THERESA CREEK DAM RECREATION & CAMPGROUND CONCEPT DEVELOPMENT PLAN

November 2023

ISAAC REGION

PREPARED BY **STAFFORD STRATEGY**
FOR **ISAAC REGIONAL COUNCIL**

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1. INTRODUCTION & CONTEXT

1.1. The Project

Theresa Creek Dam (TCD) covers 300 ha of freehold land in Clermont within the Isaac Regional Council Local Government Area (LGA). It contains a number of features including the dam itself (which contains a number of fish species), camping and picnic facilities, walking trails and a café/kiosk. The site is valued highly as a major recreational asset by the local community and attracts visitors from a broader regional catchment.

Stafford Strategy (Stafford) was commissioned by Isaac Regional Council (Council) to develop a Concept Development Plan for TCD. The overarching purpose of the Concept Development Plan is to guide the future investment and development of the recreation and campgrounds at the Dam to ensure it reaches its potential as both a tourism attraction for visitors and recreational asset for locals.

1.2. The Approach Followed

The development of this Concept Development Plan has involved a comprehensive review of background documents as well as extensive consultation with Council personnel and users of TCD via multiple surveys and community engagement.

Informed by consultation and site understanding, key recommendations have been developed for the overall site. Importantly, the Concept Development Plan picks up on the needs of both visitors and locals through its key concepts and improvements required.

Figure 1 outlines the eight-stage process which was followed in developing this Concept Development Plan.

Figure 1: Stages followed to complete this Concept Development Plan

2. PROJECT CONTEXT

2.1. About Theresa Creek Dam

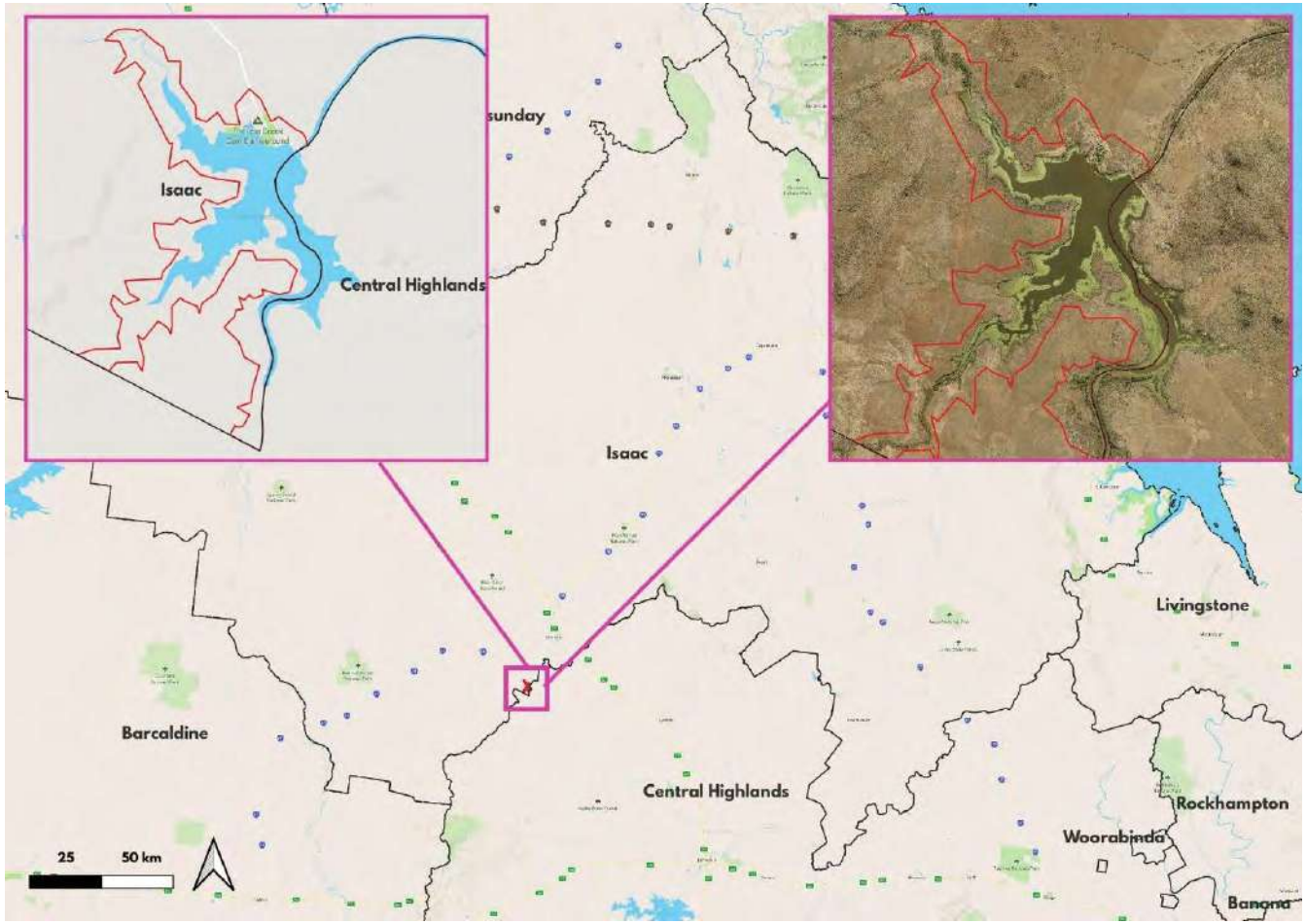
TCD, which was initially constructed in 1983, is situated 22km southwest of the town of Clermont. The site covers 300 ha of freehold land under Council's ownership. The site is bordered by large residential farming properties. The site Concept Development Plan area is outlined in red in Figure 2.

TCD functions as an important water source for the region and is also a highly important and valued community recreational asset. It offers a diverse range of activities and amenities, including:

- fishing (including Red Claw crayfish, Barramundi, Golden Perch, Eel-Tailed Catfish, Sleepy Cod, Silver Perch, and Bony Bream);
- swimming and boating areas (there are two boat ramps onsite);
- picnic and BBQ facilities;
- an on-site café/food kiosk;
- a children's playground;
- paid unpowered caravan, RV, and camping sites[1];
- dump point;
- camping shelters, showers, and toilet amenities.

It is noted as a key tourism asset within a large region, and with little competition in surrounding regions. It therefore holds highly strategic value for both the local community (who value it as a key recreational asset), and a wide range of visitor markets from interstate and intrastate.

Figure 2: Site context



[1] These are charged at a nominal rate of $20 per night per couple

3. VISITATION & PROFILE ASSESSMENT

3.1. Historic Visitation to Isaac LGA

3.1.1. How data was derived

Visitor data has been compiled using the National and International Visitor Survey (NVS and IVS) data published by Tourism Research Australia (TRA). The NVS and IVS provide visitation data based on 'Statistical Area 2' (SA2) boundaries. Every LGA in Australia is made up of one or more SA2s. The SA2s included in Isaac LGA are Broadsound – Nebo, Clermont, and Moranbah.

As per the methodology applied by TRA for LGAs[2], visitation data is averaged across three-year periods, rather than being provided on an annual basis. This minimises the impact of variability in estimates from year to year and provides more robust estimates. The data average periods are as follows.

- 2013: reflects the average over 2011-2013;
- 2016: reflects the average over 2014-2016;
- 2019: reflects the average over 2017-2019; and
- 2021: reflects the average over 2020-2021 (this reflects a two-year period because they are both COVID-19 impacted years).

December YE data (unless otherwise specified) has been applied as this is the most recent iteration of data released by TRA via the NVS and IVS at the time of writing this report.

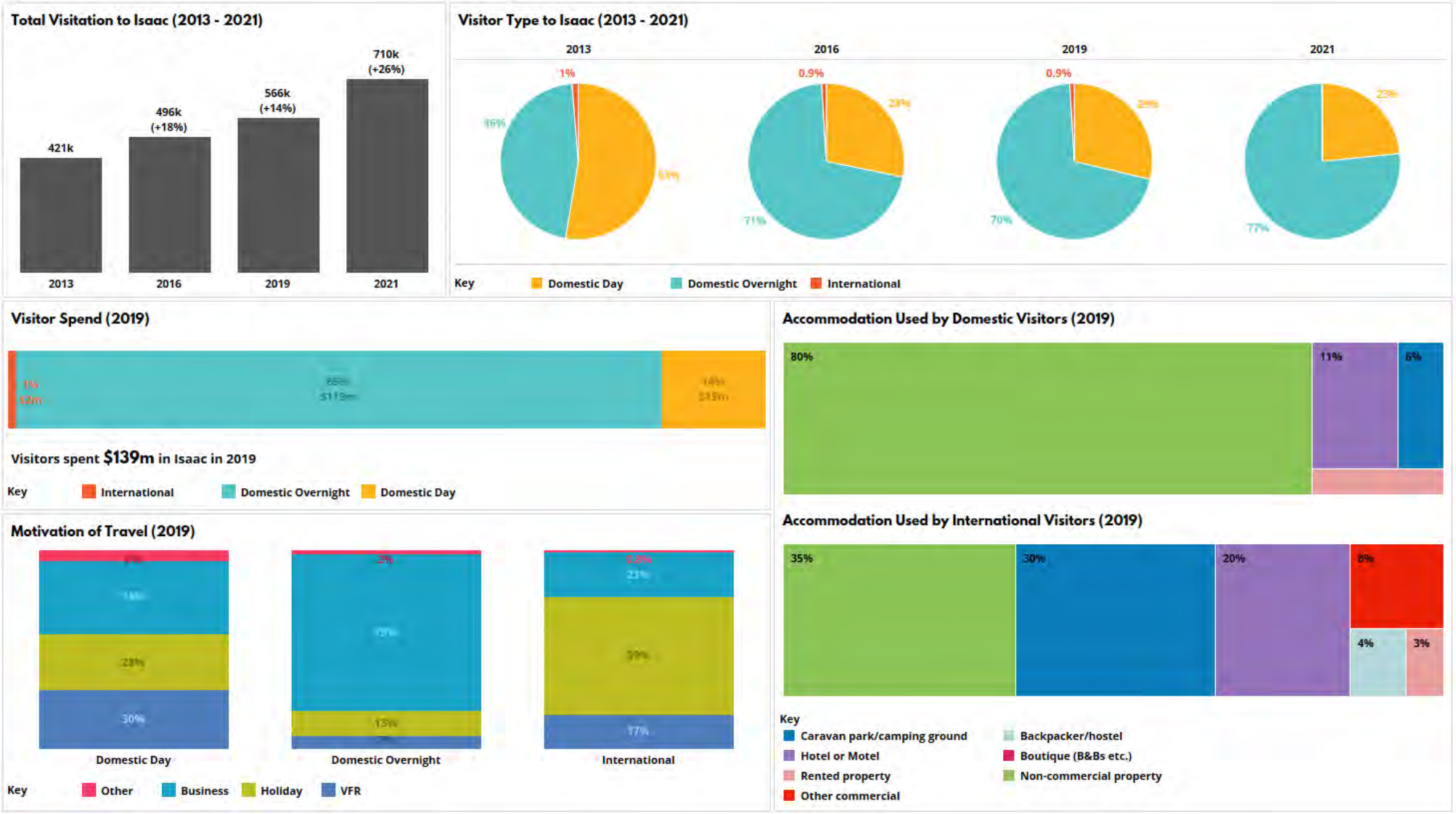
3.1.2. Visitation

Figure 3 on the following page provides a summary of visitation to Isaac region.

- Isaac challenged the national trend of decreasing visitation due to COVID-19, with a 26% increase in visitation between 2019 and 2021. Many regional locations in Queensland (and those in other parts of Australia) experienced strong growth and unanticipated demand as a result of a surge in intrastate visitors who were unable to travel elsewhere due to state and international border lockdowns. Those is regional and outback parts of Queensland were particularly beneficiaries of this. While Isaac is not officially part of the Outback region, The Great Inland Way traverses through Clermont and is a key route for accessing the Outback. These regions saw strong growth in the drive market, including family visitation as well as grey nomad and caravan/RV visitors. This growth, however, is likely to struggle to be sustained as state and international borders open back up and markets look to a far wider range of destination options to travel to.
- Isaac is primarily a domestic destination. In 2019, 99% of travel was undertaken by domestic visitors.
- Isaac also saw a growth in the number of visitors staying overnight in the region – up 7% between 2019 and 2021. This is a strong positive as overnight visitors typically contribute far more to the visitor economy through increased spend on accommodation, F&B, transport etc. In 2021, domestic overnight visitors comprised 77% of visitors but their spend amounted to 85% of total visitor spend.
- For the domestic market, business travel dominates, comprising 79% of domestic overnight travel and 36% of domestic day travel. International visitors (albeit a very small market) are far more likely to visit for a holiday. In 2019, this comprised 59% of international travel.
- In 2019, domestic overnight visitors primarily stayed in non-commercial accommodation including with friends/family (80% of domestic overnight visitors). This was followed by those staying at a hotel or motel (11%) and at commercial caravan parks/camping grounds (6%). and at commercial caravan parks/camping grounds (6%). This result could be influenced by a number of things and does not illustrate if pent up demand exists. Such factors that could be influencing this result include whether the current accommodation stock offered in Isaac and its quality and price point is meeting market expectations and whether there is sufficient product on offer to cater to demand etc.
- International visitors, however, were far more likely to stay in commercial accommodation, with 30% staying at a commercial caravan park/camping ground and 20% at a hotel/motel. As stated previously, however, this market represents a very small share of total overall visitation to Isaac.

[2] https://www.tra.gov.au/research/regional-tourism/local-government-area-profiles/local-government-area-profiles

Figure 3: Summary of visitation to Isaac[3]



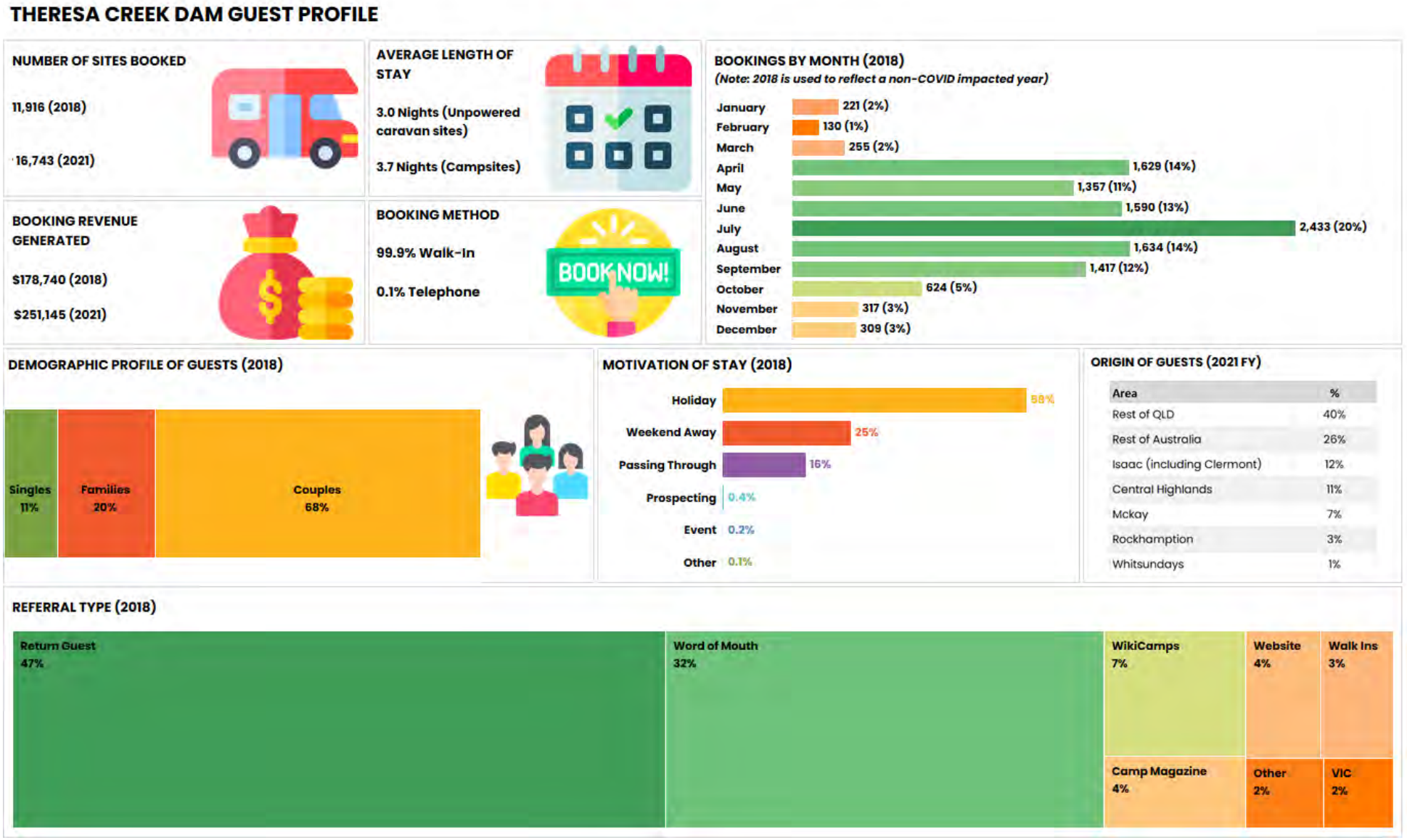
[3] All data has been sourced from TRA's NVS and IVS and compiled by Stafford Strategy. Data is December YE unless specified.

3.2. TCD Visitor Profile

Figure 4 provides a breakdown of the overnight guest profile at TCD. This is based on booking data provided by Council. It shows the following.

- In 2018 (which reflects a pre-COVID-19 year), TCD received 11,916 site bookings. 2021 (which reflects a COVID-19 impacted period), saw 16,743 bookings. This data includes only those staying overnight at TCD, it does not include day trippers who frequent the site for a number of recreational and leisure-based purposes.
- Almost all bookings (99.9%) were generated through walk-ins.
- Guests stayed, on average, 3.4 nights per trip. This is broken down into those staying in unpowered caravan sites (3.0 nights) and campsites (3.7 nights).
- In 2018, TCD generated just under $179k in booking revenue. This equates to average site booking revenue of $15 and excludes revenue generated through the café or from other sources. This increased to $251k in 2021.
- Interestingly, the site booking numbers by month (shown for 2018 as it reflects a non-COVID impacted year) shows that winter months, particularly July, is the busiest (again, though, it is important to note that this does not include day trips). 20% of all camping guests visited in July in 2018.
- Over two-thirds (68%) of guests staying overnight were couples, followed by families (20%) and singles (11%).
- As expected, TCD is very much a leisure-based destination. 58% of guests were visiting for a holiday, followed by those travelling for a weekend away (25%).
- Almost half of all bookings (47%) were generated by return guests. This was followed by word of mouth (32%) and WikiCamps (7%).
- On average there were an estimated 2 visitors per camp site booking so overnight visitation is expected to have grown to 33k at least in 2021.
- Though no data is captured on day visitors coming to TCD, anecdotal feedback indicated that total day visitation is likely to be circa 7k+, taking total site visitation per annum to 40k approximately.
- 88% of overnight visitors to TCD are from outside of the region and 66% are travelling quite some distance from other states and territories as well as from more distant parts of Queensland. Whilst the regional Isaac market (especially from Clermont who make up 45% of day visitors as well) are also 12% of overnight visitors to TCD, 88% of overnight TCD visitors are not Isaac regional residents or ratepayers. These make up a very valuable and important component of the visitor economy to Isaac region and generate important visitor spend not only at TCD but also in other parts of the region.

Figure 4: Theresa Creek Dam Guest Profile[4] (overnight visitors only)



[4] All data is for the 2018 calendar year unless specified otherwise. No day visitor day was available.

4. SITE ANALYSIS & EXISTING CONDITIONS

4.1. Land Ownership

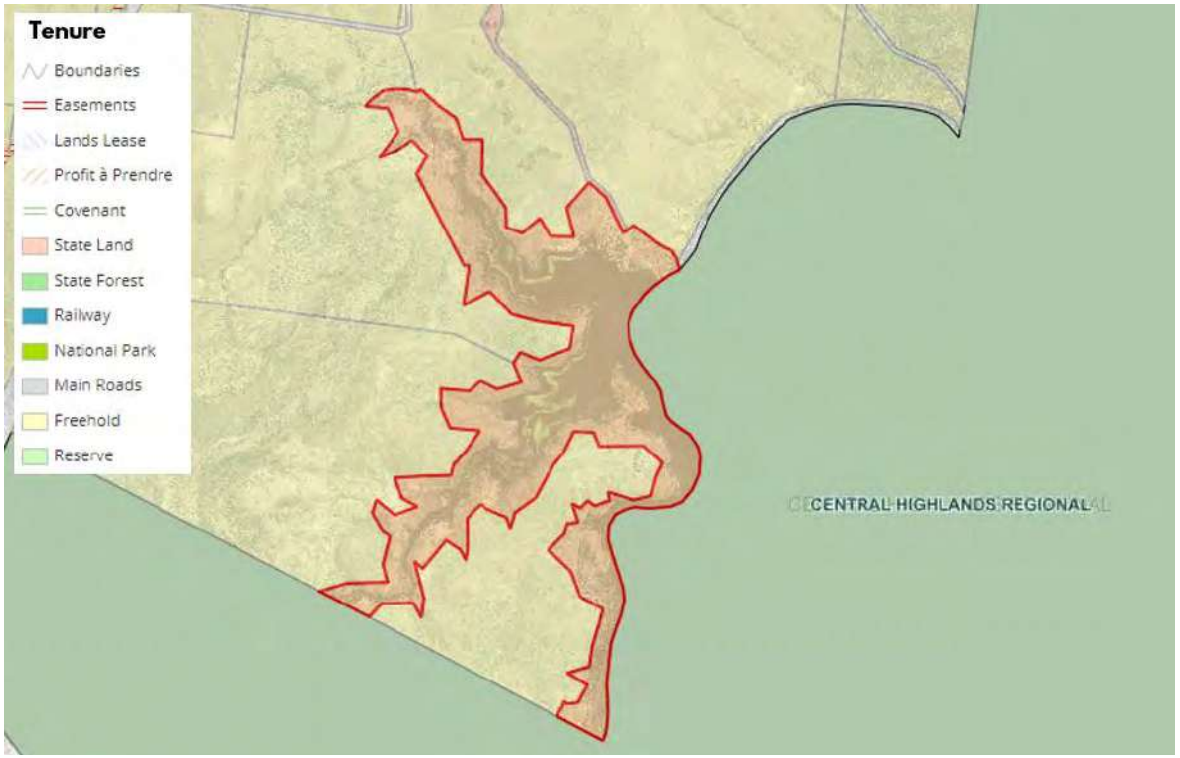
The 300-ha freehold site, situated at 580 Percy Albert Drive, is entirely owned by Council (see Figure 5). There is a commercial management agreement in place with a third-party provider for the operation of the camping ground and kiosk. Theresa Creek Power Boat and Ski Club Inc. also have a supportive relationship with Council. This provides them with exclusive use rights for camping and water sports activities along part of the TCD's waterfront. TCD is also supported through the Clermont Fish Stocking Group who are a community-based group who fundraise to assist with the stocking of fish in Theresa Creek Dam.

4.2. Isaac 2035 Community Strategic Plan

The Isaac 2035 Community Strategic Plan (CSP) reflects community aspirations. Isaac's recreational infrastructure is recognised as a strength for the region. TCD is one of these core pieces of infrastructure. This Concept Development Plan (and the ultimate upgrades that may result) fits into each of the four themes identified in the CSP, including:

- Communities: Isaac will have strong and diverse communities that support all to live, work and raise families (recreational infrastructure is a play a key role in attracting residents to the region and enhancing the health and wellbeing of residents).
- Economy: Isaac will continue to be Queensland's number one performing regional economy based upon a thriving, resilient and diverse mix of industry sectors (TCD attracts many visitors from outside of the LGA who contribute to the regional economy through spend on groceries, food and beverage, petrol, and services etc.).
- Infrastructure: Isaac will have effective and sustainable infrastructure that supports the needs of the region's communities and its economic sectors (TCD is an important water source for the region and will continue to be going into the future).
- Environment: Isaac will have an appropriate and sustainable balance between environment, economy, and community to ensure our natural resources are sustainably managed and protected (while TCD is a built resource, it supplies the region's water and is environmentally important from and fauna perspective including bird and fish life. It also allows the community to easily engage with the natural environment. Continuing to maintain and enhance this access is important).

Figure 5: Site tenure



4.3. Planning controls

4.3.1. Site zoning

As demonstrated in Figure 6, the entire TCD site is zoned "Special Purpose". The purpose of this zone is to: (a) provide for public facilities and infrastructure that are publicly or privately owned or operated; and (b) ensure that incompatible uses do not encroach on the public facilities and infrastructure. This includes utility infrastructure network elements such as water supply facilities, water treatment plants, water reservoirs and other related network elements".

The non-water parts of the site (and surrounding sites) are classified as Agricultural Land (Class C) which is "pastureland that is suitable only for improved or native pastures due to limitations which preclude continuous cultivation for crop production. Some areas may tolerate a short period of ground disturbance for pasture establishment."[5]

Figure 6: Site zoning

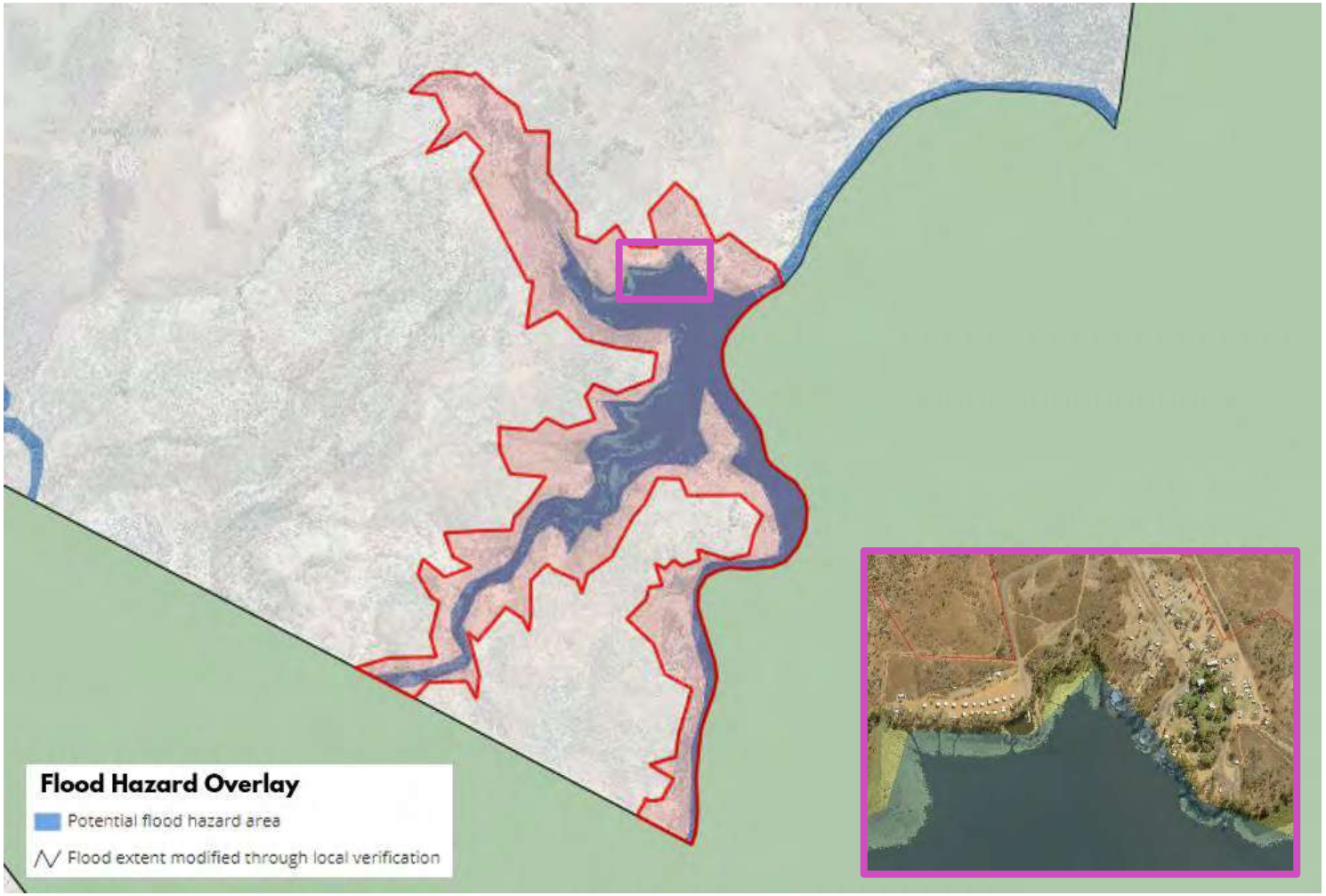
4.3.2. Flooding

Figure 7 demonstrates that potential flood hazard area for the site as per the Queensland Floodplain Assessment Overlay. This "represents a floodplain area within drainage sub-basins in Queensland. It has been developed for use by local governments as a potential flood hazard area. It represents an estimate of areas potentially at threat of inundation by flooding. The data has been developed through a process of drainage sub-basin analysis utilising data sources including 10 metre contours, historical flood records, vegetation and soils mapping and satellite imagery. "[6]

Given that the site comprises a dam, the water areas and the immediate frontage is classified as a potential flood hazard area. The parts of the site where the majority of the camping, caravan and land-based recreation takes place is not within this overlay.

Further anecdotal information may need to be gathered from TCD local users to ascertain if any parts of the camping and caravanning area have ever suffered flooding and if so, how regularly. From available information at least, there doesn't appear to have been a flooding issue historically.

Figure 7: Potential flood hazard area overlay

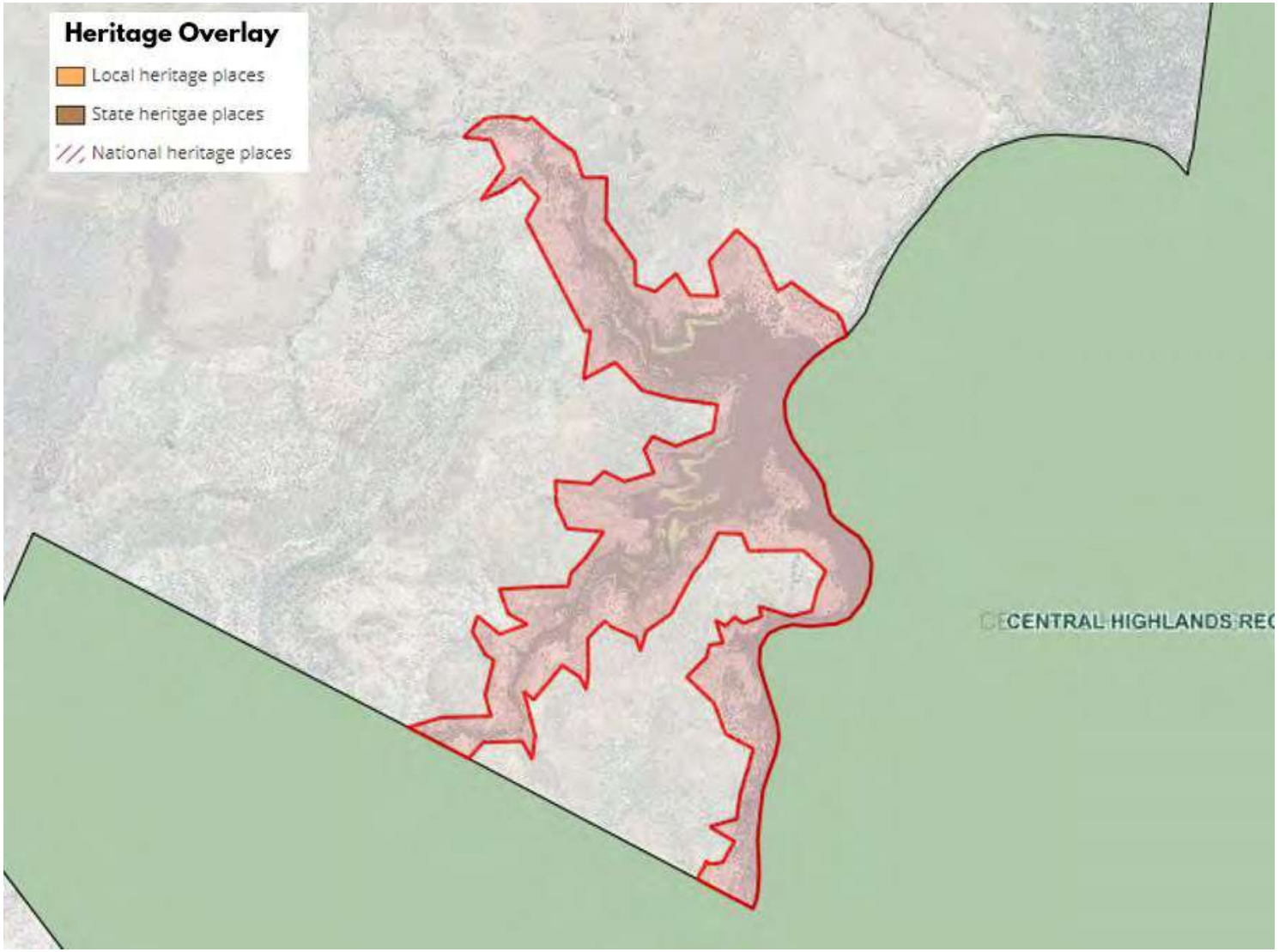


[6] Queensland floodplain assessment overlay, data.qld.gov.au

4.3.3. Heritage

A cultural heritage overlay (Western Kangoulu People) is applied to any heritage place that has been formally recognised on the heritage register or identified in local heritage studies. As per Figure 8, none of the TCD site has this overlay.

Figure 8: Heritage overlay



4.3.4. Environmental Significance

Figure 9 provides the environmental significance overlay for the site. The purpose of this overlay is to "manage development to avoid or minimise and mitigate, and in some instances offset, significant impacts on matters of national, state, and local environmental significance. This includes protecting and enhancing native vegetation and wildlife habitat areas".[7]

It shows that part of the dam area is classified as "high ecological significance wetlands" as well as "regulated vegetation (intersecting a watercourse)" both of which are which are considered matters of state environmental significance.

Figure 9: Environmental Significance overlay

4.3.5. Bushfire hazard

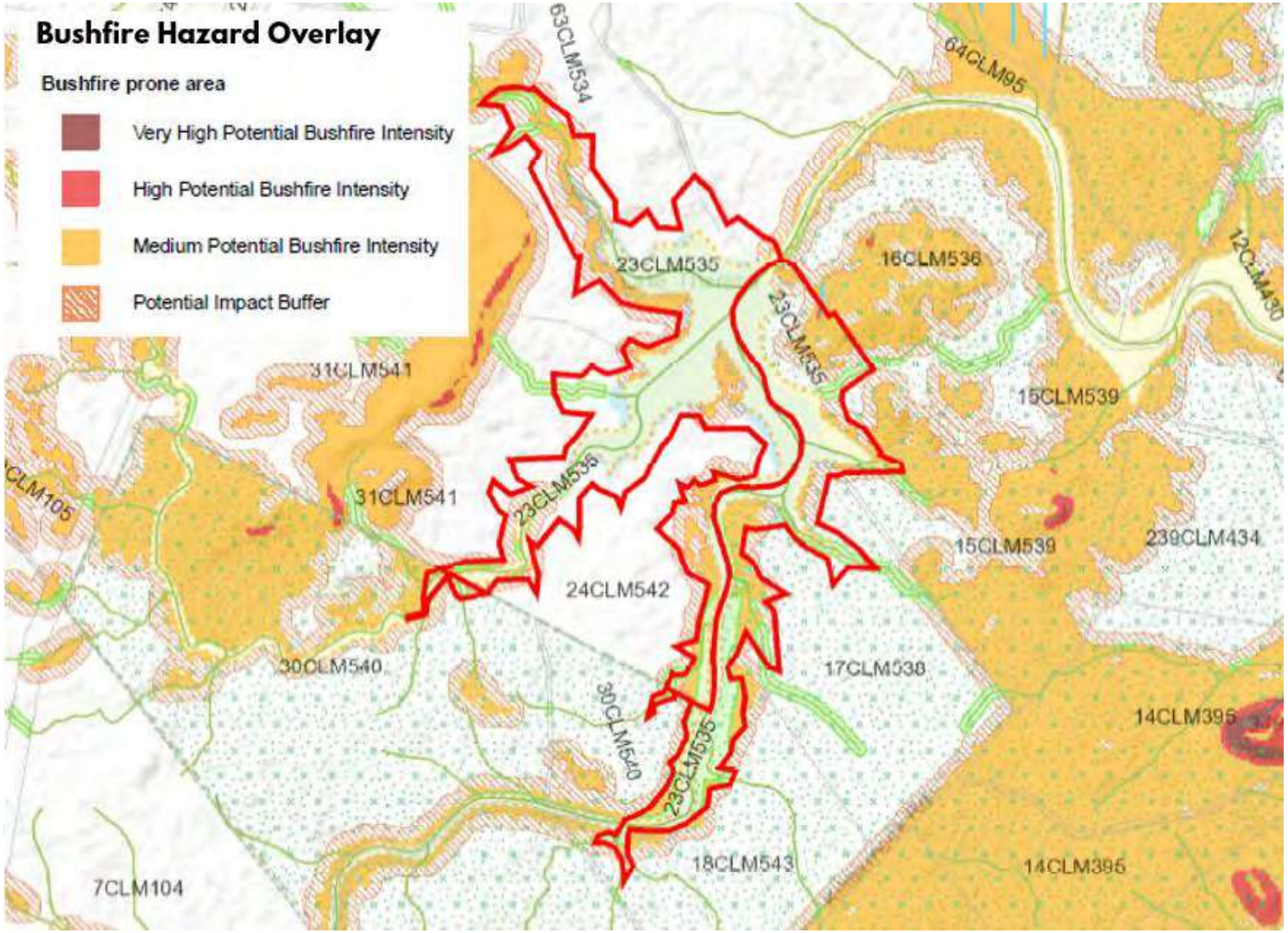
The Queensland State Government manages bushfire hazard through the State Planning Policy. The state-wide mapping identifies bushfire hazard areas using three key factors to determine the potential intensity of a bushfire:

- potential fire weather severity;
- landscape slope; and
- potential fuel load.

Figure 10 demonstrates that parts of the site are designated by State Government as having a Medium Potential Bushfire Intensity. Part of the site is also classified as being a Potential Impact Buffer.

These parts of the site are situated primarily on areas which are not currently developed.

Figure 10: Bushfire hazard overlay



4.4. Existing conditions

This section considers the existing site, its current uses and identified challenges associated with the site.

4.4.1. Current facilities

As noted previously, TCD is well-loved and used by the local Isaac community, along with a broader visitor market. It is used for a variety of recreation and social purposes. The site is large, extending 300 ha and has a number of built facilities and amenities. Figure 11 on the following page provides an overview of the site's key assets and features.

Some key findings include the following.

- The Theresa Creek Power Boat and Ski Club Inc is noted as strong and well-supported within the community and with a good relationship with Council.
- The café/kiosk facility is popular and is noted as the only place is the wider area for locals to come to get weekend breakfast. The quality of the food offering is noted as good.
- The children's playground (though dated) is very popular with families.
- The site offers a range of picnic settings and BBQ facilities.
- TCD provides a major recreational asset for locals all year round and especially at weekends.
- In the tourism season, 90% of campsite users are grey nomads who are mostly visiting for 3-5 nights on average. Grey nomads typically have an average site booking spend of $20 per day. However, on Wednesday's (pension payments), grey nomads typically spend and this spend is important for local businesses with the purchase of groceries, dining out etc.
- While not formalised, the camping capacity of TCD can reach up to 170 sites occupied per night (with an estimated 500 guests on-site). However, on average, this tends to be closer to 60 sites (150 guests on average) occupied. Peak numbers do create parking issues.
- TCD currently only offers unpowered camping at a charge of $20 per site per night
- Easter weekend is when TCD typically receives peak demand.
- Locals primarily utilised TCD on weekends and they have an estimated average spend of $25 per day due to kiosk spend. Many also come as day visitors.
- TCD has over 140 species of bird and attracts a birdwatching market. This could be leveraged further.
- The fact that TCD is pet-friendly is considered a major positive by visitor markets.

Figure 11: Key site assets and features

KIOSK/CAFE

PLAYGROUND

ABLUTION FACILITIES (2)

COVERED PICNIC AREAS

BEACH SWIMMING AREA

BOAT RAMPS (2)

BOAT & SKI CLUB

FLOATING PONTOON

CAMPING SHELTERS

NO CAMPING/SWIM AREA

VISITOR CAR PARKING AREA

OPEN CAMPING AREA

OPEN SPACE CAMPING AREA

OPEN SPACE CAMPING AREAS

The water-ski club has a designated area within the TCD site, as confirmed by Council (see Figure 12). Changes to where boat trailers are currently able to be parked is considered within the Concept Development Plan created, to help create better separation between vehicle movements and pedestrians and to better manage boat launching and trailer parking especially during peak periods.

The relationship between Council and the water ski club is supportive with both parties respecting the needs of the other and the wider users of TCD which need to be accommodated (kayakers, swimmers, jet skiers, other boaties etc.) as well.

Figure 12: Water ski club site

4.5. Primary site challenges

The following are noted as some of the key challenges with the site. These are based on a site visit and consultation with a variety of stakeholders.

- While the dam used to be well-stocked with barramundi and other fish species, there have been challenges maintaining this.
- There is currently no riparian corridor protecting the lake edge from cattle and camels grazing which has created land management issues.
- The current sewer system capacity is limited and requires upgrading.
- The kiosk/café is popular and requires larger facilities to continue to cater to a growing market. This primarily relates to the back-of-house cooking/kitchen area.

Figure 13: Back-of-house kitchen facilities are constrained

- There is a lack of attractive way-finding signage on the highway which profiles TCD and the facilities it offers.

Figure 14: Dated & non-standardised signage

- Within the TCD precinct, signage is dated and in a multitude of designs/formats. This should be standardised.
- There is no interpretive signage to enable guests to better understand the flora and fauna, surrounding cultural heritage and also the dam's function.
- There is currently no camp kitchen on site. As a result, visitors utilise the bathroom facilities to wash dishes which does not have drinking quality water creating OH&S issues.
- There are safety conflicts, at times, between lake users (swimmers, kayakers, jet skiers, ski boats).
- The swimming/beach area is very popular and usage can exceed capacity at times.

Figure 15: Current beach/swimming area

- The site has a range of ageing infrastructure and some deferred site maintenance
- Parking can be a challenge when the site is nearing capacity. This is also compounded by the lack of formalisation of sites and parking areas. The formalised parking that does exist is limited (fitting approximately 10-15 vehicles only).

Figure 16: Existing formalised parking

- There is no laundry area available to guests (guests are directed to a laundromat facility in town).
- While there are two ablution blocks, these are often at capacity when the site is busy.
- There are no powered sites available for RV/camping vehicles.
- There is limited marketing collateral profiling TCD and what it offers.
- The current playground facility is popular but is considered dated and in need of expansion and upgrades.

Figure 17: Existing playground

- Water quality is noted is generally good but there are quality challenges at times.
- There are few pathways to enable pedestrians to safely perambulate the site (particularly when busy).
- There is no ability to hire/rent watercraft (such as kayaks and paddleboards) and this is noted as a desire by survey respondents.
- There may be a need for better signage around dog controls (including where on-lead and off-lead areas are situated throughout TCD).
- While TCD is generally well-landscaped, some areas require revegetation/landscaping.

Figure 18: Areas that could benefit from some revegetation

4.6. Infrastructure upgrades required

We note that AECOM undertook a study at TCD in 2019 to look at sedimentation analysis and the feasibility of dredging to help improve water storage capacity. Sedimentation has resulted in the lakebed being 6 metres higher due to this build up.

AECOM was engaged to undertake an investigation into the impacts of historical climate variability and climate change on water availability (yield) in the Theresa Creek Catchment. As part of this investigation, comparisons between original stage-storage relationships and the stage-storage relationship developed from the 2019 bathymetric survey of the Theresa Creek impoundment area, flagged that there is significant change to the available water storage. The comparison of various bathymetric datasets indicated that significant amounts of sedimentation is present within the dam catchment affecting the storage availability. This has consequently led to the investigation of sedimentation and dredging feasibility within the Theresa Creek Dam. Refer to appendix 1 for further detail.

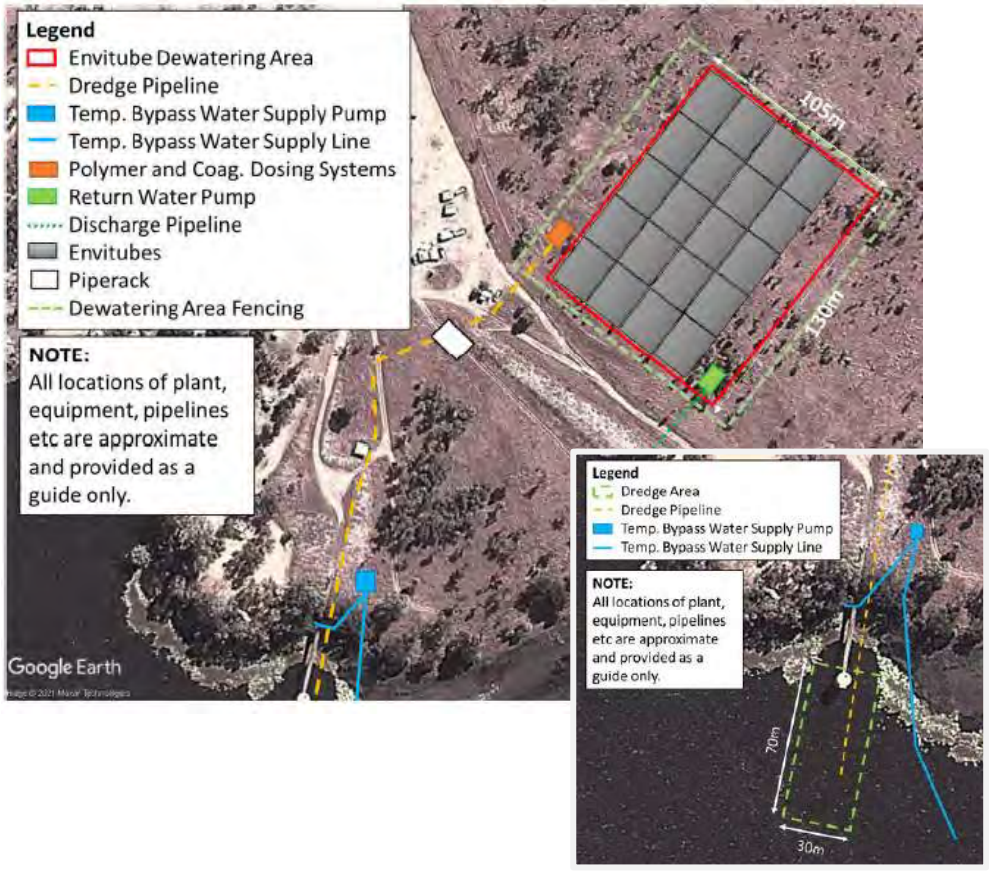
Through comparison of the 1981 and 2019 Digital Elevation Model's (DEM), areas were identified where bed levels have been raised by approximately 6 metres as a result of sedimentation over the period between construction to present. The results from the cross sections analysed, indicate that the dredging of Theresa Creek, particularly in the channels closer to the dam wall, as a proposed solution to increase storage volume and consequently the reliability of the yield is feasible.

In order to provide insight as to how to improve dam storage and to maximise storage efficiency, it was suggested that hydrodynamic modelling be undertaken. The hydrodynamic modelling would be used in order to represent how dredging will impact the impoundment area, specifically in regard to particle plumes and the consequent dispersion of particles consequent of the dredging activities. The hydrodynamic modelling will also be used to assess the viability of a floating intake.

In order to establish a hydrodynamic model that can be used to model sediment transfer, details regarding the sediment particles within the catchment would need to be understood. To obtain the relevant data, it was proposed that a total of 13 suspended sediment samples and 3 core sediment samples be collected and analysed within the impoundment area. It is proposed that for the Theresa Creek Dam Impoundment area, suspended sediment sampling be implemented, with the intent to collect data from the upper 100mm of the bed surface to the water surface level. The information collected should provide insight on such things as size, specific gravity, shape, and mineralogy of the particles that make up the bed; stratigraphy, density, and compaction of the deposits; and the quantity and distribution of contaminants.

Figure 19 illustrates the location set aside to address the sedimentation issues and to allow for dredging work to be undertaken safely While TCD users are in and on the water but kept sufficiently far away to avoid any risk to public safety.

Figure 19: Proposed dredge and dewatering site layout




WALK THE PLANK

5. CONSULTATION

To guide the development of this Concept Development Plan and to ensure community were provided with the chance to input into TCD's future, a survey was distributed. The survey was made available on Council's SpeakUp platform. An additional more targeted survey was also distributed to Councillors.

5.1. Visitor Survey

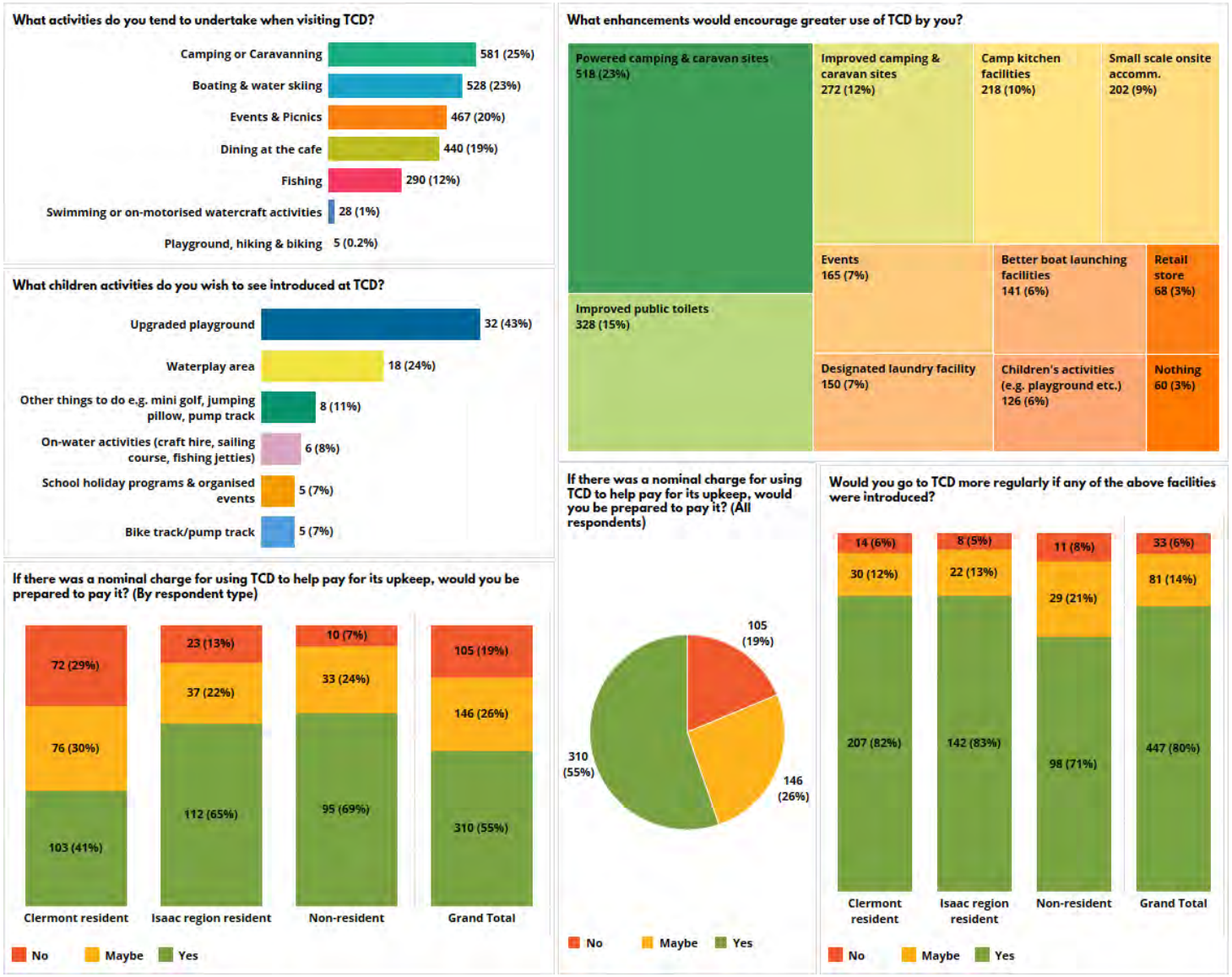
Figure 20 and Figure 21 provide a summary of the community survey results. The questions indicated have been shortened to fit the graphic, however, the full questions that were provided to survey respondents have been included in Appendix 2. Key observations are as follows.

- A total of 561 responses were received which is a very high response rate.
- The vast majority of residents support Council seeking funding to upgrade TCD. The few who responded no, typically want investment in other Council assets.
- Most respondents (41%) visit TCD 1-5 times per annum, although 32% indicated they visit 13 or more times per annum. The site is therefore very popular with locals especially as a recreational venue.
- The vast majority of resident respondents, feel that TCD provides social benefit to the local community (93%) and that visitation to TCD by non-residents generates an economic return to the Clermont community (94%).
- Clermont residents have a higher tendency to visit more often, with 91% of those who indicated they visited more than 24 times per annum being from Clermont.
- Most of those who camp at TCD (49%) typically camp for 1-5 nights per annum.

Figure 20: Visitor Survey – Results Summary 1

- Camping/caravanning is the most popular activity to undertake at TCD (25% of respondents indicated this), followed by boating & water skiing (23%), attending events/picnics (20%), and visiting the café (19%).
- To encourage greater use of TCD, respondents want to see powered camping and caravan sites (23%), followed by improved toilet facilities (15%), improved camping & caravan sites (12%) and camp kitchen facilities (10%).
- If upgrades were undertaken, respondents noted they would visit TCD more frequently.
- In terms of additional activities that could be offered, most respondents want to see the playground upgraded (43%), followed by the introduction of a water play area.
- 55% of respondents support a pay-for-use model at TCD providing there were upgrades at the site.
- Clermont residents are more resistant to a charge being introduced. Of the 105 total respondents who indicated "no" to this question, 69% were Clermont residents.
- Non-residents are far more open to this with only 7% of these respondents indicating they would not be prepared to pay this (7%).
- For Clermont residents, 41% were prepared to pay a nominal charge for TCD upkeep, whilst 65% of Isaac region residents were prepared to. Only 29% of Clermont residents indicated they would not pay a nominal charge for TCD upkeep.
- 69% of non-residents were willing to pay.

Figure 21: Visitor Survey – Results Summary 2



6. COMPARATIVE BENCHMARKING

6.1. Common factors of success

Looking at other destinations that have developed caravan and destination holiday parks provides the ability to identify factors of success. As part of this Concept Development Plan, a number of best-practice destination holiday parks at a variety of lake, coastal and hinterland locations were assessed.

Figure 22 highlights some of the common factors of success that were identified.

Figure 22: Common factors of successful caravan & holiday parks

Diverse typology of accommodation offering (cabins, villas, powered & unpowered sites)	Clean and updated facilities (toilets, showers, laundry, camp kitchen)	Family-friendly activities (water play park, jumping pillow, high ropes, karts, minigolf)	Reputable brand
River, lake, or beach location	On-site F&B offering and/or shop with basics	Easy-to-use online reservation system	Caters to visitors rather than permanents

6.2. Destination holiday parks vs. traditional caravan parks

The following section offers the rationale for why a destination holiday park has been recommended for TCD rather than a traditional transit caravan park or camping ground.

The caravan and camping industry is constantly evolving. Many parks have responded to consumer demand for better standards and facilities by transforming from traditional transit caravan parks (Figure 23) into holiday/destination parks (Figure 24 on the following page).

Figure 23: Examples of traditional caravan parks[8]

Holiday parks differ from traditional caravan parks as they offer a full holiday experience providing facilities such as swimming pools and aquatic parks, kids clubs, camp kitchens, mini-golf, group entertainment and shops etc. Consequently, these parks are attracting a growing number of families who utilise the park as their holiday destination rather than solely utilising them as a means of accommodation.

One of the primary benefits of destination parks is the scale of accommodation they can provide, from higher-yielding cabins to lower-yielding camping spots.

[8] Wonnangatta Caravan Park, VIC; Batlow Caravan Park, NSW; Bridgewater Public Caravan Park, VIC.

Figure 24: Examples of destination holiday parks[9]

While there are several parks throughout the wider region and further afield, many of these reflect more traditional caravan/transit styles of parks. The opportunity exists for TCD to differentiate itself and appeal to the growing number of caravan and camping travellers who are seeking destination parks.

Of the 21 holiday/caravan parks identified in the region, almost all of these (86% or 18 properties) reflect a more traditional caravan park model. Many also have a significant number of permanents who reside at the parks year-round. We are not discounting the importance of these facilities – they fill a gap in the market and provide lower-cost residential housing for some of the regions population. However, facilitating stronger market demand for any proposed new facility is likely going to require offering a unique product that is not already saturated in the region. Destination holiday parks offer this product.

In summary, it is going to be important to ensure that the cost of accessing TCD for locals is not prohibitive. In addition, while every effort is needed to keep TCD as natural as possible, the feedback from the local community is for improvements to support a more family friendly destination at TCD, including many of the attributes which a destination holiday park is able to offer.

6.3. Examples of Best Practice Holiday Parks

Table 1 provides a summary of several existing, higher-quality destination holiday parks. The purpose of this is to offer examples of the types of accommodation and facilities that are typically included in these higher-quality destination holiday parks. Refer to Appendix 3 for other examples of best practice.

Table 1: Comparative Assessment

Name	Units	Accommodation type	Activities/Attractions
BIG4 Traralgon Park Lane Holiday Park 	▪ 48 cabins ▪ 31 caravan & camping sites	▪ Cabins (superior, family, studio, standard, budget, outdoor spa) ▪ Powered caravan & camping sites ▪ Pet-friendly options ▪ Ensuite sites	▪ 3 level adventure ropes course ▪ 18-hole mini-golf course ▪ Giant jumping cushion ▪ Indoor play centre
Ingenia Holidays Queenscliff Beacon 	▪ ~64 self-contained cabins ▪ 37 caravan & camping sites (mix of short-and longer-term)	▪ Studio, two- and three-bedroom villas, apartments, and cabins ▪ Three-bedroom beach house ▪ Powered caravan & camping sites ▪ Ensuite sites	▪ Mud day spa ▪ Yoga and pilates ▪ Indoor heated pool and adventure centre ▪ Go-kart and bike hire ▪ Giant jumping pillow ▪ Kids clubhouse ▪ Tennis and basketball courts ▪ Private function room for hire ▪ Giant chessboard
All Seasons Holiday Park, Mildura 	▪ ~35 self-contained cabins/villas ▪ 37 caravan & camping sites	▪ Standard, deluxe, family, executive and superior cabins ▪ Aqua rise villas ▪ Powered & unpowered sites ▪ Ensuite sites	▪ Go-kart and bike hire ▪ Jumping pillow ▪ Kids clubhouse ▪ Giant chessboard ▪ 5 hole putting green ▪ Pump track ▪ Splash waterpark

[9] BIG4 Traralgon Park Lane Holiday Park, VIC; BIG4 Adventure Whitsunday Resort, QLD; NRMA Ocean Beach Holiday Park, NSW.

Name	Units	Accommodation type	Activities/Attractions
Ingenia Holidays Hunter Valley 	▪ 26 self-contained ▪ 41 caravan & camping short-term	▪ Villas (2 bedroom & 3 bedroom) ▪ Standard (2 bedroom & 1 bedroom) ▪ Budget cabin (2 bedroom & 1 bedroom) ▪ Powered caravan sites	▪ Pool/spa ▪ Onsite café/restaurant ▪ Kids club & kids playground ▪ Giant chessboard ▪ Giant jumping pillows ▪ BBQ
Ingenia Holidays Mudgee 	▪ 33 self-contained ▪ 42 caravan & camping	▪ Deluxe unit (1 bedroom) ▪ Standard Cabin (1 bedroom & 2 bedroom) ▪ Family studio cabin ▪ Powered caravan & camping sites ▪ Ensuite sites	▪ Games room ▪ Inflatable trampoline ▪ Kids playground ▪ Pool & ▪ Sauna ▪ BBQ
Ingenia Holidays Lake Macquarie 	▪ 21 self-contained ▪ 50 caravan & camping short-term	▪ Waterview cottage (2 bedroom) ▪ Waterfront villa (2 bedroom) ▪ Poolside villa (2 bedroom) ▪ Parkside cabin (2 bedroom) ▪ Cottage (1 bedroom) ▪ Waterfront powered camping & caravan site ▪ Powered camping & caravan site	▪ BBQ ▪ Bike hire ▪ Giant jumping pillows ▪ Boat ramp ▪ Jetty ▪ Kids activities/kid's playground ▪ Pool

Name	Units	Accommodation type	Activities/Attractions
Ingenia Holidays Sydney Hills 	▪ np[10]	▪ Cabins ▪ Ensuite cabins ▪ Ensuite sites ▪ Motorhome sites ▪ Powered/unpowered camping & caravan site	▪ Swimming Pool ▪ Children's Playground ▪ Barbecues ▪ Camp Kitchen ▪ Pet friendly
NRMA Ocean Beach Holiday Park 	▪ np	▪ Villas (3 bedroom & 2 bedroom) ▪ Seabreeze townhouse (2 bedroom) ▪ Playground cabin (2 bedroom) ▪ Cottages (2 bedroom) ▪ Loft (2 bedroom) ▪ Tent (1 bedroom) ▪ Ensuite caravan site ▪ Premium caravan site ▪ Powered & unpowered tent site ▪ Powered caravan site	▪ Basketball/netball ring ▪ Conference facilities ▪ Kiosk and BBQ facilities ▪ Function and games rooms ▪ Giant jumping pillows ▪ Go-karts ▪ Kid's playground ▪ Pool, toddler pool & spa ▪ Recreation lounge ▪ Tennis court ▪ Waterpark
NRMA Sydney Lakeside Holiday Park 	▪ np	▪ Villa (2 bedroom) ▪ Cabin (2 bedroom & 1 bedroom) ▪ Bungalow (2 bedroom) ▪ Bunkhouse (1 bedroom) ▪ Ensuite powered caravan site ▪ Powered caravan site ▪ Powered and unpowered tent site	▪ Conference facilities ▪ Kiosk & BBQ facilities ▪ Function and games rooms ▪ Boat ramp ▪ Kids activities & playground ▪ Lending library ▪ Recreation lounge ▪ TV/video room ▪ Water playground

[10] Note: 'np' denotes not published

7.VISION & THEMES

7.1. Vision

The Concept Development Plan vision for Theresa Creek Dam, a major recreation asset for the Isaac region, is to preserve, enhance and encourage greater use and enjoyment of the precinct's diverse natural, environmental, and recreational qualities.

7.2. Themes

Four emerging themes have been identified through the engagement process and in response to the opportunities and known constraints of TCD. These themes have been used to identify proposed future directions associated with the Concept Development Plan. The four themes are:

Figure 25: Concept Development Plan themes

7.2.1. A natural place

Ensure the existing cultural, historic and landscape character, including native trees and vegetation is preserved and enhanced. New landscape planting should be sustainable and in keeping with the precinct's character.

Enhance public knowledge about the precinct, its character, vegetation, points of interest and history through improved interpretative and way finding signage.

7.2.2. A recreational playground

TCD plays a key role as a major recreational asset for local residents and visitors. Residents, particularly those in Clermont, are major users of the site, undertaking a range of activities including fishing, camping, boating, walking, cycling, visiting the café, and utilising the playground. It is important that the ability to undertake these activities is retained and that additional opportunities for new/enhanced recreational pursuits are considered. There is a strong appetite for more family-friendly activities to be introduced.

While the natural features of TCD are the major drawcard, the built infrastructure and provision of activities also plays a key role in encouraging visitation and extending length of stay.

TCD also plays an important role as a space for the local community to gather, socialise and interact. The café is noted as a popular location to meet friends and dine over the weekend. The proximity of this space to the children's playground supports this.

TCD is also used by residents as a location for events and gatherings, including family picnics, birthday parties and other social engagements.

7.2.3. A place to stay

TCD is a popular caravan, RV and camping destination used by locals and visitors. Further investment in the site's camping facilities, including the addition of powered sites, formalisation of some sites and the upgrade of supporting infrastructure may not only increase demand but can potentially grow revenue streams that can be reinvested back into the site.

7.2.4. A safe and inviting space

Ongoing investment will help ensure TCD continues to be a safe and inviting space for locals and visitors. There is a need to undertake an infrastructure improvement program within the precinct to remove and replace infrastructure that is ageing or in poor condition. This could include toilets, showers, picnic facilities, signage, paths, shelters etc. Upgrades to facilities should be high quality, sustainable, durable, and underpinned by Ecologically Sustainable Design (ESD), Disability Access (DDA) and Healthy Active by Design principles. These infrastructure elements should be appropriately designed and located to be sympathetic with the informal and natural character of TCD.

7.3. Key principles

Key principles guiding the development of this Concept Development Plan are as follows.

8. EXISTING USE & FUTURE OPPORTUNITIES

8.1. Site Concept Development Plan

8.1.1. A natural place

Landscaping upgrades: While the site offers a fairly natural environment interlaced with supporting infrastructure, opportunities exist to improve the overall amenity with upgrades to landscaping involving the planting of more shade trees where appropriate, landscaping of areas with vegetation to offer buffer zones between the various precincts identified and to avoid an overall look of too much hard surface (access roads, parking areas, caravan and RV sites, boat ramp upgrades etc).

Envitube Dewatering Area: this major piece of infrastructure is provided to help address the siltation issues facing TCD and to ensure the depth of the dam lake can be improved.

8.1.2. A recreational playground

Waterfront Deck Seating: Offering visitors a place to be able to sit and enjoy noting that currently there are some picnic tables around part of the shoreline for visitors to use but further round the lake edge past the ski club building the potential exists to offer an attractive seating area for those staying on this side of the TCD.

Widened and Lengthened Boat Ramp: The existing boat ramp needs resurfacing, widening, and lengthening. This will address capacity issues and also allow for easier access and egress from the water noting that changes in lakebed sediment have meant at times the water level is lower so the boat ramp needs to extend further to help address this.

Expanded Beach Cove Area: This space is the kid friendly swimming area and needs to be expanded -widened and a pontoon introduced to allow for safety and jumping off. There is a need for stronger separation between the swimming area and the remainder of the dam lake to avoid conflict between swimmers, boaties, and kayakers etc.

Pontoon: The pontoon is to be introduced as part of the expanded beach cove area noted above.

Investigate Flying Fox into The Water: This component is there to offer a more exciting recreation option and should appeal to both kids, teenagers, and adults. Its seen as an important value add and a free thing to do.

Play Area: This component effectively would replace the existing playground and offer a highly attractive and more expansive kid friendly play area. This would need to appeal to kids of a wide age range from 3–15-year old's, depending on the components on offer.

Kiosk Cafe Kitchen: Based on discussions with the existing manager of TCD there is a need to redo the café kitchen which is in need of both modernising and expanding to be more functional.

8.1.3. A place to stay

Formalised RV & Caravan Powered Sites (37): Offering expanded capacity for RVs and caravans for powered sites is important. While the preferred sites are expected to be closer to the water, additional new powered sites need to be offered back further from the water but be easier to access for longer RVs and caravans.

Powered and Unpowered RV and Caravan Sites within Existing Trees (24): These sites are what we would refer to as the premium waterfront sites and developed within the existing trees which offer shade and a vegetated barrier from other amenities. The highest level of demand is expected to be for these waterfront sites. These sites should be able to command a higher rate due to their proximity to the water's edge.

Eco Cabins (up to 5): This is a new product and there is likely to be strong demand from both locals and visitors. Quality eco-cabins with capacity for a family of 4-5 or 2 couples will offer a year-round product. It may also be possible to extend the number of eco cabins over time if demand is shown for this. The suggestion is for five eco-cabins, but to ensure that site planning allows for a potential stage 2 encompassing a further 5 cabins if and when market demand is shown to support this.

Decks Facing Water: These decks are part of the eco cabins and offer unobstructed views of the water. They offer the indoor-outdoor facilities which would be expected to command a premium price and offer a new product.

Car Spaces (10): These increase the capacity of those visiting as day visitors only and using the café and other facilities.

Camp Kitchen (80 sqm): A camp kitchen for those staying was seen as missing from the mix of amenities so is a new building and would offer cooking, cleaning, and related facilities. Currently, some visitors are using the ablutions block for washing dishes etc. This facility is, therefore, required to also address public health issues with some guests washing their dishes in the ablutions block etc.

Formalised Unpowered RV and Caravan Sites: These sites offer the potential for expansion of TCD caravan, camping and RV sites either on a staged basis or as part of composite site redevelopment

Formalised Unpowered Camping Sites: These sites offer the potential for expansion of TCD caravan, camping and RV sites either on a staged basis or as part of composite site redevelopment

Formalised Unpowered RV and Caravan Sites: These sites offer the potential for expansion of TCD caravan, camping and RV sites either on a staged basis or as part of composite site redevelopment

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Formalised Unpowered Camping Sites: These sites offer the potential for expansion of TCD caravan, camping and RV sites either on a staged basis or as part of composite site redevelopment

Uniformalised Overflow Camping: This is a large area close to the main access road into TCD and is suggested as an uniformalised overflow area to offer greater capacity for events and festivals held at TCD.

8.1.4. A safe and inviting space

Formalised Pathways: This is designated to offer an attractive pathway around the developed parts of the dam lake to enable kids to ride bikes on a hardened surface, prams/strollers to be easily pushed and as a comfortable walking surface

Boat Trailer Parking (15-20 Bays): To help separate out boat and trailer parking from the boat ramp area and to create less safety risks to pedestrians throughout the site, a dedicated boat trailer parking area is designated.

Car Park (5): These relate to the 5 eco cabins and enable a parking space per cabin to be provided.

Signage upgrades: Many of the signs throughout TCD need to be updated and replaced. These are in various locations such as around the boat ramp. New signs will be required to help designate the different precincts for the TCD Concept Development Plan and to help direct visitors to both powered and unpowered sites (with numbering) along with other amenities.

Introduce traffic counter as day visitor numbers are not yet included – need to know carrying capacity of overall site (parking etc.): Determining the actual level of visitation at TCD is very important to help better manage the site, and to determine its actual carrying capacity per day. While obtaining numbers of overnight stayers is relatively easy, a system is required to determine day visitor numbers so a traffic counter-people counter is required to be introduced on the entrance gate and possibly into the café-kiosk precinct.

Digital Connectivity Improvements: introduce stronger wifi connection than currently so entire site has good coverage. We note that the current site operator has a satellite connection within the kiosk with a 50m range. Ideally a wifi range of 500m should be provided to support health and safety requirements and in case of an emergency.

8.2. Other options to consider

Operational Model: A decision will need to be made on a preferred future operating model of TCD by Council, noting that the amenity strongly supports both a local recreational requirement and a seasonal visitor market requirement. The site is also in need of upgrades to aspects of existing infrastructure so the net cost to Council over the next few years is existed to rise from its ongoing maintenance. A different operational model may provide for some of this ongoing infrastructure cost to be shared or passed across to an operator.

Create riparian boundary around lake to improve water quality: While initial research identified problems with livestock using TCD for drinking water and other uses, the option of fencing off the lake from surrounding private land holdings was not seen as viable. This is because of long standing arrangements between neighbouring land holders and TCD and the lack of formalized boundaries over many years. Regardless, a mechanism needs to be found to protect the quality of water in TCD as it is a major water supply to Isaac Regional Council residents for drinking water. Livestock effluent needs to be reduced going into TCD.

Expanded kiosk operating hours: Ensure kiosk is operational 7 days per week in peak tourist season and assess increasing size of cooking area. With greater site capacity comes a stronger need for a 7 day per week operator for the café-kiosk. We understand that locals especially enjoy coming down to the café-kiosk on weekends to relax and have breakfast; this should extend into mid-weekdays during peak and shoulder periods. In addition, as the uptake of the eco cabins is expected to be strong, these visitors will expect to have breakfast options available at the café-kiosk throughout the year.

Introduce sewage treatment facility to help future proof the site: We note that as capacity grows in the number of sites and the expected number of visitors onsite at any one time, upgrades to the sewage system may be required. This also need to include the distribution of raw water to other toilet and shower facilities to be installed. Determination of when this is likely to be required needs to be investigated, along with the options for introducing best practice technology which may be available for a dam site. The potential capital costs are reflected in the financial development estimates as part of the implementation plan.

Investigate powered sites at market rate: The market rates being achieved for powered sites continue to increase.

Reintroduce fish stocking program: It is known that TCD did have a regular fish stocking program. Reintroducing this will help establish TCD as a venue for fishing events, competitions and also encourage stronger visitation by locals especially.

Address issue of micro plastics polluting lake: Finding ways to improve the water quality is an essential outcome because of the dependence on TCD to provide potable water to Isaac region communities.

Introduce a laundromat facility (user pays): With a focus on a higher quality destination holiday park rather than a more traditional form of caravan park, a user pays laundromat facility should be investigated, especially as the average length of time at TCD is over 3 days.

Upgrade toilet facilities and shower facilities: It is suggested that the existing toilet facilities and shower facilities be extended and upgraded to better reflect the needs of a more discerning local and visitor market to TCD. Expanded camping and caravan sites will put additional pressure on the limited number of shower and toilet facilities.

Investigate a heli pad for scenic flights and emergency services: Investigation into introducing a heli pad for various uses is suggested, especially to enhance the visitor experience and for events and festival goers amongst others.

Create tours for visitors including gold fossicking: The potential may exist to offer TCD as a visitor accommodation and recreational hub for those visitors wanting to base themselves within the Isaac region. With TCD as a hub, a number of tour options can be investigated including for gold fossicking, to visit heritage and historic sites, for mountain biking, trekking and horse riding etc.

Investigate differential rates for weekdays and weekends (different $ per site for weekdays and per site for weekends for unpowered sites): While weekend periods are known to be very busy and attract many locals, weekdays can be much quieter. A system of differential rates to encourage and incentivise visitation during mid-week periods needs to be investigated.

Investigate series of smaller scale non-peak season events (music, fishing competitions, triathlons): The site lends itself to the development of various events and festivals which might include fishing competitions, swimming, running, and cycling triathlons, music festivals etc. We note the success of more remote regional areas with various festivals and events including the 2,500 pax who turn up to the Outback Film Festival in Winton, the 10,000 who attend the Big Red Bash in Birdsville and the 4,000 who attend the Mount Isa Rodeo, just by way of examples.

Additional plans required for ongoing site management and maintenance: Develop a TCD Recreation and Campground Operational Management Plan and a TCD Environmental Management Plan.

Conduct a Flood Study: needed to define flood risk extent, assessment of impacts and management. The flood study will need to be based on hydrological modelling which can be regularly updated to take into consideration any flooding activity and ongoing changes.

8.3. Site Concept Development Plan

Figure 26 which follows offers a site Concept Development Plan layout. This offers a concept level Concept Development Plan to allow for the various development needs being both formalised facilities and unformalised.

Figure 27 offers a precinct plan to help simplify where the separate development components could be located to maximise usage but at sustainable levels.

Figure 26: Concept Development Plan

Figure 27: Precinct Plan

8.4. Capex

Analysis is provided at a concept design level of likely capital development costs to provide the various components desired (see Table 2). Due to the current challenges of supply system constraints and rapidly increasing construction material and labour costs, contingency escalation has been included to attempt to offer greater realism.

While the estimated capital cost may appear high, especially as many facilities already exist at TCD, what is provided as development components are elements noted by those survey respondents and from our own observations.

Until detailed design work is undertaken, it must be remembered that these costs are at a concept design level only, based on previous experience with similar projects. Total development costs are estimated at circa $9.04m and contingencies and fees are estimated at circa $2.98m, creating a total estimated construction and development cost of $12m.

By way of example, a new destination holiday park on a 7-9 ha. site and excluding land costs, would typically cost in the range of $20-$26m.

While it would be far cheaper to just offer a more traditional caravan and camping park which reflects more basic upgrades to what is at TCD currently, this, in our opinion, would not address the concerns and needs expressed by local stakeholders especially for:

- Improving site safety and the need for demarcation between pedestrian areas and separate parking and boat and caravan designated areas
- Offering a better range of sites to include powered and non-powered caravan and camping sites and introducing a small number of eco-cabins
- Improvements to the swimming area and ensuring it is designated as a safe zone away from boats etc
- improving the kid friendly elements so that TCD has more for families to do and enjoy, especially for locals.
- Having the ability to both stage development if required and in addition, to retain the ability to close off areas if demand is lower in offseason periods or mid-week.

Finally, by offering the upgrades and new amenities as suggested, the potential exists to go to the market to find either a destination holiday park operator with a strong marketing network already, and/or a range of contractors with vast experience and who can see the potential for additional revenue stream development.

Table 2: Estimated CAPEX

Estimated Capex	Size / Qty.	Unit	Rate per sqm	Subtotal	Total
Cabins + café upgrades					**$1,824,000**
Star Rating	3 star	5			
Size of larger cabins	50	sqm	$3,600	$180,000	$900,000
Café kitchen upgrade	30	sqm	$3,600	$108,000	$108,000
Open space/outdoor covered areas	120	sqm	$1,200	$144,000	$144,000
Fitout Cost (cabins and other facilities)	280	sqm	$2,400	$672,000	$672,000
Powered and unpowered sites					**$1,519,020**
No. powered sites (RV and Caravan)	43				
Size of sites	21.0	sqm	$540	$11,340	$487,620
No. unpowered sites (RV and Caravan)	84				
Size of sites	21.0	sqm	$450	$9,450	$793,800
No. unpowered sites (Camping)	55				
Size of sites	18	sqm	$240	$4,320	$237,600
Camp Kitchen + Toilet-shower upgrades					**$960,000**
Kitchen (new building)	80	sqm			
Construction Cost	80	sqm	$3,600	$288,000	
Fitout Cost	80	sqm	$2,400	$192,000	
Toilet + shower expansion and upgrades	80	sqm			
Construction Cost	80	sqm	$3,600	$288,000	
Fitout Cost	80	sqm	$2,400	$192,000	
Playground and waterfront deck seating					**$550,000**
upgraded play ground	200	sqm	$2,000	$400,000	
Waterfront deck seating	100	sqm	$1,500	$150,000	
Car park + boat ramp + boat trailer park					**$966,000**
Number of car spaces additional	10				
Car space area additional	15	sqm	$240	$36,000	
Boat trailer parking spaces (2 areas)	30				
Boat trailer parking area	50	sqm	$420	$630,000	
Boat ramp upgrades	100	sqm	$3,000	$300,000	
Landscaping/gardens/pathways/etc					**$507,000**
Landscape area	2,000		$30	$60,000	
Expanded beach cove	200	sqm	$180	$36,000	
Pontoon	65	sqm	$1,800	$117,000	
Formalised pathways	1,000	sqm	$60	$60,000	
Signage upgrades (7)	70	sqm	$1,800	$126,000	
Unformalised overflow camping (100 sites)	1,800	sqm	$60	$108,000	
Supporting infrastructure/misc.					**$2,716,000**
Road upgrades	400	sqm	$1,200	$480,000	
M&E Services	-	-	-	$200,000	
Incoming Hv/Lv Power Supply, Water Supply	1	-	-	$240,000	
Sewage Treatment Plant + water treatment plan	1			$1,700,000	
Envitube dewatering area - waste water	TBC			$0	
upgraded Wi-Fi connectivity	500			$96,000	
Contingency & fees					**$2,983,867**
Contingency escalation provision	10%				$904,202
Consultancy Charges (Financial, Legal, Planning, design)	7.00%				$632,941
project management	15.00%				$1,356,303
Government Compliance Charges & Approvals	1.0%				$90,420
Total development and fitout costs					**$9,042,020**
Total fees and contingencies					**$2,983,867**
Total CAPEX					**$12,025,887**

9. IMPLEMENTATION PLAN

The following provides the action implementation plan to assist in delivering the various priority projects identified in this document. It highlights the:

- activations needed to kick start this Concept Development Plan;
- key stakeholders who should collectively be engaged to drive public projects;
- indicative budget required for feasibility studies, or strategies required to be undertaken; and
- key performance indicators to ensure actions are implemented.

This implementation plan needs to be considered a working document and, as such, it needs to remain fluid to take account of the needs of different stakeholders and their ability to undertake actions along with their other responsibilities.

Stage 1

Recommendation	Action	Who	Budget	KPIs
Infrastructure upgrades	■ Ensure adequate infrastructure for onsite Water Treatment Plant and Sewage Treatment Plant	Council	$1.7m	■ Follow TCD Concept Development Plan approach and determine infrastructure corridors to be designated for utility supplies ■ Ensure adequate capacity for future growth and to allow for peak periods ■ Ensure utility facilities are well maintained
Playground upgrade	■ To replace existing playground with a far more exciting and bigger play area ■ A free family focussed value add to take TCD to the next level in quality	Council	$400k est.	■ Designate area and get quotes from suppliers ■ Select preferred quote ■ Construct and develop a regular maintenance program
Widened and Lengthened Boat Ramp	■ Determination of width requirements and lengthening ■ Address existing safety concerns and associated congestion	Council	$300k est.	■ Detailed concept design work and plans ■ Tender for construction ■ Undertake construction
Envitube Dewatering Area	■ Investigate introducing the Envitube dewatering system recommended by Aecom in July 2019 as a mechanism to address sediment levels and improve water capacity levels within TCD	Council	TBC	■ Complete required studies ■ Obtain a fixed price quote ■ Introduce as proposed by Aecom if viable and preferred by Council or assess alternative options

Stage 2

Recommendation	Action	Who	Budget	KPIs
Expanded Beach Cove Area	■ To offer a larger and safer swimming area ■ Earthworks required to widen beach area	Council	Est. $36k	■ Undertake design work to ensure expansion occurs within site constraints ■ Council or contractor to undertake the work to widen the cove and improve access into the water
Pontoon	■ Needed as part of expanded swimming area	Council	$117k est.	■ Options for best pontoon identified by Council ■ Potential to possibly locate near new or new pontoon ■ Secure pontoon in optimal location at beach cove
10 Car Spaces	■ Additional formalised car parks to support the café and to allow for more casual diners- visitors rather than those staying on site	Council	$36k	■ Follow TCD Concept Development Plan approach and refine area if required ■ Develop formal car parking sites and introduce landscaping at same time if required
Camp Kitchen	■ Required to address current lack of formalised cooking facility ■ Address health issue with visitors washing dishes in bathroom area	Council or operator	$480k	■ Follow TCD Concept Development Plan approach and refine area if required ■ Develop with expanded bathroom facilities construction at same time ■ Ensure all supporting infrastructure is included ■ Investigate prefab options along with unique build option ■ Engage contractor
Boat Trailer Parking 30 Bays	■ Improve site safety and remove congestion by creating a large, designated area for boat trailer parking	Council	$630k	■ Follow TCD Concept Development Plan approach and refine area if required ■ Develop formalised parking bays ■ Ensure all supporting infrastructure is included such as unsealed access roads and signage
Signage upgrades	■ Introduce new and improved signage to support park safety, use of pedestrian only areas and swimming areas	Council	$126k	■ Follow TCD Concept Development Plan approach and determine signage locations ■ Ensure quality signs are erected which are easy to maintain ■ Ensure consistency in signage style
Supporting road upgrades	■ With more formalised caravan and camping sites and separate areas for boat trailer parking and car parking, existing roads need upgrading and new roads need to be formed	Council	$480k	■ Determining location of access ways-roads throughout the site to update the Concept Development Plan for TCD ■ Ensure clear separation between vehicles and pedestrians for improved site safety ■ Ensure quality road base is applied which is appropriate to the site ■ Ensure roads are well maintained
Infrastructure upgrades	■ Ensure adequate infrastructure upgrades to cater for increased caravan and camping sites and covering toilets and shower upgrades, M&E services, electricity supply, Wi-Fi and telecommunications	Council	$1.016m	■ Follow TCD Concept Development Plan approach and determine infrastructure corridors to be designated for utility supplies ■ Ensure adequate capacity for future growth and to allow for peak periods ■ Ensure utility facilities are well maintained

Stage 3

Recommendation	Action	Who	Budget	KPIs
Landscaping upgrades	■ Link to a staging plan for development of TCD so each precinct gets its landscape upgraded when development occurs	Council	$60k	■ Follow the current vegetation study requirements for the site to ensure consistency ■ Ensure sufficient shade trees to offer attractive camping, caravan, and picnicking sites
Waterfront Deck Seating	■ Determination of exact locations for seating platforms	Council	$150k est.	■ Detailed concept design work and plans ■ Tender for construction ■ Undertake construction
Cafe Kiosk Kitchen	■ Upgrade to existing café kitchen as too small and needs updating ■ Expanded camping and caravan capacity supports need for expansion as well	Council or operator	$324k includes fit out	■ Redesign of kitchen area required and council approval ■ Construction contract with design drawings let ■ Upgrade kitchen undertaken and operational
43 Formalised Powered Sites (RV and Caravan)	■ New powered sites up behind ski club building to increase site capacity ■ Includes formalising the existing sites near the waterfront and changing them to powered sites	Council or operator	$488k est.	■ Follow TCD Concept Development Plan approach and refine area if required ■ Develop formal sites and introduce landscaping at same time ■ Ensure all supporting infrastructure is included
Up to 5 Eco Cabins	■ A new facility to expand accommodation options for a broader market	Council or operator	$1.38m	■ Follow TCD Concept Development Plan approach and refine area if required ■ Develop formal sites and introduce landscaping at same time ■ Ensure all supporting infrastructure is included ■ Investigate prefab options along with unique build ■ Engage contractor
Decks Facing Water	■ Attached to each of the eco cabins offering indoor-outdoor entertainment area	Council or operator	$120k	■ Follow TCD Concept Development Plan approach and refine area if required ■ Develop with eco cabin construction at same time ■ Ensure all supporting infrastructure is included ■ Investigate prefab options along with unique build option ■ Engage contractor
84 Formalised Unpowered RV and Caravan Sites	■ This will formalise new sites along main access route into TCD ■ These sites are existing within the area between the café and the lake but are yet to be formalised ■ These sites are around the lake further beyond the ski club building	Council or operator	$794k	■ Follow TCD Concept Development Plan approach and refine area if required ■ Develop formal sites and introduce landscaping at same time ■ Ensure all supporting infrastructure is included
55 Formalised Unpowered Camping Sites	■ Introduced to help formalise sites and expand capacity ■ These sites are around the lake further beyond the ski club building	Council or operator	$238k	■ Follow TCD Concept Development Plan approach and refine area if required ■ Develop formal sites and introduce landscaping at same time ■ Ensure all supporting infrastructure is included

Uniformalised Overflow Camping	■ This is a large area on the access road into TCD and needs minimal work to ensure it remains available for peak periods such as Easter and for larger events and competitions and offers 60 potential unpowered sites	Council or operator	$108k	■ Follow TCD Concept Development Plan approach and refine area if required ■ Develop uniformalised sites and introduce landscaping at same time where required ■ Ensure all supporting infrastructure is included such as unsealed access roads
Formalised Pathways	■ The pathway extends from the boat ramp around the lake edge to the northwestern side	Council	$60k	■ Follow TCD Concept Development Plan approach and refine alignment if required ■ introduce landscaping at same time where required ■ Ensure all supporting infrastructure is included such as signage etc

10. APPENDICES

Appendix 1 **TCD Dredging and Water Improvement Systems**

Appendix 2 **Full Survey Questions**

Appendix 3 **Benchmarks**

GPS & HYDROGRAPHIC SERVICES PTY LTD
ACN 126362123

PO BOX 606 NERANG QLD 4211
PH 0438 762 886
FAX 07 5578 1990
EMAIL mail@gpshydro.com.au

20th May 2021

Theresa Creek Post Dredge Volume Report

Attn: Andrew Cochrane

The total volume removed from the Theresa Creek dredge area has been calculated by a TIN to TIN surface comparison using the Terramodel V10.61 CAD software package.
The calculation was limited by a boundary string and a maximum triangle side of 10m used.

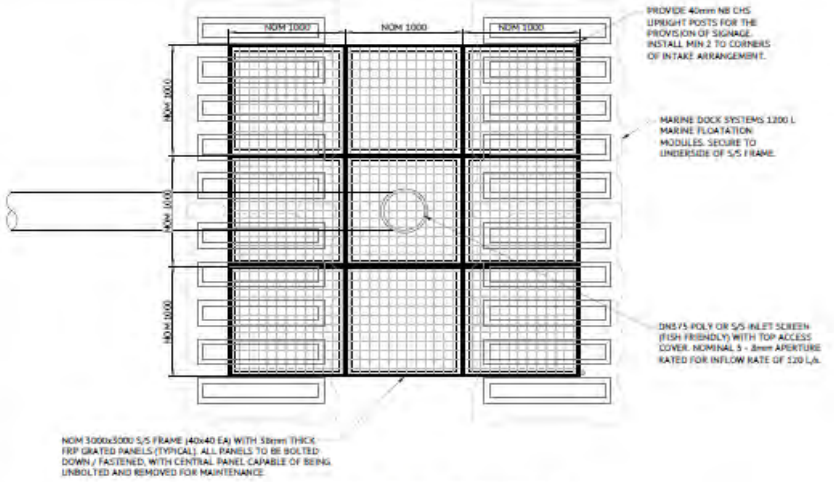
Surface 1 – Pre dredge survey 9/4/21 Surface 2 – Post dredge survey 19/5/21

Total volume removed = 15,222m³

```
Project: C:\Terramodel Data\1362 Dredging Solutions Theresa Ck\1362 Theresa Ck.pro
Report Generated:      Thursday, 20 May 2021 9:07:41 PM
-------------------------------------------------------------------------------

Where the second surface is above the first the volume is reported as fill.
Where the second surface is below the first the volume is reported as
excavation.
-------------------------------------------------------------------------------

Shrinkage/swell factors:      Excavation   1.0000              Fill    1.0000
First Surface                  Number      Second Surface              Number
Layer Name                     of Points   Layer Name                  of Points
-------------------------------------------------------------------------------

210408 PRE                        3,311        210519 POST              4,049

Volume limited to that within the constraining boundary - Object  5911
Area within boundary: 18,340.86 m2  (1.83 Ha)
Total triangulated area: 18,301.83 m2  (1.83 Ha)

Excavation Volume (m3)                    Fill Volume (m3)
-------------------------------------------------------------------------------

                15,222.2                                  13.6
```

Kind regards

Jon Pike
Director
GPS & Hydrographic Services Pty Ltd



PLAN - FLOATING INTAKE ARRANGEMENT

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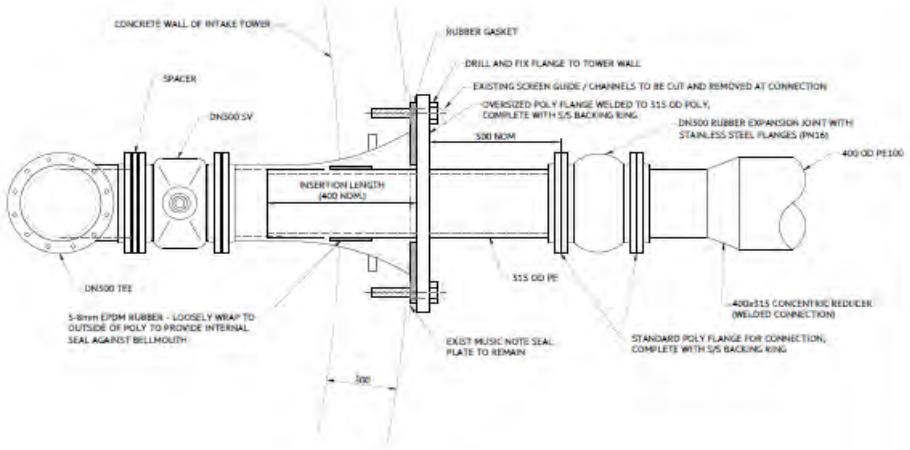

TOWER INTAKE CONNECTION

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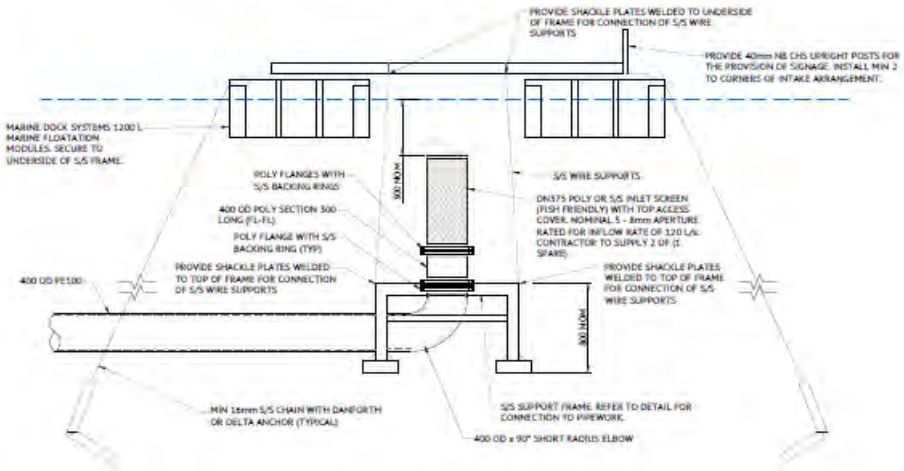

ELEVATION - FLOATING INTAKE ARRANGEMENT

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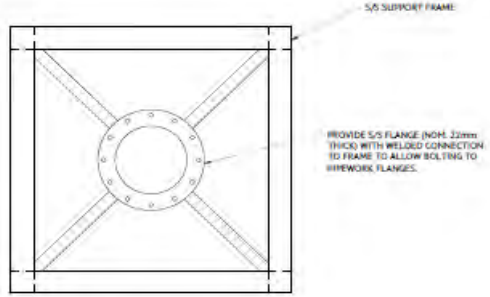

SUPPORT FRAME PIPEWORK CONNECTION DETAIL

SCALE 1: 10

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10/08/20	4	ISSUE FOR TENDER	-	-
24/07/20	3	FOR APPROVAL	-	-
21/07/20	2	REVISED FOR INFORMATION	-	-
10/06/20	1	FOR INFORMATION	-	-
DATE	REV	DESCRIPTION	DES	APP

Premise
MACKAY OFFICE
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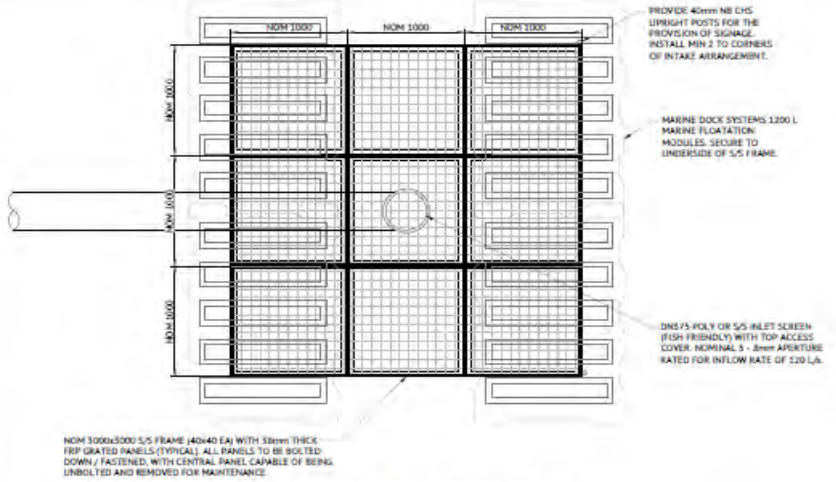
MACKAY, QLD 4740
PH: (07) 4829 5660
WEB: www.premise.com.au

L.LORD
J.O'NEILL
C.JESSUP

SCALE 1:20 (A1)
SCALE 1:10 (A1)

CLIENT: ISAAC REGIONAL COUNCIL
PROJECT: CLERMONT RAW WATER SUPPLY (IMPROVEMENT & AUGMENTATION) PROJECT
LOCATION: THERESA CREEK DAM, CLERMONT QLD
DRAWING TITLE: FLOATING INTAKE ARRANGEMENT DETAILS

JOB CODE: IRC-0062
DRAWING NUMBER: SKC001
REV: 5



PLAN - FLOATING INTAKE ARRANGEMENT

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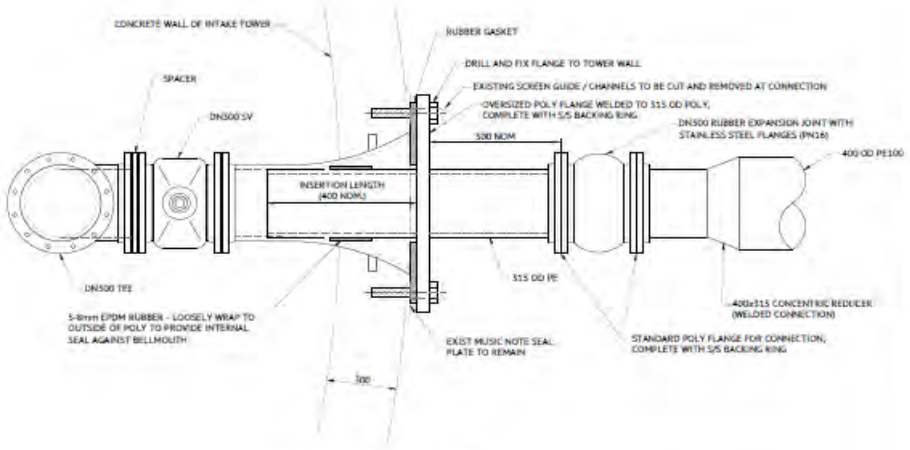

TOWER INTAKE CONNECTION

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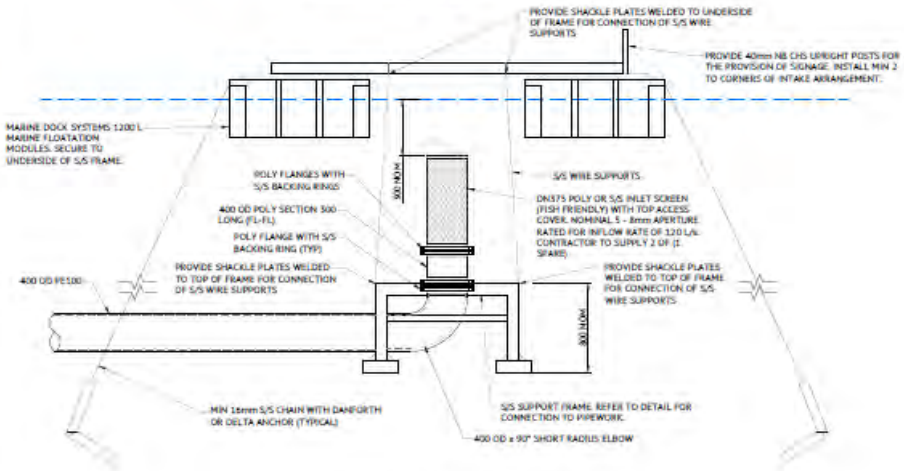
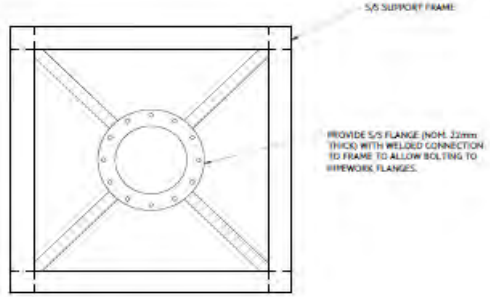


ELEVATION - FLOATING INTAKE ARRANGEMENT

SCALE 1: 20



SUPPORT FRAME PIPEWORK CONNECTION DETAIL

SCALE 1: 10

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10/08/22	4	ISSUE FOR TENDER	-	-
24/03/22	3	FOR APPROVAL	-	-
21/01/22	2	REVISED FOR INFORMATION	-	-
16/09/21	1	FOR INFORMATION	-	-
DATE	REV	DESCRIPTION	DES	APP

Premise
MACKAY OFFICE
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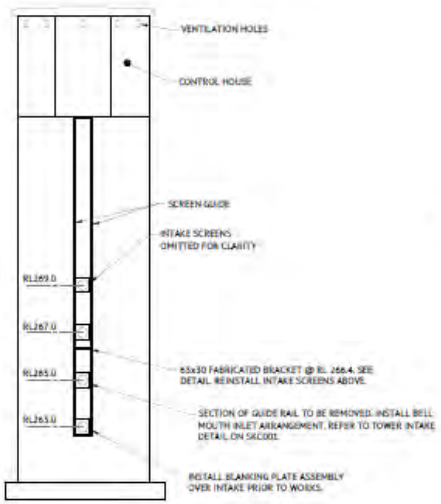
PH: (07) 4829 5660
WEB: www.premise.com.au

DESIGNED: L.LORD
CHECKED: J.O'NEILL
PROJECT MANAGER: C.JESSUP

SCALE 1:20 (A1)
SCALE 1:10 (A1)

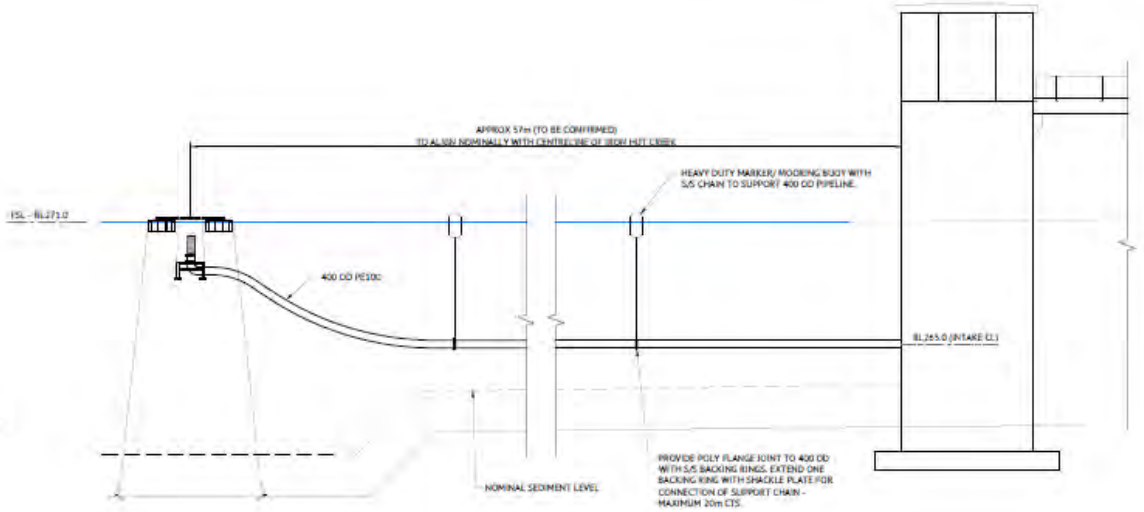
CLIENT: ISAAC REGIONAL COUNCIL
PROJECT: CLERMONT RAW WATER SUPPLY (IMPROVEMENT & AUGMENTATION) PROJECT
LOCATION: THERESA CREEK DAM, CLERMONT QLD
SHEET TITLE: FLOATING INTAKE ARRANGEMENT DETAILS

JOB CODE: IRC-0062
SHEET NUMBER: SKC001
REV: 5



INTAKE TOWER - SOUTHERN ELEVATION

NTS



INTAKE TOWER - EASTERN ELEVATION

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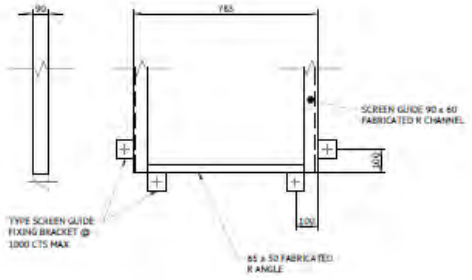

TYPICAL BRACKET DETAIL

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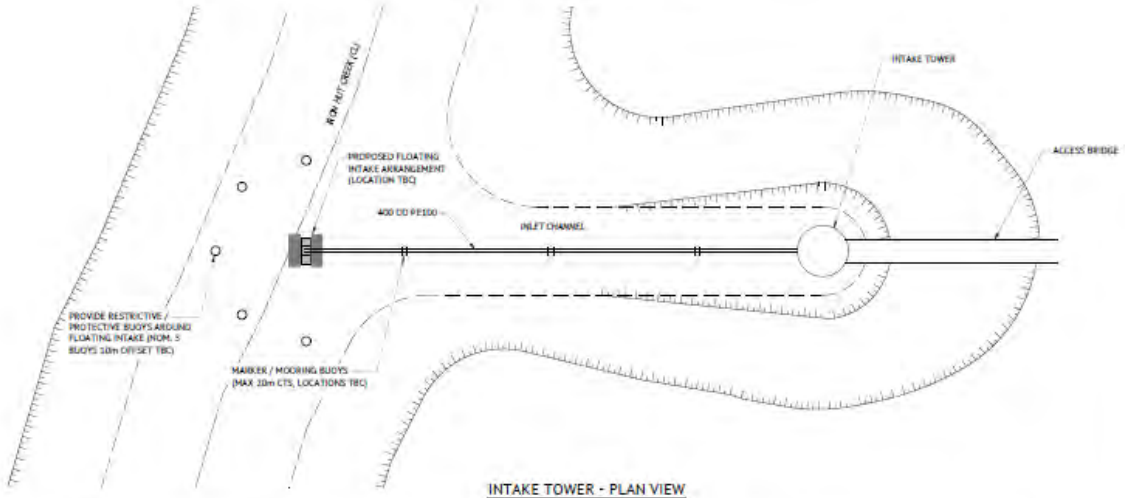

INTAKE TOWER - PLAN VIEW

NTS

PRELIMINARY ISSUE

ISS/REV	NO	DESCRIPTION	DRN	APP
ISS/REV	4	PRELIMINARY ISSUE		
ISS/REV	3	ISSUE FOR TENDER		
ISS/REV	2	FOR APPROVAL		
ISS/REV	1	REFERENCE INFORMATION		
ISS/REV	0	FOR INFORMATION		
DATE	REV	DESCRIPTION	DRN	APP

Premise

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PH: (07) 4829 5666
WEB: www.premise.com.au

DRAWN: A.LORD
CHECKED: J.O'NEILL
PROJECT MANAGER: C.JESSUP

SCALE: 0 0.4 0.8 1.2m — SCALE 1:20 (A1)
0 0.2 0.4 0.6m — SCALE 1:10 (A1)
ORIGINAL SHEET SIZE A1

CLIENT: ISAAC REGIONAL COUNCIL
PROJECT: CLERMONT RAW WATER SUPPLY (IMPROVEMENT & AUGMENTATION) PROJECT
LOCATION: THERESA CREEK DAM, CLERMONT QLD
SHEET TITLE: INTAKE TOWER CONNECTION DETAILS

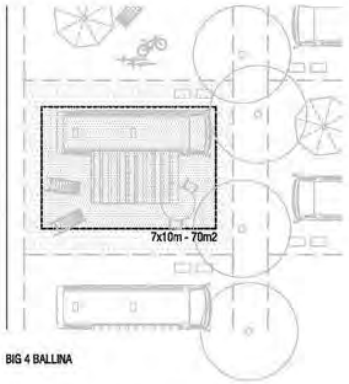
DRAWING NO: IRC-0062
SHEET NUMBER: SKC002
REV: 5

Appendix 2 Full Survey Questions

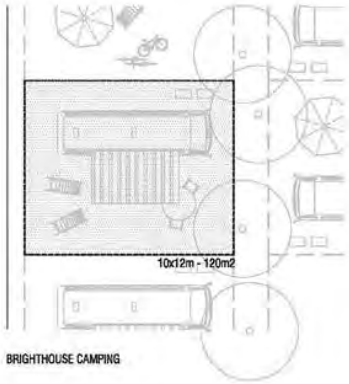
+ User Survey

1. What would you classify yourself as?
2. Do you feel the TCD recreational assets provide the Clermont community with social benefits in using the asset?
3. Do you feel the visitation of non-Clermont residents to the TCD recreational assets provides an economic return to the Clermont community?
4. Would you support Council to seek external (State/Federal) competitive funding programs to achieve investment in the Theresa Creek Dam recreational assets or would you prefer funding to be invested in other existing Council assets?
5. How often, on average, do you use Theresa Creek Dam
6. Please indicate what activities you tend to undertake when visiting Theresa Creek Dam
7. When you visit Theresa Creek Dam, how often do you camp overnight there?
8. If Theresa Creek Dam could be enhanced to encourage greater use by you, what would you like to see introduced on-site?
9. If Theresa Creek Dam could be enhanced to encourage greater use by you, what would you like to see introduced on-site? (Other (please specify))
10. Do you have any specific examples of what children activities you wish to see?
11. Would you go to Theresa Creek Dam more regularly if any of the above facilities were introduced?
12. Why?
13. If there was a nominal charge for using Theresa Creek Dam to help pay for its upkeep, would you be prepared to pay it, assuming some upgrades occurred?
14. Do you have any other comments or suggestions you would like to make?

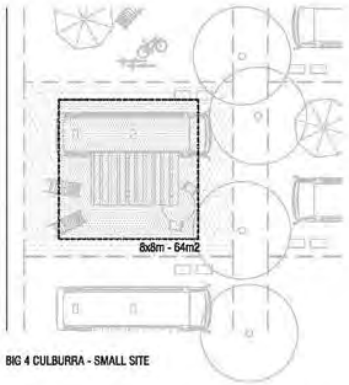
Appendix 3 Benchmarks



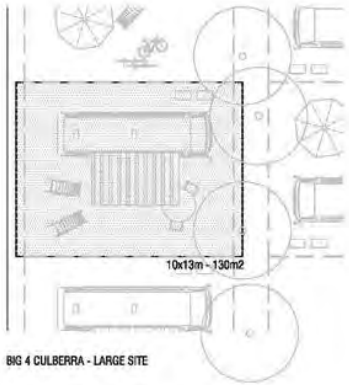
BIG 4 BALLINA



BRIGHTHOUSE CAMPING



BIG 4 CULBURRA - SMALL SITE



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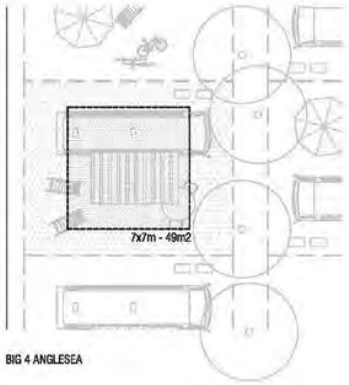
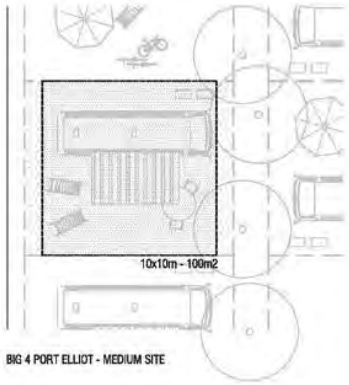


BIG 4 ANGLESEA



BIG 4 PORT ELLIOT - MEDIUM SITE

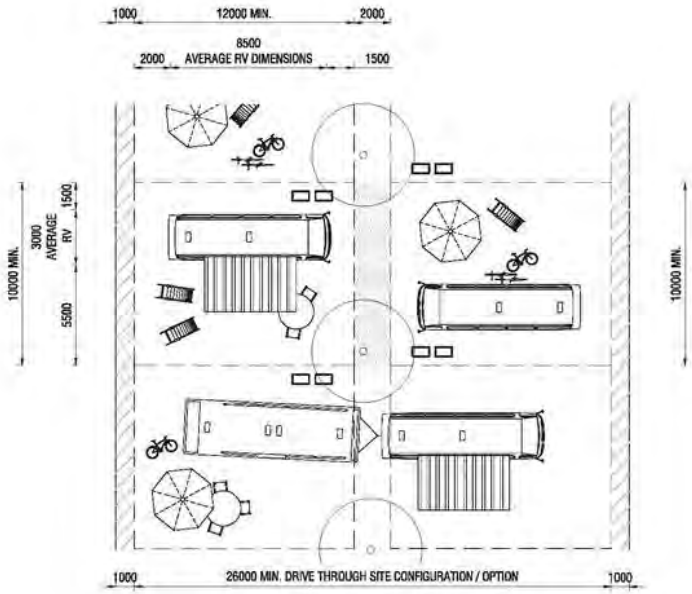
PROJECT EXAMPLES - SITE DIMENSIONS

BENCHMARK DIMENSION AVERAGES:

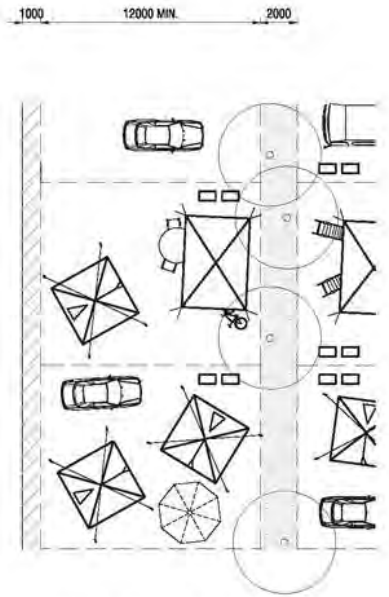
AVERAGE BENCMARK DIMENSIONS: 8x11m - 88M2

PROPOSED RV / POWERED CAMPING SITE DIMENSIONS: 10X12m MINIMUM - 120M2

APPROXIMATELY 36% INCREASE OF SIZE FROM AVERAGE BENCHMARK DIMENSIONS.



TYPICAL SITE OCCUPATION BY RVS & CARAVANS



TYPICAL SITE OCCUPATION BY TENTS & CARS

PROJECT EXAMPLES - ECO CABINS

1-2. Les Échasses Golf & Surf Eco Lodge, Saubion

3. Tree Snake Houses

4-5. Ecocamp Cocoon Comporta

6-7. Stinessen Arkitektur Manshausen Island Resort

1-3. Werribee South Boat Ramp

4. Werribee South Boat Ramp Plan - 1:1250 @A3

PROJECT EXAMPLES

1. Burns Old Mill Park
2-3. Saltwater Coast Crocodile Park
4. Camp Kitchen
5. Flying Fox into Water
6. Timber Decking
7. Beach