CITY OF KARRATHA
WATERPARK FEASIBILITY STUDY



City of Karratha

TREDWELL

donovan payne architects

The City of Karratha and Tredwell acknowledges the Traditional Owners throughout this vast land and their continuing connection to the land, waters and community. We pay our respects to Elders past, present and emerging; and extend that respect to all Aboriginal and Torres Strait Islander peoples today.

Document Control

Date	Details
31/08/2026	City of Karratha Waterpark Feasibility Study - Final Report

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00 Executive Summary



Executive Summary

Purpose of the Study

The City of Karratha (the City) has undertaken a comprehensive feasibility study to investigate the potential development of a waterpark facility within the Local Government Area. The study responds to sustained community interest in enhanced water-based recreation opportunities and seeks to determine whether a waterpark or similar facility is viable, appropriate and aligned with the City's strategic priorities, community needs and long-term financial responsibilities.

The study provides an evidence-based assessment of potential facility types, demand, suitable locations, concept scenarios, operational requirements, and financial implications to support future Council decision-making regarding potential investment in waterplay infrastructure.

Located in the Pilbara region of Western Australia, approximately 1,535 kilometres north of Perth, the City services a population of approximately 25,429 residents across Karratha, Dampier, Roebourne, Wickham and Point Samson. Karratha functions as the primary regional centre and administrative hub for the area.

The City currently provides aquatic recreation through facilities including the Karratha Leisureplex, which includes 50 metre and 25 metre lap pools, a children's pool and splash pad, as well as additional aquatic facilities in Wickham and Roebourne. While these facilities provide an important baseline level of service, community feedback has consistently identified a desire for expanded and more diverse waterplay opportunities, including a dedicated publicly accessible facility.

The study aligns with the City's Strategic *Community Plan 2020–2030, Council Plan 2025–2035* and *Community Infrastructure Plan 2025–2035* by recognising the importance of waterplay, leisure and recreation facilities in supporting healthy, connected communities.

Community Demand and Engagement Findings

Community and stakeholder engagement undertaken as part of the study demonstrated strong and consistent support for enhanced waterplay provision across the City.

Engagement activities included community drop-in sessions, an online public survey, stakeholder interviews, and Councillor and staff workshops. The online survey received strong community participation, with 99% of respondents supporting public investment in improved waterplay facilities and 96% indicating they had used existing aquatic facilities within the City within the previous 12 months.

Feedback identified that current demand is constrained by limitations within existing facilities, including insufficient variety, limited shade and heat protection, overcrowding, and a lack of suitable opportunities for older children and teenagers. The strongest design priorities for future waterplay facilities identified were shade, waterslides, adventure-style play elements, dedicated youth areas, toddler facilities and supporting amenities including toilets and changerooms.

Community feedback indicated a preference for a balanced network approach, with 60% of survey respondents supporting a combination of one larger destination-style facility supported by smaller distributed waterplay opportunities across the City. There was also strong support for a user-pays model where quality facilities were provided, with 85% of respondents indicating a willingness to pay for access.

The Councillor workshop identified a clear appetite for a mid-to-large scale waterplay outcome, ranging from a district/community waterplay facility through to a regional water playground/waterpark. Councillors recognised the opportunity for a facility to respond to the Region's climatic conditions, improve community liveability, support families and young people, and enhance the City's regional profile. However, there was also strong recognition of the need to balance destination appeal with affordability, long-term operational sustainability, and responsible investment.

Recommended Facility Type and Scale

The assessment identified that there is no single defined "waterpark" model, with facilities ranging from small local splash pads through to large commercial waterparks. For the purposes of this study, a hierarchy of facility types was established to assess appropriate scale, including 1. Incidental/ Urban Water Feature, 2. Local/Neighbourhood Waterplay, 3. District/Community Waterplay, 4. Regional Water Playground/Waterpark and 5. Major/Commercial Waterpark.

Based on the demand assessment, community feedback, demographic profile, climatic conditions, case study benchmarking and indicative demand modelling, the strongest alignment is with a district/community-scale waterplay facility with potential to incorporate regional destination elements.

A major commercial waterpark was considered outside the likely scale and operational requirements of the City, while smaller incidental facilities were considered insufficient to meet identified community expectations. A district/community facility provides the most appropriate balance between community accessibility, destination value, capital investment, operational sustainability and long-term adaptability.

The analysis indicates that a well-designed facility could support high utilisation, particularly during warmer months, after-school periods, weekends and school holidays. Karratha's climate, strong family population profile, existing aquatic participation levels and limited alternative cooling recreation opportunities provide a strong foundation for sustained demand.

Site Assessment and Shortlisted Locations

A total of 25 potential sites were identified and assessed across Karratha, Dampier, Wickham, Roebourne and Point Samson. The assessment considered accessibility, planning constraints, environmental factors, servicing and infrastructure, future land use compatibility, overall site suitability, and prioritisation (best use). While a broad range of sites were initially considered, relatively few demonstrated the combination of land availability, accessibility, servicing, supporting infrastructure, environmental suitability and integration opportunities required to accommodate a district/community or regional-scale waterplay facility.

Four sites were shortlisted for further investigation and concept development:

- Dampier Foreshore
- Karratha Leisureplex
- Richardson Way/Country Club
- Bulgarra Sporting Precinct

Each shortlisted site presents different opportunities and constraints:

Dampier Foreshore provides a highly visible coastal recreation setting with strong tourism and destination potential. However, coastal hazards, tenure uncertainty, servicing constraints and environmental exposure present additional delivery considerations and risks.

Karratha Leisureplex provides the strongest operational integration opportunity due to existing aquatic infrastructure and site services, staffing, management systems, accessibility, and established community use. The site provides potential for a district/community facility and, subject to future precinct masterplanning and land availability, could potentially accommodate a larger regional-scale facility outcome.

Richardson Way provides significant capacity for a larger regional recreation precinct outcome, with opportunities for integration with future recreation and tourism development. However, flood risk, ground conditions, servicing requirements and higher development costs create additional feasibility challenges.

Bulgarra Sporting Precinct provides an accessible community recreation location with strong integration into an established sporting precinct. The site is suitable for a district/community-scale splash pad outcome, although existing event uses, flooding considerations and operational interfaces require mitigation and management.

Concept Scenario Assessment

Four concept scenarios were developed to test different facility models and site responses.

The assessment considered environmental sustainability, community value, site suitability, risk and compliance, tourism benefits, capital cost, operational and lifecycle costs, operational complexity, strategic alignment and impacts on existing facilities.

The overall assessment identified:

Concept Scenario 2 - Karratha Leisureplex as the strongest overall option, achieving the highest feasibility outcome due to its ability to leverage existing aquatic infrastructure, established operational systems, strong accessibility, and reduced operational risk. Integration with the existing Leisureplex provides significant advantages through shared staffing, water quality management, emergency response capability and existing visitor patterns.

Concept Scenario 4 - Bulgarra Sporting Precinct achieved a moderate feasibility outcome, providing

a lower-cost, community-focused splash pad opportunity with strong accessibility and integration into an existing recreation precinct. As a free-entry facility, it would provide broad community access but would not generate direct admission revenue, with ongoing operational, maintenance and lifecycle costs remaining a Council responsibility.

Concept Scenario 1 - Dampier Foreshore provides strong tourism and coastal destination opportunities but presents increased delivery risks associated with tenure, coastal hazards, servicing, potential latent site conditions and environmental exposure.

Concept Scenario 3 - Richardson Way/ Country Club provides the greatest opportunity for a regional destination facility; however, it also presents the highest capital investment, operational complexity and delivery risks due to site constraints and infrastructure requirements.

Financial and Operational Considerations

Indicative financial modelling was undertaken for all four concept scenarios, including capital costs, operational costs, revenue assumptions, lifecycle renewals and potential funding considerations.

Indicative capital costs are preliminary estimates only and exclude project-specific costs such as land acquisition, statutory approvals, legal and financing costs, relocation costs, credits for salvaged materials, and escalation beyond December 2029 (assumed completion date).

Indicative capital costs (excluding GST) are approximately:

- Dampier Foreshore - $11.9 million
- Karratha Leisureplex (excluding optional Learn-to-Swim Program Pool) - $13.5 million
- Richardson Way/Country Club - $27.5 million
- Bulgarra Sporting Precinct - $10.7 million

The analysis confirms that all waterpark facilities require ongoing operational investment. While splash pads generally have lower operational complexity than larger aquatic facilities, they are not maintenance-free assets and require ongoing technical operation, water quality management, preventative maintenance and regulatory compliance.

Standalone splash pad facilities would generally operate without routine lifeguard supervision; however, appropriately trained technical operators would still be required to manage water treatment systems and maintain compliance. Facilities incorporating waterslides, such as the Karratha Leisureplex and Richardson Way concepts, would require additional supervision, emergency response capability and higher operational staffing requirements.

The Karratha Leisureplex option provides the greatest operational efficiencies through integration with existing aquatic infrastructure and management systems. In comparison, standalone concepts would require the establishment of dedicated operational arrangements and additional management processes, including water quality management, technical maintenance, asset inspections, contractor procurement and operational oversight.

The Karratha Leisureplex option also provides greater potential to support ongoing operating costs through admission and ancillary revenue streams. This is relevant when compared with free-entry options such as Bulgarra Sporting Precinct, which would require ongoing operational and maintenance investment without direct admission revenue. Community engagement indicates that 85% of survey respondents would be willing to pay for access where quality facilities are provided, supporting consideration of a user-pays component for an appropriately designed destination facility.

Overall Findings and Future Considerations

The feasibility assessment demonstrates that there is strong community demand and strategic justification for improved waterplay provision within the City. Waterplay is identified not only as a recreation opportunity, but also as an important climate-responsive community asset supporting liveability, family wellbeing and access to cooling infrastructure during extreme heat conditions.

The evidence supports the development of a district/community-scale waterplay facility, with the potential to incorporate regional destination elements through design, programming, staged development or future expansion. A larger regional-scale outcome remains achievable but would require a higher level of capital investment, operational commitment and resolution of site-specific constraints.

The findings indicate that the Karratha Leisureplex provides the strongest overall feasibility profile due to its central location, existing infrastructure, operational efficiencies and ability to integrate with the City's broader aquatic and recreation network.

Future consideration should also include the potential role of smaller distributed waterplay facilities across the City including in Wickham and Roebourne, to complement a primary destination facility and improve equitable access across the region. Waterplay opportunities should also be considered through future public open space and recreation planning, particularly where new or renewed public open spaces provide suitable locations and community demand supports their inclusion.

Any decision to progress capital investment in waterplay infrastructure should also recognise the ongoing operational and lifecycle commitment required to operate, maintain and renew these assets. While smaller splash pad facilities generally have lower operational complexity than larger aquatic facilities, all waterplay infrastructure requires ongoing water quality management, technical operation, preventative maintenance, asset management and lifecycle investment. Larger facilities incorporating waterslides and other aquatic attractions require additional staffing, supervision, emergency response and operational resources.

Similarly to many aquatic facilities and waterparks operated by Councils across Western Australia, all options will require a significant ongoing operational subsidy and lifecycle costs that will need to be funded by the City and included in the long term financial plan.

The outcomes of this study provide a robust evidence base to guide future planning, business case development, funding investigations and potential inclusion of waterplay infrastructure within the City's broader recreation and public open space planning framework.

01 Introduction



Project Background

The City of Karratha is undertaking a comprehensive feasibility study to assess the potential development of a waterpark facility within the Local Government Area. This study responds to sustained community interest in enhanced water-based recreation and seeks to determine whether a waterpark or similar facility is viable, appropriate, and aligned with the City's strategic priorities and fiscal responsibilities. The outcome will provide clear, evidence-based direction to inform future planning and investment decisions.

Located in the Pilbara region of Western Australia, approximately 1,535 kilometres north of Perth, the City services a population of around 25,429 residents across the towns of Karratha, Dampier, Roebourne, Wickham, and Point Samson. Karratha functions as the primary regional centre and administrative hub for the area.

The City currently provides aquatic recreation through several facilities, including the Karratha Leisureplex, which features 50 metre and 25 metre lap pools, a children's pool, and a splash pad. Additional facilities are located in Wickham and Roebourne. While these assets provide a baseline level of service, ongoing community feedback has identified a strong desire for expanded waterplay opportunities, including a dedicated, publicly accessible facility.

This project is informed by the City's *Strategic Community Plan 2020-2030* and *Council Plan 2025-2035*, both of which highlight the need for enhanced sport, recreation, and leisure infrastructure. The *Community Infrastructure Plan 2025-2035* further reinforces this direction, identifying the requirement to investigate the feasibility and potential locations for a waterpark facility across the City. Preliminary investigations into expanding existing facilities have indicated limited viability, reinforcing the need for a more comprehensive assessment.

As the concept of a 'waterpark' remains undefined within the local context, this study will explore a range of potential models, scales, and delivery approaches. Key components include a needs assessment, site selection analysis, concept scenario testing, and financial feasibility. Community and stakeholder engagement forms a critical part of this process, ensuring local needs and expectations are clearly understood and integrated with technical analysis.

For the purposes of this study, the term waterpark is used broadly to describe a range of water-based recreation facilities. These facilities may vary significantly in scale and complexity, from smaller splash pads and interactive waterplay areas through to larger destination-style facilities incorporating waterslides, waterplay structures, supporting amenities, and other recreational attractions. As such, references to a waterpark throughout this report should be interpreted as encompassing a spectrum of potential facility types and delivery models rather than a single, predefined facility format.

Project Methodology

Stage 1 – Project Initiation

Stage 2 – Background Review, Research and Case Studies

Stage 3 – Engagement Phases 1 and 2

Stage 4 – Site Identification and Analysis

Stage 5 – Develop Concept Scenario Options

Stage 6 – Financial Modelling

Stage 7 – Draft Feasibility Report

Stage 8 – Final Feasibility Report

02

Background Review, Research and Case Studies



Literature Review

A variety of strategic and planning documents are integral to the successful planning and development of waterpark facilities. A comprehensive review of relevant national, state, regional, and local-level documents has been conducted, highlighting key directions, strategies, and policies that inform the development of waterpark facilities within the City.

The following documents were reviewed for this literature review.

National Level Documents

- Royal Life Saving Australia Guidelines for Safe Pool Operations
- Royal Life Saving Australia National Aquatic Industry Development Strategy
- Royal Life Saving Australia State of Aquatic Facilities 2025
- Australian Water Safety Council – Australian Water Safety Strategy 2030
- Australian Standard AS 3533 – 2009 Amusement rides and devices

State Level Documents

- WA Health (Aquatic Facilities) Regulations 2007
- Code of Practice for the Design, Construction, Operation, Management and Maintenance of Aquatic Facilities, WA Department of Health
- Aquatic Facilities Water Spray Grounds and Interactive Water Features Application, Design & Operating Requirements Environmental Health Guide, WA Department of Health

Local Level Documents

- City of Karratha Council Plan 2025–2035
- City of Karratha Community Infrastructure Plan 2025–2035
- Land Allocation Study 2025 (confidential)
- Preliminary Pre-Feasibility Memo – Karratha Leisureplex 2015
- City of Karratha Revitalisation Strategy 2015
- Karratha City Centre Precinct Structure Plan (in progress)
- The Economic Development and Tourism Strategy 2025–2035
- Karratha Leisureplex Facility Improvement Plan/Masterplan 2020
- Dampier Masterplan
- Dampier Tourist Park Feasibility Report
- Karratha Tourism Park - Phase 1 - Project Initiation & Site Investigation (confidential)

Other Documents

- NSW ‘Everyone Can Play’ Guidelines

The literature review informed the key considerations applied throughout the feasibility study, including strategic alignment, facility classification, design and operational requirements, water safety and regulatory compliance, accessibility and inclusion, maintenance considerations, and integration with existing community infrastructure. The review highlighted the importance of considering waterpark facilities as community assets that require appropriate planning, ongoing operational management and lifecycle investment. These considerations have informed the site assessment, concept development and operational analysis undertaken as part of this study.

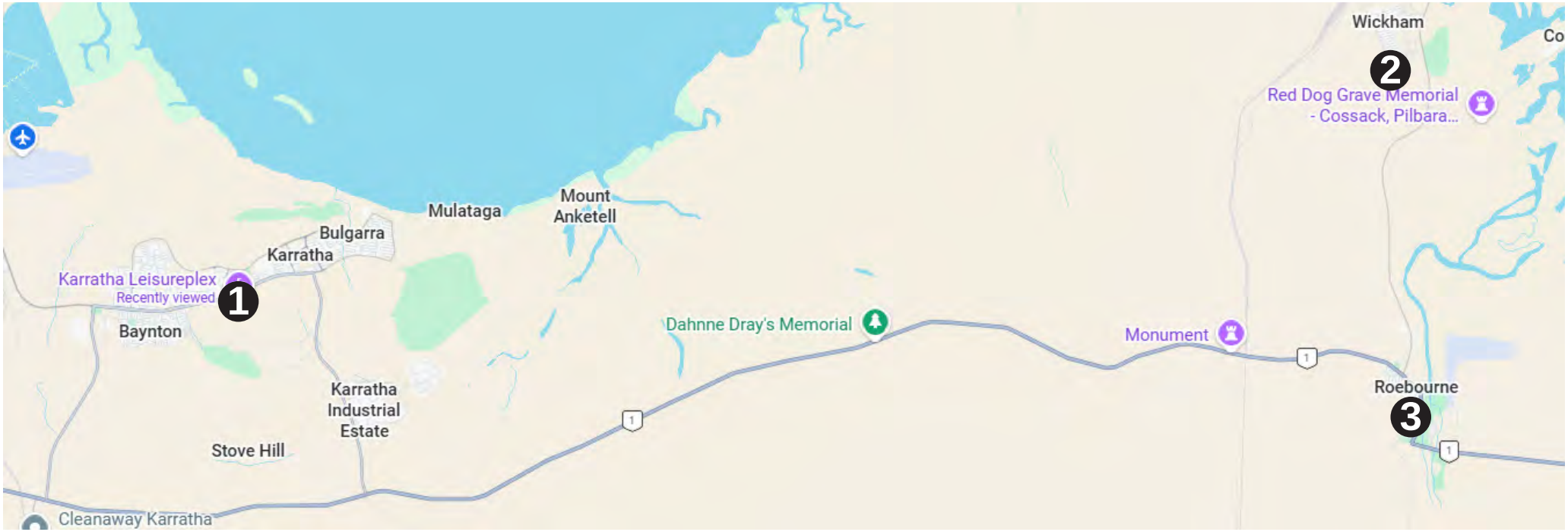








Existing Aquatic Facilities Context



1 Karratha Leisureplex

50m lap pool, 25m children's pool, splash pad and aqua run

2 Wickham Recreation Precinct

25m pool and splash pad

3 Roebourne Aquatic Centre

50m pool with beach style entry and recreation space







Waterpark Types and Hierarchy

There is no formal national hierarchy for waterpark facilities in Australia. The following typologies have been developed based on industry best practice, Tredwell's project experience, and guidance from the *NSW Everyone Can Play* guidelines, which are seen as the industry benchmark for play facilities.

This hierarchy establishes a structured approach to understanding the range of waterpark provision, from small-scale incidental features through to large regional or commercial destinations. It considers key differentiators including scale, catchment, play value, dwell time, operational requirements, and level of supporting infrastructure.

The hierarchy is intended to provide a consistent framework to guide assessment throughout this study, including benchmarking existing provision, identifying service gaps, and testing appropriate facility models for the City. It also recognises that different typologies serve distinct community needs and should be considered as part of a broader, integrated network of recreation infrastructure, rather than as standalone or competing facilities.

1. Incidental/Urban Water Feature


Water Labrynth, WA

Role: Amenity, cooling, placemaking

Function:

- Small fountains, jets, rills or misting features
- Often embedded in plazas, town squares or streetscapes
- Not destination-based
- Minimal supervision and infrastructure
- Short dwell time
- Free entry

2. Local/ Neighbourhood Waterplay


Collie Splash Park, WA

Role: Small splash pad, heat relief, local recreation

Function:

- Ground sprays, tipping buckets, interactive jets
- Usually co-located with playgrounds or parks
- Serves a local catchment
- Limited infrastructure
- Short dwell time
- Free entry

3. District/ Community Waterplay


Sea Play on the Bay, WA

Role: Themed splash park, Community destination

Function:

- Multiple zones and features
- Strong theming and inclusive design
- Serves multiple suburbs
- Includes amenities (shade, seating, toilets)
- Longer dwell time (1–2 hours)
- Free entry

4. Regional Water Playground/Waterpark


Kununurra Splash Park, WA

Role: High-quality public destination, major recreation asset and visitor economy driver

Function:

- Large-scale slides and waterplay structures
- High capital and operational costs
- Strong tourism draw
- Often controlled access
- Regional catchment
- Half-day visit
- Typically paid entry

5. Major/Commercial Waterpark


Perth Outback Spash, WA

Role: Tourism anchor and commercial attraction

Function:

- Full-scale commercial operation
- Signature rides, wave pools, lazy rivers
- State or national catchment
- High staffing, safety and operational requirements
- All-day destination
- Typically paid entry

Waterpark Types and Hierarchy Comparison Table

Attribute	1. Incidental/Urban Water Feature	2. Local/Neighbourhood Waterplay	3. District/Community Waterplay	4. Regional Water Playground/Waterpark	5. Major/Commercial Waterpark
Typical Setting	Town centres, plazas, streetscapes, civic forecourts	Local parks, neighbourhood reserves, playground co-locations	District parks, community hubs, large reserves	Regional parks, major recreation precincts	Stand-alone sites or tourism precincts
Catchment Area	No defined catchment; incidental use	<1 km walkable catchment	3–5 km catchment (multiple suburbs)	Regional catchment; no defined radius	State or national catchment
Indicative Provision Approach	Opportunistic as part of urban realm projects	Distributed across neighbourhoods	Limited number serving wider communities	Typically one per region	Market-driven provision
Primary Age Group	All ages (passive interaction)	0–12 years, intergenerational	0–15 years, intergenerational	0–15+ years, intergenerational	All ages
Target Time to Spend	<20 minutes	20–45 minutes	1–2 hours	Half-day visit	Full-day visit
Approx. Waterplay Area (m²) - site total	</=100	100–500	500–1,500	1,500–4,000+	4,000+
Typical Users (Peak)	10–30	20–40	50–20	150–400+	500+
Waterplay Elements (examples)	Mist, rills, fountains, low-intensity jets	Ground sprays, jets, simple interactive features	Multiple zones, tipping buckets, cannons, inclusive elements	Large play structures, slides, flow or wave elements	Signature rides, wave pools, lazy rivers
Inclusive & Accessible Design	Passive universal access	Ground-level access	Graduated challenge and sensory play	Comprehensive inclusive design	Subject to commercial model
Supporting Amenities	Water Spray Ground and Interactive Water Feature users should have access to sanitary facilities including nappy changing stations, showers, toilets and handwashing facilities. Noting for a stand-alone water spray ground or interactive water feature, shower and change room facilities are not mandatory.				
Supervision Model	Carer supervision	Carer supervision	Carer supervision	Controlled access includes qualified staff	Staffed lifeguard supervision
Operational Complexity	Low	Moderate	Moderate–High	High	Very high
Capital Cost (subject to design)	Low	Moderate	High	Very high	Very high (inflatable waterpark moderate cost)
Water Testing (WA Health requirements)	Minimum requirement: manual water testing 30 minutes before opening and every 2 hours during operation, in accordance with WA Health requirements for water spray grounds and interactive water features				Varies based on aquatic facility elements (before opening & every 2–4 hours)
Staffing and Lifeguarding	Technical operations staff only and not required to be present at all times (assumes no pools, spas or waterslides provided)			All patrons directly supervised by qualified person/s. Emergency care personnel on-site at all times (assumes pools, spas and/or waterslides are provided).	

Waterpark Types and Hierarchy Indicative Cost and Operational Comparison

To support strategic decision-making, the waterpark hierarchy has been further developed to include indicative capital costs, operational requirements, and usage benchmarks across each typology.

These metrics are based on industry benchmarking, comparable projects, and the consulting team's project experience, and are intended to provide an order-of-magnitude understanding of the relative scale, investment, and operational implications associated with different facility types.

It is important to note that these figures are indicative only and will vary depending on site conditions, design scope, level of servicing, and the selected delivery and management model. In particular, climatic conditions, seasonality, and the mix of waterpark elements can significantly influence both capital and operational costs, as well as visitation patterns.

This comparison framework will be used to inform subsequent feasibility testing, including scenario modelling, financial analysis, and the identification of a preferred scale and delivery approach for the City.

Attribute	1. Incidental/Urban Water Feature	2. Local/ Neighbourhood Waterplay	3. District/Community Waterplay	4. Regional Water Playground/Waterpark	5. Major/Commercial Waterpark
Capital Cost	< $2M	$2M–$5M	$5M–$10M	$10M+	Commercial operation with primarily private/external investment
Operating Cost	Low <$100k	Low–Medium $100k–$300k	Medium $300k–$500k	High $500k+	Potentially cost neutral to Council (dependent on ownership/management model)
Staffing	Limited to technical staff	Limited to technical staff	Limited to technical staff	At all times (including lifeguard/s)	At all times (including lifeguard/s)
Likely Forecast Weekly Usage (indicative)	Not routinely measured; incidental and transient use only	~200–600 visits per week (seasonal, weather-dependent)	~300–800 visits per week (seasonal, slides recorded ~6,000 uses per season)	~2,500–3,000 visits per week (~150,000 visits per year)	~1,900–2,900 visits per week (100,000–150,000 visits per year)

Note: Indicative benchmark costs only. Costs are highly dependent on the waterpark location, final design, components, and existing support facilities.

The indicative visitation ranges presented are derived from a synthesis of:

- observed attendance outcomes from comparable regional and commercial waterpark and aquatic facilities across Australia,
- operational case study learnings (including seasonal demand patterns, peak period intensity, and facility scale impacts), and
- professional judgement informed by facility typology, climatic conditions, and likely catchment behaviour.

These ranges are intended to provide a comparative planning framework across waterpark typologies rather than precise predictive forecasts. Actual visitation outcomes will be influenced by facility design, location, level of amenity provision, operational model, and seasonal climatic conditions.

Case Studies Overview

A range of case studies across five waterpark typologies has been reviewed, encompassing a variety of facility scales, delivery models, and regional contexts, including examples from Northern Australia and comparable climatic regions. This includes incidental and urban features such as Cockburn Central City Square Splash Pad and Forrest Place Water Labyrinth; neighbourhood facilities such as Exmouth Waterpark Spray Ground and Marquee Park Splash and Play (Port Hedland); district-level facilities including Dawson-Damer Park (Oran Park) and Northam Aquatic Facility slides; regional destinations such as The Strand Water Park (Townsville) and Kununurra Splash Park; and large-scale commercial facilities including Perth Outback Splash and Port Hedland Aqua Park.

The case studies collectively address the brief requirement for up to 10 examples across varying scales and models, including large-scale facilities, and provide a representative evidence base for analysis.

Case Study Insights and Strategic Implications

The case study review identifies consistent themes across waterpark facilities of varying scale, providing clear insight into the feasibility, delivery, and operation of such infrastructure in regional and remote contexts.

Scale is a primary driver of cost, complexity, and operational risk.

Smaller incidental and neighbourhood facilities generally have lower capital and operational requirements but still necessitate ongoing water quality management, maintenance, and technical oversight. As facilities increase in scale, particularly at district and regional levels, there is a step change in capital investment, servicing requirements, and operational complexity, including the introduction of supervised operations, lifeguarding, and higher compliance obligations. Larger facilities also bring increased staffing requirements and greater exposure to operational and financial risk.

Environmental conditions materially affect asset performance and lifecycle costs.

Facilities in hot, coastal, and remote environments comparable to Karratha experience accelerated deterioration of mechanical systems, increased evaporation, and higher water and chemical demand. Corrosion, dust, and extreme temperatures were consistently identified as key contributors to infrastructure degradation and maintenance burden. Several examples highlighted recurring failures in pumps, filtration systems, and dosing equipment, reinforcing the importance of robust design, durable materials, and whole-of-life planning.

Operational sustainability is a critical constraint in regional contexts.

Most council-operated facilities are not cost-neutral and require ongoing operational subsidy. Even smaller facilities incur meaningful annual costs associated with water treatment, energy, chemicals, and maintenance. Larger or more complex facilities require full-time staffing and lifeguard supervision, with multiple case studies identifying ongoing challenges in recruiting and retaining suitably qualified personnel in regional areas. Seasonal or demand-based operating models were identified as a more efficient approach but require careful management to balance service levels and cost.

Water quality, compliance, and safety requirements are continuous and non-negotiable.

All facility types require regular water testing and adherence to relevant health regulations, including frequent manual testing regardless of automated systems. Higher-order facilities introduce additional safety and supervision requirements, particularly where slides or deeper water elements are provided. Across case studies, operational procedures and rules were often refined over time to balance compliance requirements with practical user behaviour.

Location and integration strongly influence performance outcomes.

Successful facilities are typically well integrated within active public realms or co-located with complementary recreation and civic uses. This supports higher visitation, passive surveillance, and multi-purpose use. Conversely, poorly integrated or isolated facilities were more vulnerable to underutilisation, anti-social behaviour, and higher ongoing management requirements.

Community expectations influence design and operating pressures.

Free and publicly accessible waterplay facilities generate strong demand but also place sustained pressure on infrastructure, including increased wear, higher maintenance requirements, and expectations for extended operating seasons. Case studies also highlighted operational challenges relating to misuse, informal commercial activity, and the need for adequate supporting infrastructure such as shade, parking, and change facilities.

Delivery model has a direct impact on financial viability and service provision.

Council-owned and operated facilities prioritise broad community access but require ongoing public funding. In contrast, privately operated or commercial models can offset operational costs through user charges and diversified revenue streams, although they are typically more seasonal and market-driven. Hybrid models and partnership approaches were identified as potential mechanisms to improve long-term feasibility and financial sustainability.

Key Risks and Mitigation Measures Identified Through Case Studies

The review of comparable waterpark facilities identified a range of recurring operational, environmental and asset management risks that can influence the long-term performance and sustainability of waterpark infrastructure. While the scale and significance of these risks varied depending on facility type, location and operating model, the case studies also demonstrated that many risks can be effectively managed through appropriate planning, design, operational procedures and lifecycle management.

The following table summarises the key risks identified through the case study review and the mitigation measures that should be considered in the planning and delivery of future waterpark facilities. These findings have informed the development of the concept scenarios and indicative cost estimates presented later in this report. Further detailed design, engineering assessment and operational planning will be required to confirm the final technical requirements, mitigation measures and costs at subsequent project stages.

Key Risk	Case Study Findings	Potential Mitigation Measures
Water supply and water quality risks	Comparable facilities identified ongoing challenges associated with microbial management, visitor hygiene, stormwater contamination, high evaporation rates, and water security in hot and arid climates.	Incorporate robust water treatment systems, automated dosing and monitoring, recirculation systems, water-efficient design, and operational procedures for contamination events and peak demand periods.
Asset failure and maintenance risks	Pumps, filtration systems, chlorine dosing equipment and mechanical components experienced increased failure rates due to high usage, harsh climates, corrosion, dust and limited access to specialist support.	Design appropriately sized plant infrastructure, specify durable equipment suited to local conditions, avoid the use of bespoke designs of waterplay elements, maintain critical spare parts, establish preventative maintenance programs and undertake lifecycle planning.
Operational sustainability risks	Larger and more complex facilities experienced increased operating costs, staffing requirements and challenges recruiting suitably qualified personnel in regional areas.	Align facility scale with demand, assess long-term operational funding requirements, consider seasonal operating models, and develop workforce strategies.
Safety and security risks	Some facilities experienced vandalism, anti-social behaviour, visitor misuse, child safety concerns and the need for appropriate supervision and access controls.	Incorporate Crime Prevention Through Environmental Design (CPTED) principles, closed-circuit television (CCTV), lighting, controlled access, clear conditions of use, appropriate fencing and operational safety procedures.
Capacity and supporting infrastructure risks	Some facilities experienced constraints relating to parking, bus access, shade, accessibility, change facilities and plant capacity due to higher-than-anticipated visitation.	Undertake demand modelling, provide appropriately scaled supporting infrastructure, incorporate universal accessibility and allow for future expansion where appropriate.
Climate and environmental risks	Hot temperatures, dust, coastal exposure, extreme weather and evaporation increased infrastructure stress and operating requirements.	Select climate-appropriate materials and systems (e.g. water slides), incorporate corrosion protection and shade, resilient engineering design, appropriate drainage and weather response procedures.

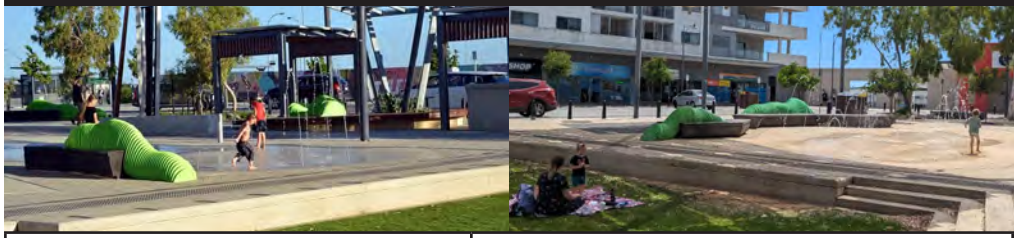
Benefits and Challenges Summary

To support synthesis of the case study findings, the key benefits and challenges associated with waterpark facilities have been summarised across social, economic and environmental dimensions. This provides a high-level overview of the opportunities and constraints influencing the feasibility, performance and long-term sustainability of waterpark infrastructure in regional contexts.

Category	Benefits	Challenges
Social & Health	**Community recreation and wellbeing:** Waterparks provide accessible opportunities for physical activity, social connection and family recreation, particularly in hot regional climates. **Community amenity:** Can provide safe and controlled alternatives to natural waterways, supporting community safety and inclusion. **Child development:** Support sensory play, water confidence and motor skill development.	**Managing community expectations**: High community demand can create expectations for extended operating seasons, additional amenities and ongoing improvements. **User management:** High visitation can increase operational pressures associated with safety, supervision, behaviour management and facility upkeep.
Economic	**Tourism and visitation:** Larger waterparks can contribute to regional destination appeal, attract visitors and support local economic activity. **Social value:** Public aquatic facilities can generate significant community benefits and social return through recreation, health and wellbeing outcomes.	**Capital investment:** Higher-order facilities require significant upfront investment and may require external funding support or partnerships. **Long-term operational commitment:** Public facilities generally require ongoing financial support to maintain service levels, asset condition and community access.
Environmental	**Water-efficient recreation:** Modern splash pad and recirculating systems can provide efficient water-based recreation when appropriately designed and managed. **Climate adaptation:** Provide opportunities for heat relief and outdoor recreation in hot regional environments.	**Environmental exposure:** Hot climates, extreme weather, coastal conditions and dust can increase asset deterioration and lifecycle requirements. **Resource management:** Water availability, treatment requirements and energy demand require careful consideration in arid environments.

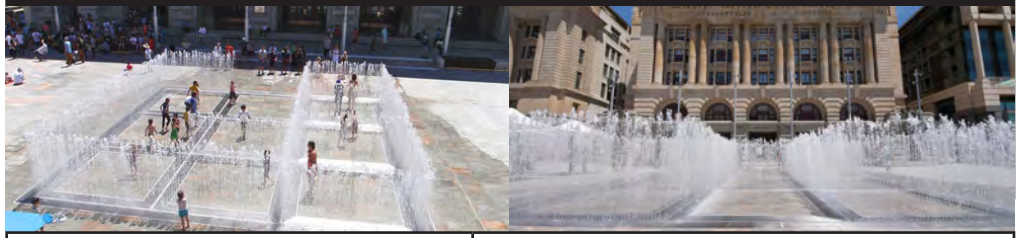
1. Incidental/Urban Water Feature Case Studies

Cockburn Central City Square Splash Pad



Location:	Perth, Western Australia
Year opened and/or upgraded:	August 2012
Ownership/management model:	Council-owned and managed
Size:	100 m² (32 ground sprays)
Capital cost:	$600k (2026 estimate)
Operational costs:	• $42k annually (closed in winter) • Requires staff member to test water chlorine levels twice daily • Chemicals: $8,000–$15,000 per annum (in addition to above)
Usage or attendance:	Not measured (public open space)
Key lessons or success factors:	• High annual cost • Chlorine causes equipment corrosion • Potable water is cheaper/less harsh (Bibra Lake Splash Pad only $3k per annum) • Success of waterparks are highly dependent on location
Challenges or risks encountered:	• Pump infrastructure replaced three times since opening due to corrosion • Department of Health restrictions
Sustainability considerations:	Computer system can undertake some monitoring work but still requires manual testing daily

Forrest Place Water Labyrinth



Location:	Perth, Western Australia
Year opened and/or upgraded:	November 2012
Ownership/management model:	Council-owned and managed
Size:	144 m² (12 m x 12 m)
Capital cost:	$1.3m (2012)
Operational costs:	• Water: To be confirmed • Maintenance: $34k–$71k per annum
Usage or attendance:	Not measured (public open space)
Key lessons or success factors:	• Water labyrinth can be turned off during events or incorporated • Co-located with a stage making it a multi-use area
Challenges or risks encountered:	• Granite floor can become slippery • Rapidly changing water walls can overwhelm young children, making it difficult for them to exit • Splash from the fountains was initially a problem for pedestrians, required a second, shallow drainage barrier to be installed • Frequent water testing required • Some dog usage and anti-social behaviour
Sustainability considerations:	High water usage

2. Local/Neighbourhood Waterplay Case Studies

Exmouth Waterpark Spray Ground





Location:	Exmouth, Western Australia
Year opened and/or upgraded:	July 2013
Ownership/management model:	Council-owned and managed
Size:	540 m² (76 ground sprays)
Capital cost:	$1m (2013)
Operational costs:	Unavailable
Usage or attendance:	Not measured
Key lessons or success factors:	• Strong and unique theming with custom made fiberglass animals including spouting turtles, dolphins, humpback whale, and a cave
Challenges or risks encountered:	• Used by travellers for showering • Water quality management (microbial levels) • Required to be closed regularly for short periods for maintenance • Acute water insecurity • Isolated location increases difficulty of sourcing specialised parts and technical expertise
Sustainability considerations:	• Climate increases evaporation rate and puts strain on the filtration and pumping infrastructure

Marquee Park Splash and Play



Location:	South Hedland, Western Australia
Year opened and/or upgraded:	2012
Ownership/management model:	Council-owned and managed
Size:	830 m²
Capital cost:	$13.7m–$14.4m
Operational costs:	Unavailable
Usage or attendance:	Not measured
Key lessons or success factors:	• Nil
Challenges or risks encountered:	• Closed since November 2020 due to a water line fault and significant remediation needs • Recently repurposed into a scoot and ride track • Ratepayers spent approximately $1m on repairs following extreme vandalism • High levels of anti-social behaviour • Extreme dust, and high temperatures accelerated wear and tear of mechanical components • Park struggled with recurring filter failures and broken chlorine booster pumps

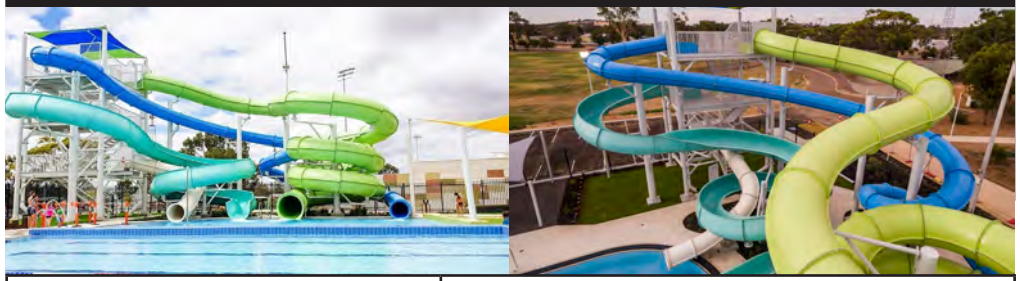
3. District/Community Waterplay Case Studies

Dawson-Damer Park/Oran Park Splash Pad



Location:	Camden, New South Wales
Year opened and/or upgraded:	Opened 2020
Ownership/management model:	Council-owned and managed
Size:	1,050 m²
Capital cost:	Approx. $1.5m
Operational costs:	• Water: $16,769.75 per annum • Electricity: $836.45 per annum • Gas: $143.63 per annum • Chemical: $12,000 ex GST per auunum
Usage or attendance:	Not measured
Key lessons or success factors:	• Accessible change rooms and wet wheelchair hire has been essential • Adequate bus parking is essential • Fencing is required (bikes and dogs)
Challenges or risks encountered:	• Ongoing public demand for a extended operating season and summer hours • Unapproved food and ice-cream trucks operating onsite • Pump room undersized for the waterplay area and higher-than-anticipated usage • Ongoing parking constraints • Child safety concerns, including police requests for CCTV footage

Northam Aquatic Facility (Slides)



Location:	Northam, Western Australia
Year opened and/or upgraded:	Opened 2020
Ownership/management model:	Council-owned and managed
Size:	4 slides (varying heights and design)
Capital cost:	Commercial-in-confidence. Constructed as part of broader facility totaling $9.5m
Operational costs:	Commercial-in-confidence. Slides form part of broader pool filtering and system
Usage or attendance:	Last season (Sep 2024–April 2025) had 6,168 people use the slides
Key lessons or success factors:	• Operating rules and conditions of use were refined through four iterations, including age and height requirements, to maintain compliance while better reflecting practical operations, user behaviour, and the regional context. Standard theme park slide regulations were not fully applicable • Seasonal and demand-based operating hours (peak season, school holidays, after school and weekends) improved efficiency
Challenges or risks encountered:	• Lifeguard supervision is required at slide exits during operation • Ongoing challenges in recruiting and retaining sufficient qualified staff, particularly in a regional setting

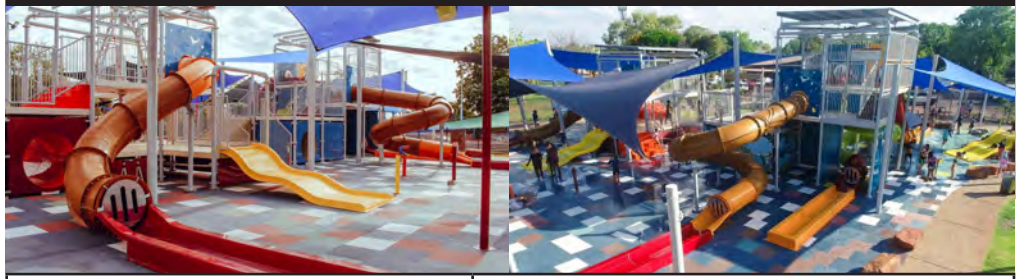
4. Regional Water Playground/Waterpark Case Studies

The Strand Water Park



Location:	Townsville, Queensland
Year opened and/or upgraded:	Opened 1999 - Upgraded 2017
Ownership/management model:	Council-owned and managed
Size:	1,200–1,500 m²
Capital cost:	$2.8m (full waterpark renewal 2017)
Operational costs:	• To be confirmed by Townsville City Council • Recent maintenance (2024) $100k (maintenance, painting, mechanical overhaul, recertification)
Usage or attendance:	150,000 visitors per annum
Key lessons or success factors:	• Has become an iconic location • Has been well maintained by Council
Challenges or risks encountered:	• Coastal environment has led to accelerated corrosion and aging • High usage has seen mechanical breakdowns and surface wear • Water quality is tested every Monday, closed every Tuesday for deep cleaning and maintenance • Park closed after storms due to potential runoff contamination • Visitor hygiene incidents

Kununurra Splash Park



Location:	Kununurra, Western Australia
Year opened and/or upgraded:	October 2022
Ownership/management model:	Council-owned and managed
Size:	2,000 m²
Capital cost:	$3.5m (excl. project management costs)
Operational costs:	$200k p/a for services excl. staffing
Usage or attendance:	Not measured (but very popular)
Key lessons or success factors:	• Funded mostly by Lotterywest on agreement Park is free entry • Low maintenance, open year-round, safe and inclusive • Original entry bypassed reception, limiting control and requiring constant staffing; reception access has improved control
Challenges or risks encountered:	• Chlorine dosing system struggles in hot conditions • UK-manufactured UV system results in delays sourcing replacement parts • Slide height requires Bronze-qualified supervision, limiting operation to 10–12 and 2–4 daily • Balance tank lids excessively heavy

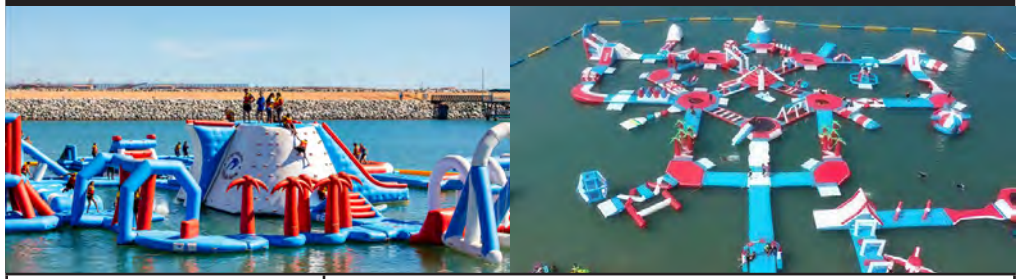
5. Major/Commercial Waterpark Case Studies

Perth Outback Splash



Location:	Perth, Western Australia
Year opened and/or upgraded:	Opened 1981. Upgraded to include water attractions 2013, 2016, 2019, 2023
Ownership/management model:	Owner Operated - Private
Size:	6,200 m² (waterpark facilities only)
Capital cost:	Commercial-in-confidence
Operational costs:	Commercial-in-confidence
Usage or attendance:	Not disclosed. Estimated 100,000–150,000 visitors annually Generally $57 (Adult)
Key lessons or success factors:	• Listed as one of WA's top outdoor entertainment destinations (Westernaustralia.com) • Caters for all abilities and disabilities • Multiple waterpark offerings and experiences for different age groups • Waterpark is supported by dry attractions open year-round (mini golf, mazes, food and drink, picnic opportunities)
Challenges or risks encountered:	• Water attractions operate seasonally (typically September to April)

Port Headland Aqua Park



Location:	Port Hedland, Western Australia
Year opened and/or upgraded:	2025
Ownership/ management model:	Owner Operated - Private Lease - Department of Transport (WA) and Town of Port Headland
Size:	1,030 m² (varies with elements used)
Capital cost:	$1.6m (spend to date, all inclusive)
Operational costs:	Commercial-in-confidence (currently operates at a loss)
Usage or attendance:	Commercial-in-confidence. Attracts schools, team building events, birthday parties, neighbouring townships
Key lessons or success factors:	• Currently open May–November; from 2026/27 will operate year-round • Anchorage systems rated to 3-tonne to withstand operational, wind, and uplift forces • Design aqua park to reflect the local community • Supports additional local business (catering, cafés, caravan park)
Challenges or risks encountered:	• Must be removed from water for cyclone events • Inflatables have a 3–5 year lifespan, depending on material • Requires trained staff with lifeguard, skipper's ticket, first aid, etc.

03 Engagement



Engagement Approach

Engagement for this project included a combination of community and stakeholder activities undertaken between 10 & 26 March 2026:

- In-person drop-in sessions (Wickham, Karratha, Dampier, Roebourne)
- Online survey (residents and user groups)
- Key stakeholder interviews
- Councillor and staff workshops

In-person drop-in sessions

Sessions were held at Wickham Recreation Precinct, Karratha Leisureplex, Dampier Library, and Roebourne Ieramugadu Store Maya. These were scheduled at key times to maximise community participation and accessibility.

Online survey

The survey was open from 12 to 26 March 2026, capturing both quantitative and qualitative insights on community preferences, usage, and priorities.

Key stakeholder interviews

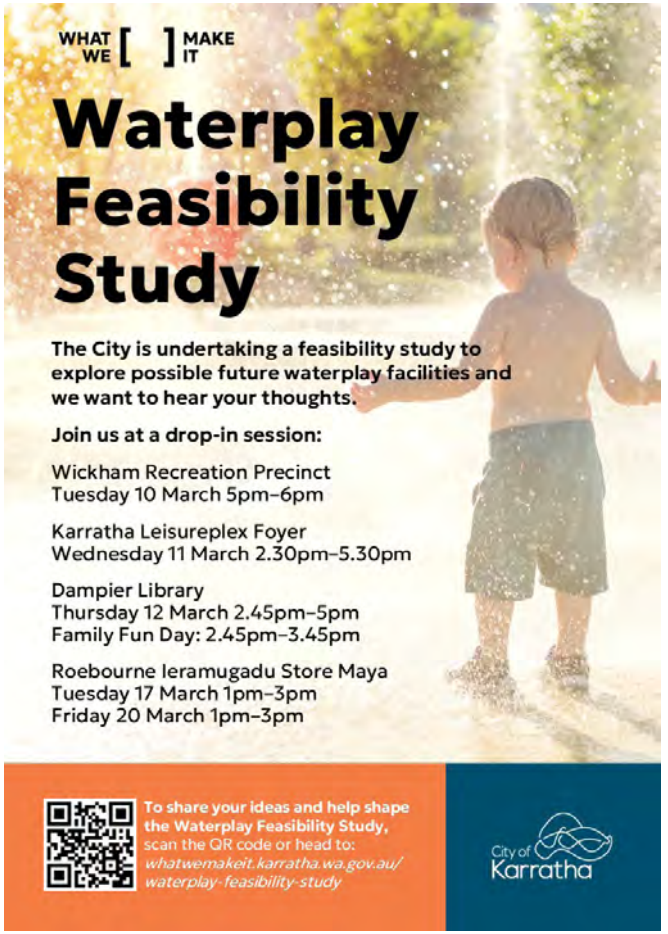
A mix of in-person and online interviews was undertaken with the Pilbara Development Commission, Rio Tinto and Broome Shire Council to capture a range of perspectives, including operational insights and local context.

Councillor and staff workshops

In-person workshops were undertaken to capture strategic input, local priorities, and key considerations for the study.

Community Demand and Utilisation Overview

Community feedback relating to waterpark demand, utilisation outlook, key demand drivers, and likely usage patterns is summarised in Section 04 - Demand and Community Needs Assessment under ‘Demand Context and Behavioural Evidence’. This section provides a detailed synthesis of engagement findings and their implications for demand assessment and scenario modelling.



Engagement Poster

Summary of Online Survey

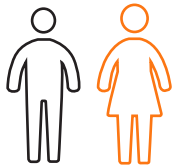
The following pages provide a detailed summary of the online public survey findings which ran from 12th to 26th March 2026.

Overall, the survey responses indicate overwhelmingly strong community support for new and improved waterpark provision, with 99% supporting public investment in a facility and 96% having used an existing aquatic facilities in the City of Karratha within the past 12 months. Current usage is constrained by several key factors, including limited variety in existing facilities, heat and insufficient shade, overcrowding, and a lack of suitable options for older children and teenagers. There is clear demand for more engaging and diverse experiences, particularly youth-focused waterplay such as waterslides, climbing, and adventure elements. Respondents also expressed interest in both destination-style waterparks with entry fees and integrated waterplay within parks or playground settings.

In terms of design priorities, the most important features identified include shade, waterslides, adventure-style play elements, dedicated areas for older children, as well as essential amenities such as toilets, changerooms, and toddler-friendly spaces. The preferred delivery model is a combination of one larger, destination waterpark supported by smaller, distributed waterplay or splash pad facilities across the City. Notably, cost is not seen as a major barrier, with 85% of respondents indicating a willingness to pay for access.

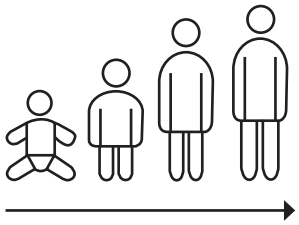
94 Responses

Gender



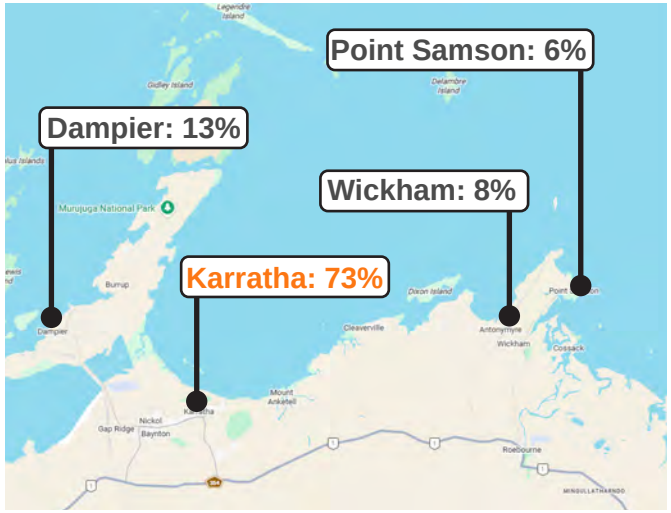
Female: 81%
Male: 19%

Age

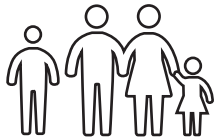


40–49 years: 43%
30–39 years: 42%
50–59 years: 7%
20–29 years: 6%
15–19 years: 2%
60–69 years: 1%

Usual place of residence

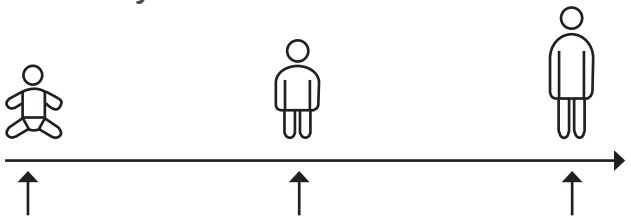


Do you have a child/children under the age of 18?

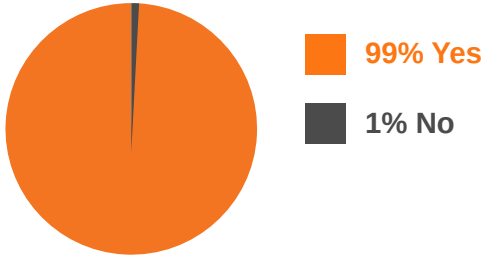


86% Yes
14% No

How old is your child/children?



Do you support public investment in a waterplay facility?



99% Yes
1% No

Have you, or any household members, used any aquatic facilities in the City of Karratha in the past 12 months?

96% Yes

4% No

In the past 12 months, how often have you or members of your household used the following aquatic facilities?

Karratha Leisureplex



3 times per week	17%
1–2 times per week	**38%**
1–3 times per month	13%
Every 2–3 months	**20%**
1–2 times per year	8%
Less often once per year	2%
I never use this aquatic facility	1%

Wickham Recreation Precinct Pool



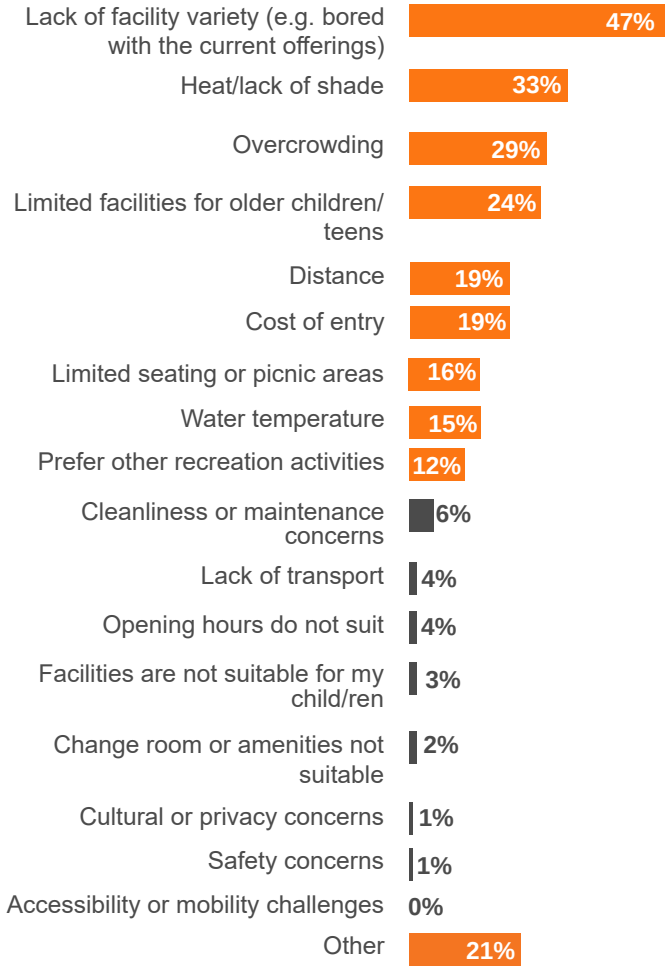
3 times per week	3%
1–2 times per week	2%
1–3 times per month	7%
Every 2–3 months	9%
1–2 times per year	**12%**
Less often once per year	**12%**
I never use this aquatic facility	**54%**

Roebourne Pool



3 times per week	0%
1–2 times per week	0%
1–3 times per month	2%
Every 2–3 months	0%
1–2 times per year	4%
Less often once per year	**8%**
I never use this aquatic facility	**85%**

What limits you from using the aquatic facilities more often than you currently do?



Are there any specific issues with the existing aquatic centres in the City of Karratha that you would like to raise?

- Lack of facilities and activities for older children
- Need for increased shade
- Overcrowding and limited availability
- Cost concerns
- Desire for expanded and upgraded facilities
- Accessibility and distance issues
- Operational and management issues
- Amenities and supporting infrastructure
- Seasonal comfort and usability

How important is developing new waterplay facilities to you and/or your household?

53% Very important

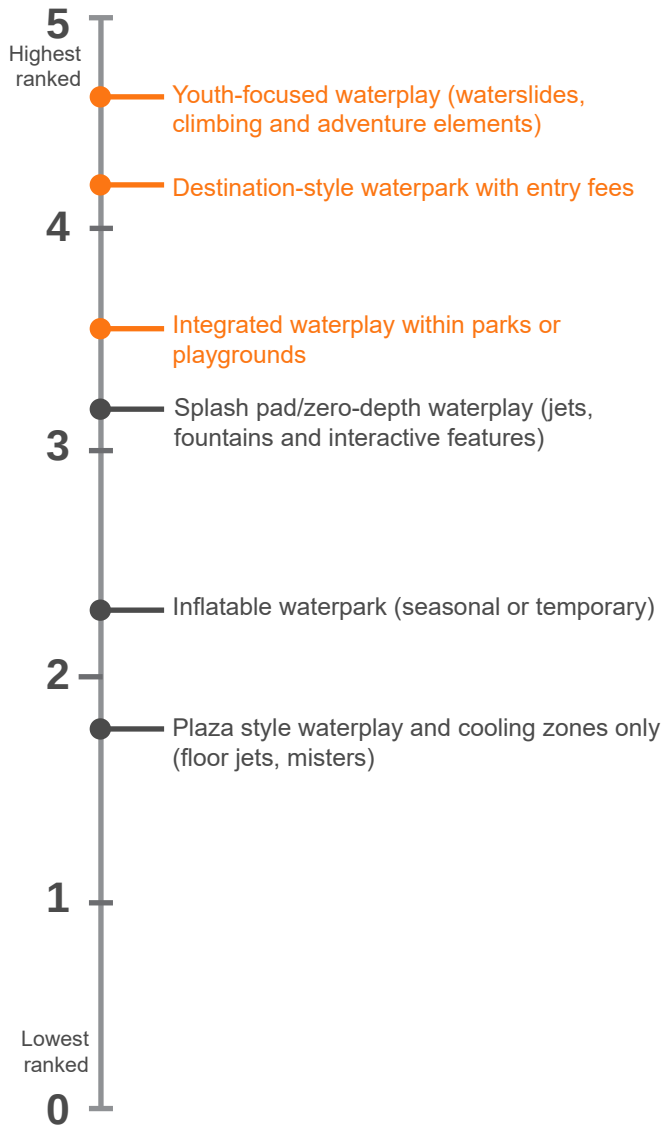
35% Important

11% Neutral

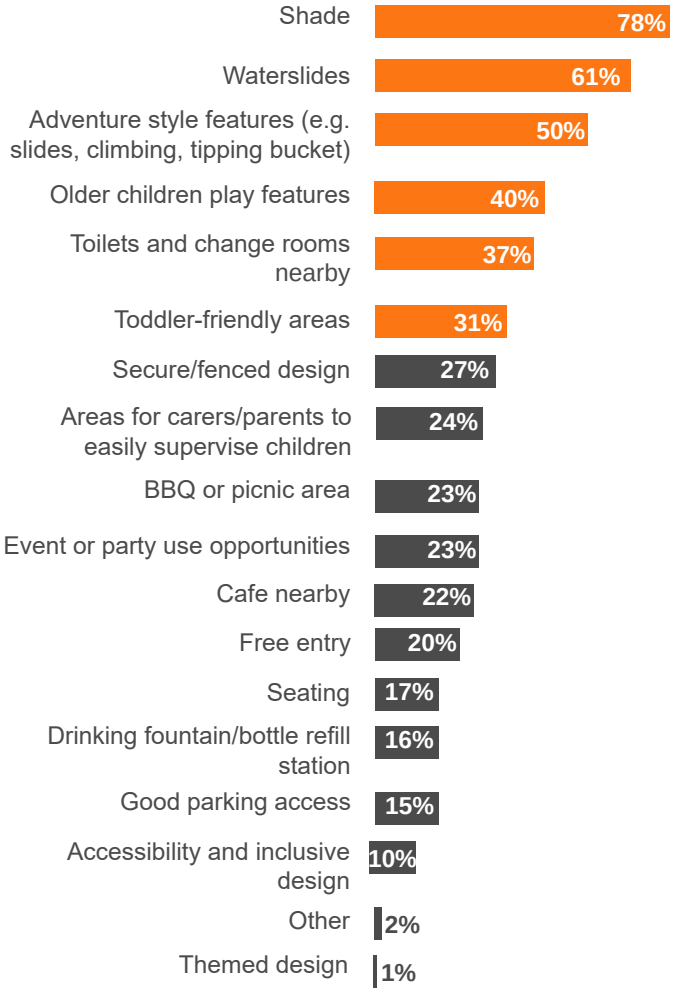
0% Unimportant

1% Not at all important

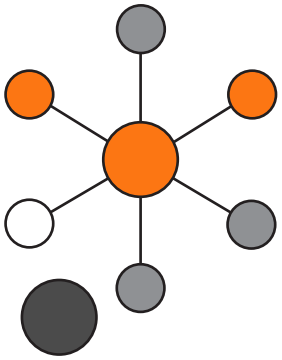
What type of waterplay facilities would you most like to see in the future?



What are the top features you consider important for waterplay facilities?



How would you prefer waterplay facilities to be provided across the City?



60% A mix of both (e.g. one large waterpark with smaller waterplay/splashpad facilities)

27% One larger waterpark in a single location

6% Several smaller waterplay or splashpad facilities in different areas

6% I have no preference

0% Other

Where would you prefer future waterplay facilities to be provided?

37% No preference

31% In a coastal area/foreshore

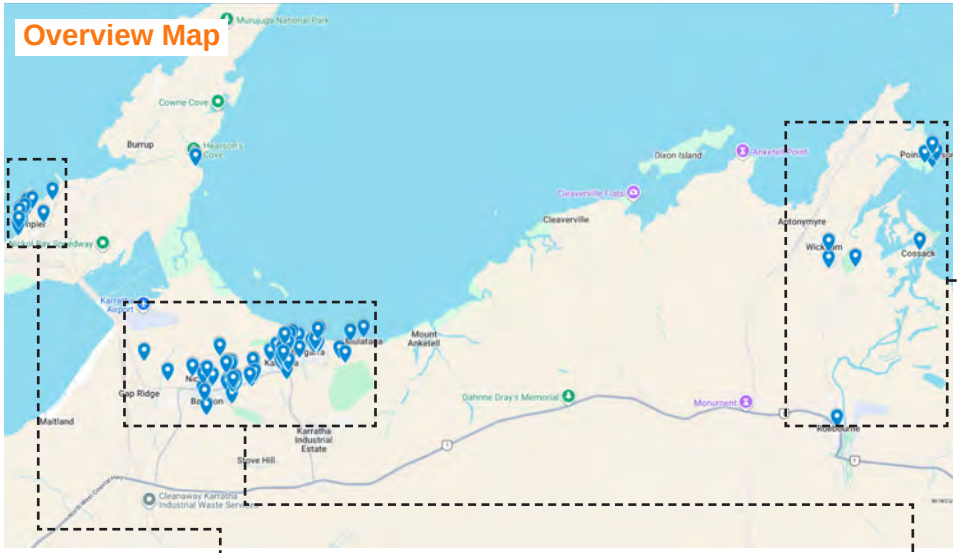
13% In a park/reserve

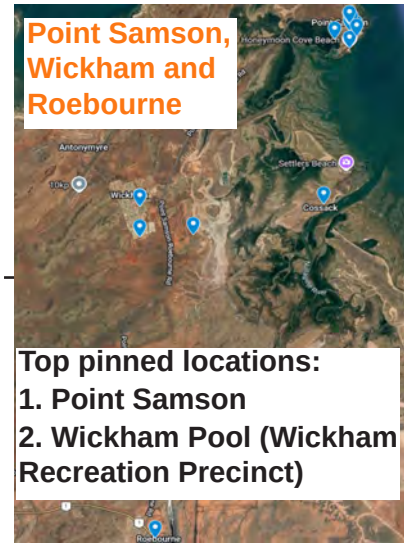
10% At an existing aquatic facility

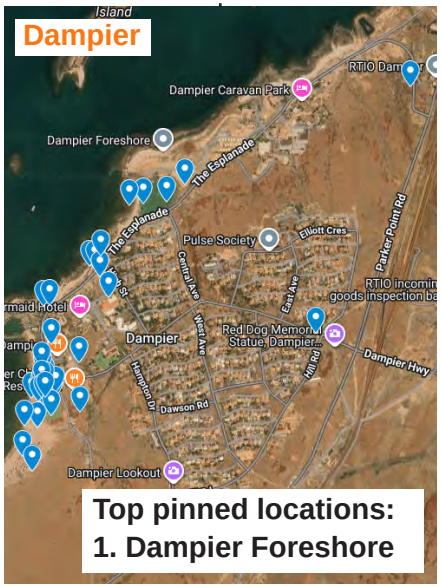
10% In a town centre

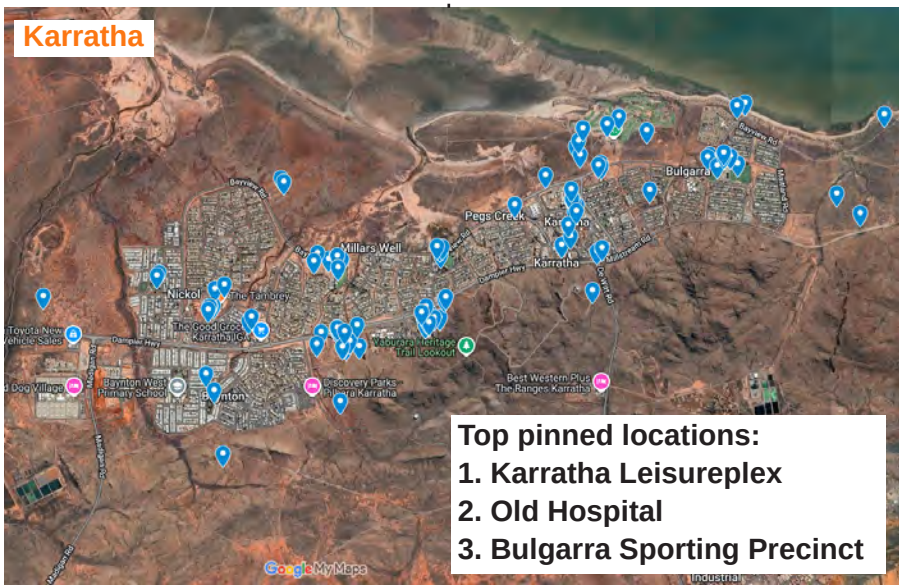
0% Other

Identify where you believe would be suitable for future waterplay opportunities within the City.

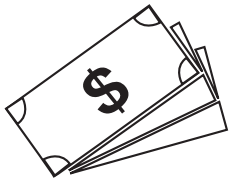








Would you be willing to pay an entry fee to use a waterpark facility?



85% Yes

15% No

Do you have any additional suggestions or comments you would like the City of Karratha to consider when planning future waterplay facilities across the City?

- Desire for larger, more engaging waterpark-style facilities
- Need to cater for all age groups (including teens and adults)
- Strong demand for facilities for older children (6+ years)
- Support for additional locations across the City (e.g. Dampier, Point Samson)
- Importance of shade and climate-responsive design
- Requests for a mix of free and paid facilities
- Opportunities to co-locate with existing or coastal areas (e.g. foreshore, beaches)
- Need for supporting amenities (toilets, seating, kiosks, parking, party spaces)
- Consideration of operational feasibility and cost
- Interest in complementary or alternative indoor facilities
- Emphasis on creating a unique, high-quality destination
- Importance of safety, accessibility, and family-friendly design
- Potential to improve liveability and attract visitors

Summary of Community Drop-in Sessions

Wickham Community Drop-in Session

10 March 2026, Wickham Recreation Precinct

Location and Catchment

- Some willingness to travel to Karratha for a worthwhile facility
- Wickham also considered suitable for waterplay
- Mixed views on other towns, with some noting Point Samson may not require provision and Dampier positively referenced
- Existing travel to Karratha already occurs for aquatic facilities

Facility Type

- Preference for hybrid district-regional waterplay model
- Interest in slides, playground elements, and interactive water features
- Urban water feature alone considered insufficient
- Desire for neighbourhood-scale waterplay (e.g. Exmouth examples)
- Interest in facilities suitable for birthday parties (BBQs, toilets, slides)

Age Groups

- Need for provision for both younger children and older children
- Interest in toddler-safe or shallow waterplay (approximately 3–5 years)
- Current facilities seen as limited for older children

Safety and Design

- Safety a key concern, including fencing and supervision needs
- Preference for safer surfacing
- Hygiene and water quality important
- Concerns about misuse and cleanliness of facilities

Operations and Access

- General support for user-pays model if facilities are high quality
- Concern that free facilities may be more prone to damage or misuse
- Seasonal usability noted, particularly for younger users

Amenities

- Strong preference for barbecues, toilets, and seating
- Interest in picnic and social gathering spaces

Karratha Community Drop-in Session

11 March 2026, Karratha Leisureplex Foyer

Facility Type

- Strong interest in district and regional-scale waterplay
- Preference for waterslides, playground integration, and adventure-style features
- Reference to larger waterpark concepts (Adventure World-style)
- Interest in zero-depth splashpad designs with enhanced features

Location

- Strong preference for Karratha as primary location with reasons including accessibility, after-school use, and proximity
- Karratha Leisureplex identified as a central hub, with congestion concerns noted
- Additional suggestions include Dampier (saltwater play) and The Quarter
- Some support for a standalone facility if a larger waterpark is developed

Features

- Waterslides (including deep pool entry) and tipping buckets
- Water guns, interactive spray features, and climbing elements
- Wave pool concepts
- Strong interest in provision for older children (6–7+ years)
- Flexible wet/dry play environments

Age and Safety

- Need to separate age groups to improve safety
- Concerns about younger children being displaced
- Importance of shallow/zero-depth areas Strong emphasis on fencing and visibility

Amenities

- Toilets, seating, shade, and café/food options
- Preference for proximity to shops or existing amenities
- Strong emphasis on shade due to climate

Operations

- Mixed views on entry fees (free vs paid) Paid entry supported if high quality and well maintained
- Concerns about hygiene, vandalism, and misuse in open-access settings
- Expectation of high-quality delivery if investment proceeds

Dampier Community Drop-in Session

12 March 2026, Dampier Library

Facility Type

- Preference for mid-scale (local-regional) waterplay
- Interest in waterslides and playground-style waterplay
- Mixed views on access model (free vs paid if value demonstrated)

Location

- Range of suggested locations across Dampier and Karratha
- Preference for central, accessible community locations
- Some willingness to travel for a high-quality facility

Design

- Strong requirement for shade
- Preference for interactive, playground-style waterplay over pool-only provision
- Desire for family-friendly design

Roebourne Community Drop-in Session

17 & 20 March 2026, Roebourne Ieramugadu Store Maya

Facility Need and Context

- Strong desire for improved or new waterplay provision in Roebourne
- Concerns regarding vandalism and site suitability
- Preference for shaded, safe, family-oriented spaces

Facility Type

- Preference for splashpad-style waterplay over pool-based upgrades
- Inclusive design sought for a range of age groups, including Elders
- Some safety concerns raised regarding waterslides

Location and Distribution

- Preference for use or adaptation of existing pool precinct spaces
- Support for wider distribution of splashpads across parks and towns
- Acknowledgement that residents already travel to other towns for facilities

Service Gaps

- Limited recent investment or change in existing facilities noted
- Strong demand for more localised, accessible waterplay options

Summary of Councillor Workshop

Councillor Workshop

4–5pm 9th March 2026 at City of Karratha Administration Centre, Welcome Road, Karratha

The Council Workshop for the City of Karratha Waterpark Feasibility Study identified a clear preference for a district to regional-scale waterplay facility that balances community accessibility with destination appeal. This reflects both the climatic need for water-based recreation and the opportunity to enhance Karratha's regional profile.

Councillors indicated a moderate appetite for capital investment (generally in the order of $5–10 million), with ongoing operational costs of approximately $500,000 per annum. It was noted that funding models may include a combination of external grants and user-pays elements to support long-term financial sustainability.

The workshop also co-designed a set of assessment criteria to guide feasibility and concept development. Strongest emphasis was placed on environmental sustainability (particularly water use), community value, and site suitability, alongside considerations such as risk, tourism benefits, lifecycle costs, and strategic alignment. Collectively, these outcomes provide a balanced framework to inform the vision, scale, financial parameters, and evaluation approach for future waterplay development in the City of Karratha.

In terms of location, a clear preference was identified for Karratha as the primary site for a future waterplay facility, with several Councillors nominating locations within the town centre to maximise accessibility and community use. The Karratha Leisureplex was highlighted as a key option, given its ability to leverage existing staff and infrastructure.

Secondary locations, including Back Beach, Point Samson, Cossack, and Dampier, were also identified as potential regional-scale opportunities; however, these received less consistent support. Overall, the findings indicate a strong preference for a centrally located facility within Karratha, with coastal or existing recreation nodes presenting the most viable opportunities.

Preferred Facility Type and Scale

- Strong preference for a mid-to-large scale waterplay facility (district/community waterplay to regional water playground/waterpark)
- No support for Category 1 (incidental/ urban water feature) or Category 5 (major/ commercial waterpark)
- Major/commercial-scale waterpark considered outside of scope
- Emphasis on ensuring the facility is appropriately scaled to community needs and expectations

Preferred Location Considerations

- Karratha Leisureplex identified as a potential location due to:
  - Existing high community use
  - Use of existing staff/resources
- Dampier noted as having community preference, however concerns raised about accessibility from Karratha (including transport limitations)
- Point Samson noted as potentially limited due to population size and ability to sustain a facility
- Note to utilise natural shade (existing trees) where possible

Operational and Financial Considerations

- High concern regarding capital and maintenance costs
- Support for a user-pays model to assist cost recovery and ongoing sustainability
- Need to ensure long-term financial viability to avoid underutilisation or "white elephant" outcomes
- Potential need for subsidy discussed

Design, Safety and Environmental Considerations

- Water sustainability identified as a concern
- Safety considerations raised regarding different water contexts (including coastal environments)
- Concerns that incidental/urban water features may result in unmanaged wet areas, children, or movement outside intended spaces
- Emphasis on ensuring safety and appropriate design outcomes
- Accessibility and community considerations

Strong Support for the Project Remaining a Community Decision

- Concern that any facility must remain accessible and not become exclusionary
- Transport limitations highlighted, particularly between Karratha and other towns
- Recognition that accessibility is a critical success factor

Strategic and Delivery Considerations

- Importance of site suitability in determining success
- Need to understand Council's cost appetite and appropriate scale
- Parking and capacity requirements noted as considerations for regional-scale facilities
- Interest in potential industry partnerships or sponsorship opportunities
- Reference made to exploring Category 4 (Regional Water Playground/Waterpark) with paid entry
- Example reference noted: Port Douglas splash pad (~$4.75m)

Proposed Criteria Ratings

Councillors were asked to rate the importance of the proposed assessment criteria to inform the feasibility framework and support comparison between the concept design options during subsequent project stages. The following criteria represent the relative importance identified by Councillors, ranked in order of priority.

1. Environmental Sustainability
   Water use and limitations, energy requirements
2. Community Value
   Including capacity to pay
3. Site Suitability
   Location, accessibility including public transport, land tenure and Native Title
4. Risk and Compliance
   Legislative and industry requirements (Royal Life Saving Society Australia, Department of Health, Leisure Institute of Western Australia)
5. Tourism Benefits
   Visitor experience, length of stay, spend
6. Lifecycle Cost
   Capital cost, operating cost
7. Operational Complexity
   Opening hours, staffing, climate impacts, security, child protection
8. Strategic Alignment
   Council, State and Federal Government (e.g. health, economic development, recreation and crime reduction)
9. Impact on existing facilities
   Competition

Summary of Key Stakeholder Interviews

Workshop with City of Karratha Staff

10:30am–1:30am 11th March 2026 at City of Karratha Administration Centre, Welcome Road, Karratha

Operational and Staffing Constraints

- Ongoing difficulty recruiting and retaining qualified lifeguard staff
- Staffing capacity identified as a key constraint for expanded waterplay facilities
- Proximity to staffed areas considered important for safe and efficient operations

Sustainability and Water Management

- Sustainability a critical site selection consideration
- Key issues include water quality, water conservation, and irrigation impacts
- Existing water reuse at Karratha Leisureplex noted, with limitations for turf irrigation
- Coastal and environmental constraints highlighted for Dampier
- Wastewater infrastructure constraints identified for Dampier and Point Samson (including septic systems and limited capacity)

Facility Type, Users and Access

- Strong emphasis on providing for teenagers (10+) in addition to younger users
- Community feedback indicates preference for free access, however Category 3–4 facilities likely require paid entry

- Need to balance affordability with cost recovery and reduced access barriers
- Importance of catering for families with multiple children across age groups
- Access barriers noted, including limited public transport

Location and Site Considerations

- Parks and coastal sites identified as potential opportunities, subject to suitability
- Dampier constrained by water availability and coastal environmental factors
- Point Samson constrained by septic infrastructure limitations
- Essential supporting infrastructure includes parking, toilets, and changerooms (with toilets a regulatory requirement)

Karratha Leisureplex (KLP) Considerations

- Potential overlap with KLP Masterplan requires careful coordination
- City-wide study will inform masterplanning if KLP emerges as a viable option
- Existing splashpad water quality testing occurs regularly (frequency to be confirmed against standards)
- Concerns regarding water discharge impacts on turf quality
- Need to ensure alignment between any future waterplay facility and KLP development direction

Design, Safety and Operational Considerations

- Waterslide design must consider heat exposure, UV protection, and user safety
- Shade provision identified as essential across all facility types
- Hygiene and water quality management critical in high-temperature conditions
- Lifecycle cost and ongoing operational subsidy require consideration
- Concepts remain exploratory and will inform, not determine, future masterplanning

Interview with Pilbara Development Commission

9am–9:30am 10th March 2026 at City of Karratha Administration Centre, Welcome Road, Karratha (on-line)

Key Items:

- Have some limited market research on demands for tourism in the region
- Marquee Park experienced a number of operational challenges, including an approximately 18-month delay to commissioning while suitable water quality standards were achieved. Following opening, the facility experienced intermittent closures due to vandalism and water quality issues.
- Need to manage community expectations
- Dampier and Karratha are probably the best locations for a waterpark
- Elizabeth Quay has also had issues with their waterplay area

Interview with Rio Tinto

1:30pm 1st April (on-line)

An overview of the project was provided along with the five candidate sites identified in Dampier for potential waterplay. Only two of the candidate sites are being considered for further investigation, Dampier Foreshore and Dampier Community Centre. Site maps were provided to Rio Tinto so they can provide advice on ownership/land tenure, utility access (water, power, waste water), contamination etc.

Rio Tinto are in general support of a waterplay/ waterpark, however there is a need to manage expectations and if it was to be located on Rio Tinto land then a waterpark would not be prioritised.

The desalination plant is currently under construction in Dampier and is forecast to be completed by the end of 2026. Rio Tinto subsequently advised that water capacity requirements following commissioning of the desalination plant will be managed in conjunction with the Water Corporation, but that no further specific information was available to inform the study at this stage.

Interview with Broome Shire Council

10am 14th May 2026 via phone

Operations and Maintenance

- Microbiological risks are a key operational consideration in hot climates, requiring robust water treatment systems

- Approximately 0.5 full time equivalent (FTE) has been allowed for daily cleaning and maintenance, including daily debris removal and weekly deep cleaning
- Power, cleaning and staffing are expected to be the primary operating costs.
- Off-the-shelf waterplay equipment was selected to improve reliability and reduce maintenance requirements

Design Considerations

- Permanent shade is considered essential to improve user comfort and reduce heat exposure
- Separate play areas for younger and older users were recommended
- Timed water activations enhance user experience and assist with water management
- Wind conditions should be considered as they can affect drainage
- Parking, noise and supporting amenities (e.g. toilets) should be appropriately planned for
- The facility has been designed without fencing due to its location within a highly activated precinct
- Larger slides would provide greater appeal for teenagers, however, due to cost and staffing requirements these were not pursued in the final design

Water and Utilities

- Water treatment systems should be designed for Northern WA climatic conditions
- Daily water losses of approximately 10-15% are anticipated through evaporation and overspray
- The facility incorporates underground water storage and filtration infrastructure
- High electrical demand should be anticipated, with consideration given to solar power to reduce operating costs

Operations

- Proposed operating hours are 9:00am to 8:00pm/9:00pm, with evening lighting
- The facility is planned to operate six days per week throughout the year
- If water depth remains below 300 mm, lifeguards may not be required (subject to regulatory requirements)

Project Benchmarking

- The proposed waterplay area is approximately 400 m², compared with the existing 120 m² splash pad
- The estimated project cost has increased from approximately $4.7 million to $6 million

WACA Aquatic Facility

A site visit was conducted of the recently developed aquatic facility at the WACA in East Perth. The aquatic facility is a component of a broader redevelopment of the WACA grounds which also included improved cricket and spectator facilities, new health club and support facilities. The City of Perth was responsible for funding the aquatic centre components which included a 50m outdoor lap pool, an indoor learn to swim pool and waterpark inclusive of water slides.

The 2020 business plan for the aquatic facilities estimated the construction cost to be approximately $31m and estimated the need for an ongoing financial subsidy throughout the operating life of the infrastructure. This is due to the costs associated with construction and operations of aquatic facilities, which are greater than the projected ability of the facility to generate revenue. The business plan estimates the subsidy requirement for the WACA Aquatic Facility will average $1.96 million per annum in the first ten years of operations and the subsidy requirements will increase to an average of $3.02 million per annum on average over the full 40 year lease term. This estimate was based on annual patronage of 229,000 over the initial ten year period, and a projected annual growth rate of 0.7 per cent per annum. The business plan noted that if this patronage level is not achieved, the annual subsidy of $3m will increase.

The business plan calculated that the cost per patron for the WACA Aquatic Facility, under the assumptions developed as part of the financial model report is forecast to be $13.20 per user on average in the first ten years of the modelling period (in inflation-adjusted terms). This places the WACA Aquatic Facility within a reasonable range of the average operating cost per user in Perth Metropolitan leisure facilities in 2019-20 ($12.77 per user).

04

Demand and Community Need Assessment



State-wide Participation

Western Australia AusPlay Swimming Participation

Data from AusPlay indicates that swimming is the most popular organised physical activity for children in Western Australia outside school hours, and remains among the top recreational activities for adults across all age groups.

Among children, swimming participation (19.2%) ranks first, ahead of major team sports such as football and basketball, highlighting a strong baseline engagement with aquatic activity from an early age. Participation is highest among younger cohorts, particularly children aged 5–8 years, reinforcing early-life familiarity with water-based recreation.

Among adults, swimming remains one of the top five most popular physical activities, with participation broadly consistent across working-age cohorts, alongside walking, fitness/gym activities, and bush walking.

While not specific to waterpark facilities, these findings demonstrate a strong cultural and behavioural affinity with aquatic recreation in Western Australia. When considered alongside City of Karratha's climatic conditions and demographic profile, this supports a strong underlying propensity for engagement with water-based leisure infrastructure, particularly in high-temperature regional environments.

Western Australia - Participation by activity (children) (organised outside of school hours)

Rank	Activity	Total	Males	Females	Ages 0–4	Ages 5–8	Ages 9–11	Ages 12–14
1	Swimming	19.2%	19.0%	19.6%	19.1%	27.0%	17.4%	11.3%
2	Football/Soccer	13.8%	20.5%	6.4%	*5.1%	16.1%	19.7%	16.8%
3	Gymnastics	8.3%	4.4%	12.7%	6.8%	11.6%	12.5%	**1.9%
4	Australian football	8.0%	13.1%	*2.4%	*1.6%	11.7%	8.1%	12.0%
5	Basketball	8.0%	10.0%	5.9%	**0.5%	7.4%	10.3%	16.8%
6	Netball	6.7%	*1.0%	13.3%	**0.4%	6.5%	9.0%	13.2%
7	Dancing (recreational)	5.5%	*1.2%	10.5%	*4.0%	9.1%	*3.0%	*5.6%
8	Cricket	4.0%	5.7%	*2.1%	**0.0%	*4.4%	*5.8%	*6.9%
9	Running/Jogging	3.6%	*3.2%	4.2%	*3.6%	*3.8%	*2.2%	*4.9%
10	Walking (Recreational)	3.1%	*2.3%	4.0%	*2.7%	*2.4%	*5.1%	*2.5%

Western Australia - Participation by activity Adult

Rank	Activity	Total	Males	Females	Ages 15–17	Ages 18–24	Ages 25–34	Ages 35–44	Ages 45–54	Ages 55–64	Ages 65+
1	Walking (Rec.)	51.0%	42.1%	59.7%	32.7%	35.3%	39.9%	49.4%	59.9%	67.0%	58.7%
2	Fitness/ Gym	35.8%	34.5%	36.9%	50.5%	41.6%	43.6%	36.3%	34.2%	28.9%	26.3%
3	Bush walking	18.3%	16.7%	19.8%	14.8%	16.3%	21.3%	22.3%	21.4%	18.7%	10.4%
4	Running/ jogging	17.3%	19.9%	14.7%	26.4%	26.9%	28.8%	19.8%	16.7%	8.6%	*2.1%
5	Swimming	16.3%	15.9%	16.8%	19.4%	16.4%	19.0%	19.6%	16.3%	14.8%	10.7%

AusPlay survey results January 2025 - December 2025
*Estimate has relative margin of error between 50% and 100% and should be used with caution
**Estimate has relative margin of error greater than 100% and is considered too unreliable to use

Local Demand

The City demonstrates several characteristics that strongly support demand for waterpark infrastructure, including a young population profile, high proportions of family households, strong aquatic recreation participation, and projected population growth.

Population is forecast to increase from approximately 23,412 residents in 2021 to 27,824 by 2046, an uplift of around 18.8%[1]. The current 2025 population estimate for the City is 25,429 people[1]. This growth is expected to reinforce demand for family-oriented recreation, community infrastructure, and climate-responsive leisure facilities.

The City has a significantly younger demographic profile than Western Australia overall. The median age is 32 years compared with 38 years across WA, while children aged 0–14 years comprise approximately 22% of the population[2]. In contrast, only 3% of residents are aged 65+, compared with 16% across WA, and couple families with children are higher at 55.8% versus 44.6%[2]. This confirms a strongly family-oriented catchment aligned with primary waterpark user groups.

Strategic planning further reinforces this need, with the City's *Strategic Community Plan 2020–2030* and *Council Plan 2025–2035* identifying the need for enhanced sport and recreation infrastructure. The *Community Infrastructure Plan 2025–2035* specifically highlights the requirement to investigate the feasibility and location of a waterpark facility across the City.

Community engagement indicates very high levels of aquatic recreation participation. At the Karratha Leisureplex, 17% of respondents attend three times per week and 38% attend one to two times per week, demonstrating a strong base of habitual use. In contrast, Wickham Recreation Precinct and Roebourne Pool show limited engagement, with 54% and 85% of respondents respectively indicating no use of these facilities.

This confirms the Leisureplex as the primary aquatic destination in the City, supporting concentrated and frequent usage patterns rather than distributed casual use. Limited public transport provision within the City further reinforces reliance on locally accessible recreation facilities, particularly for family and youth users, and strengthens the importance of well-located waterpark infrastructure within residential and activity hubs.

Importantly, consultation identifies that demand is constrained by facility limitations rather than lack of interest, with key barriers including limited variety, insufficient shade, overcrowding, and limited provision for older children and teenagers.

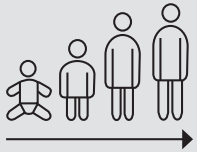
Collectively, the demographic profile, population growth, strategic policy direction, and strong aquatic participation evidence indicate a robust underlying demand base for expanded waterpark infrastructure in Karratha.

City of Karratha Key Demographics

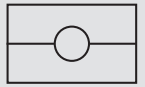
2021 Total Residents: **23,412 (2021)**[1]

2025 Estimated Residents: **25,429 (2025)**[1]

2046 Total Estimated Residents: **27,824**[1]
+4,412 people (+18.8%)[1]



Median Age: **32** ↓ (38 WA)[3]
0–14 Years: **25%** ↑ (19% WA)[3]
Over Age 65: **3%** ↓ (16% WA)[3]



Aboriginal Torres Strait Population: **12%** ↑ (3.3% WA)[3]



Couple families with children: **55.8%** ↑ (44.6% WA)[2]



Need assistance due to disability: **2%** ↓ (4.6% WA)[3]

[1] REMPLAN, 2026
[2] ABS, CENSUS 2021
[3] City of Karratha Council Plan 2025-2035

Local Demand Context and Behavioural Evidence

The following findings are drawn from Section 03 - Engagement and summarise community feedback relating to waterplay demand, including overall outlook, key demand drivers, and likely usage patterns.

Community Demand and Utilisation Outlook

Community demand for waterplay in the City of Karratha is very strong and consistent across all engagement streams. Survey results show near-universal support for investment (99%) and high existing participation in aquatic activities (96% in the past 12 months), confirming an established and engaged user base.

Current use is constrained by facility limitations rather than lack of interest. Key barriers include limited variety (47%), heat and insufficient shade (33%), overcrowding (29%), and limited provision for older children and teenagers (24%). These factors indicate that existing facilities are not meeting the breadth or quality of community need, particularly for youth and family recreation.

There is a clear preference for more diverse and engaging waterplay experiences, including waterslides, adventure-style features, and age-differentiated spaces. Feedback consistently highlights gaps in provision for older children and multi-age family use.

Demand is not location-specific, with a strong preference (60%) for a hybrid delivery model combining a destination-scale facility with smaller distributed waterplay nodes. This reflects regional catchment dynamics and the need to balance accessibility with destination appeal.

Importantly, waterplay is identified as a climate-response necessity rather than discretionary recreation, reinforcing its role in supporting liveability during extreme heat.

While precise visitation cannot be quantified from engagement data alone, multiple indicators point to high utilisation potential. Strong participation, near-universal support for investment, and high willingness to pay (85%) indicate a large and engaged user base with a strong propensity for repeat visitation.

Demand is expected to translate into high-frequency use from a broad family-based catchment, particularly given the strong representation of households with children. Utilisation will be reinforced by climatic conditions, generating consistent seasonal peaks and sustained use during hot periods, particularly in afternoons, weekends, and school holidays.

Overall, the evidence indicates strong latent and expressed demand, with high utilisation potential characterised by repeat visitation, broad catchment draw, and strong responsiveness to facility quality, comfort, and accessibility.

Demand Drivers and Likely Usage Patterns

Demand for waterplay in the City of Karratha is driven by demographic, climatic, and spatial factors.

A strong family household profile (86% with children under 18), particularly in the 0–11 age cohorts, underpins sustained demand for family-oriented recreation, alongside a clear gap in provision for older children and teenagers (10+ years).

Climate is a primary driver. Extreme heat and limited shade constrain existing outdoor recreation, positioning waterplay as essential cooling and liveability infrastructure. This drives pronounced seasonal peaks, particularly during hot periods and after-school hours.

Spatially, Karratha functions as the primary hub, supported by demand for distributed provision in Dampier, Wickham, and Roebourne to improve accessibility. This establishes a dual catchment model, combining a regional destination facility with localised neighbourhood-scale provision.

Financial barriers are limited, with 85% of respondents willing to pay for access where quality is high, supporting a mixed free and user-pays model.

Usage is expected to peak during afternoons, weekends, and high-temperature periods, with primary use by families. Visits will typically be short and high-intensity (cooling and play), with longer dwell times where shade, seating, and amenities are provided. Overall, usage will be strong, repeat-based, and highly responsive to facility quality, accessibility, and climatic conditions.

This evidence base has been used to inform the scenario assumptions within the following indicative waterplay demand modelling, particularly in relation to participation uplift, conversion rates, and frequency of use under high climatic demand conditions.

Tourism Demand

Tourism is an emerging and strategically significant contributor to demand in the City, with the visitor economy expected to grow over the medium to long term. This is supported by major regional catalysts including the United Nations Educational, Scientific and Cultural Organization (UNESCO) World Heritage listing of the Murujuga Cultural Landscape and improved regional connectivity through the Manuwarra Red Dog Highway, both of which are expected to increase the City's exposure to domestic and international markets[4].

The City's tourism direction is further supported through its strategic objective to develop a sustainable tourism industry, positioning Karratha as a destination recognised for world-class attractions that support a diverse economy, enhance liveability, and preserve natural and cultural heritage[4]. Key strengths include Aboriginal culture, marine and coastal environments, and heritage towns, with the City also positioned as a strategic Pilbara tourism hub and key crossroads within broader self-drive networks[4]. This includes regional touring routes such as the Australia's North West "Epic Pilbara Road Trip" itinerary. The strategy also highlights activation of surrounding settlements including Roebourne, Point Samson, and Dampier as complementary tourism nodes[4].

The City currently receives approximately 55,000 overnight leisure visitors annually, with potential for gradual growth within the broader North West tourism network[4]. While lower than major attractors such as Karijini National Park, this reflects a stable baseline visitor economy.

Visitor markets are primarily driven by nature-based tourism, cultural experiences, coastal environments, and self-drive touring routes[4]. These segments align with high daytime outdoor activity patterns, particularly during warmer conditions, increasing the potential for incidental use of waterpark facilities.

However, tourism growth is constrained by high travel costs, limited accommodation capacity, workforce shortages, and a relatively narrow tourism product base[4]. This results in a visitor economy that is growing but remains structurally constrained and seasonal rather than high-volume year-round demand.

Within this context, waterpark facilities are best considered a secondary visitor servicing and experiential asset rather than a primary drawcard, supporting dwell time, family-friendly activity, and climate comfort during peak heat and holiday periods.

Waterpark facilities could be developed to reflect the City's place-based strengths, drawing on Aboriginal cultural narratives, coastal and marine environments, and heritage town character[4], to strengthen placemaking and enhance the visitor experience through a stronger sense of local identity.

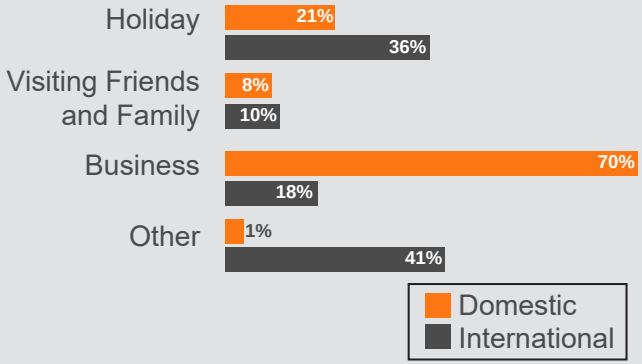
Tourism would provide a supplementary demand stream, reinforcing peak seasonal usage rather than defining baseline demand, with strongest impacts during holiday periods, touring peaks, and high-temperature conditions.

City of Karratha Visitors (2023–2024)[5]

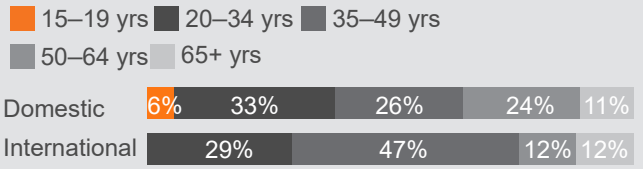
Total Overnight Visitors:	242,000 Domestic + 7,000 International (16% of Australia's North West visits)
Total Visitor Nights:	1,623,000
Total Spend:	$323 million

Average Trip Length (Domestic/International): 6.5 days ↓ (8.1 Australia's North West)

Purpose of Travel (2023–2024)



Age of visitors (2023–2024)



[4] Economic Development and Tourism Strategy 2025–2035
[5] Tourism WA Insights and Planning

Climate and Seasonal Demand

Climate is a key driver of waterplay demand in the City. The region experiences consistently high temperatures throughout much of the year, with mean maximum temperatures exceeding 30°C between September and May and remaining above 34°C during the peak summer period. Karratha records approximately 243 days per year above 30°C, including around 116 days above 35°C and 19 days above 40°C, reinforcing the role of water-based recreation as both a leisure activity and a form of heat relief[6].

Morning temperatures are already warm, averaging approximately 29–31°C during summer months, before increasing further through the afternoon[6]. This is expected to support strong daytime, after-school, and early evening demand for outdoor water-based recreation.

The climate profile indicates an extended operating season compared to metropolitan and southern Australian locations, with peak demand anticipated between November and March and sustained shoulder season demand likely during spring and autumn months. While Karratha has a relatively low average annual rainfall of approximately 291mm, rainfall is heavily concentrated between January and March, reflecting the region's tropical and cyclonic weather patterns[6].

While these conditions strongly support waterpark demand, they also increase operational considerations, including water losses through evaporation and overspray, with regional engagement indicating losses of approximately 10-15% per day, as well as increased water and chemical consumption, infrastructure wear, and the need to design for cyclonic weather events and extreme environmental exposure.

Monthly Temperature Profile and Indicative Waterplay Demand Seasonality

Month	Mean Max Temp (°C)	Mean 9am Temp (°C)	Mean 3pm Temp (°C)
Jan	36	31.1	34.1
Feb	35.9	30.7	33.7
Mar	36.3	31.1	34.5
Apr	34.4	29.6	32.8
May	30.1	25.6	28.8
Jun	26.6	21.8	25.3
Jul	26.5	20.9	25
Aug	28.4	22.8	26.7
Sep	31.1	25.2	28.7
Oct	34.2	28.7	31.5
Nov	35	30	32.7
Dec	36.1	31	33.6

Highest anticipated demand based on climatic conditions and seasonal recreation patterns.

[6] Australian Government, Bureau of Meterology, Monthly Climate Statistics (1971–2026), Karratha Aero

Indicative Waterpark Demand Modelling

This section provides a scenario-based assessment of potential demand for a waterpark facility within the City. The model integrates demographic structure, climatic conditions, participation benchmarks from AusPlay, Australian Sport Commission participation survey, and local household survey findings (n=96) (summarised in Section 03 - Engagement) to refine visitation assumptions.

The inclusion of local survey data provides direct evidence of existing aquatic recreation behaviour within the community and supports an upward adjustment to base participation assumptions.

1. Population and Target Cohort

The City has an estimated population of approximately 25,429 residents[1]. Children aged 0–14 years represent approximately 22% of the population (5,642 children).

This cohort forms the primary user group for waterpark facilities, supported by a strong family household profile identified in the community survey.

Demand modelling is based primarily on the current resident population, with projected population growth considered qualitatively in the interpretation of results.

[1] REMPLAN, 2026
[6] Australian Government, Bureau of Meterology, Monthly Climate Statistics (1971-2026), Karratha Aero

2. Behavioural Evidence (Local Survey Uplift Basis)

Community online survey findings (n=96) indicate:

- **96%** of households have used aquatic facilities in the past 12 months
- **86%** of households include children under 18 years
- **78%** include children aged 5–11 years
- **Over 50%** of respondents are weekly users of the Karratha Leisureplex

This demonstrates a highly active and habitual aquatic recreation culture within the community, significantly stronger than implied by state-level participation benchmarks alone.

3. Revised Aquatic Engagement Scenarios

Baseline engagement assumptions derived from AusPlay, the Australian Sports Commission's participation survey, have been uplifted to reflect strong local participation evidence.

Scenario	Aquatic Engagement Rate
Low	30%
Medium	45%
High	60%

Scenario	Estimated Aquatic-Engaged Children
Low	~1,693
Medium	~2,539
High	~3,385

4. Conversion to Waterpark Participation

Not all aquatic recreation participants will use waterpark facilities. Conversion rates are applied as scenario-based assumptions informed by observed usage patterns from comparable regional aquatic and waterpark facilities, local survey findings, and climatic conditions that support high discretionary recreation participation.

Scenario	Waterpark Conversion Rate	Estimated User Base
Low	55%	~931 children
Medium	70%	~1,777 children
High	85%	~2,877 children

5. Visit Frequency Assumptions

Karratha's climatic conditions (240+ days above 30°C annually)[6] and strong observed facility usage support high repeat visitation rates.

Scenario	Annual Visits per User
Low	10 visits
Medium	14 visits
High	18 visits

6. Indicative Annual Child Visitation

Scenario	Annual Visits (Children Only)
Low	~9,310 visits/year
Medium	~24,878 visits/year
High	~51,786 visits/year

7. Intergenerational Uplift

Survey findings confirm strong family participation, with 86% of households including children and high rates of shared aquatic facility use.

A 45% intergenerational uplift is applied to account for:

- Accompanying adults
- Siblings outside the primary cohort
- Teenage users (12–17 years)

Scenario	Total Annual Visits (Including Broader Users)
Low	~13,500 visits/year
Medium	~36,100 visits/year
High	~75,100 visits/year

8. Tourism Adjustment

Karratha receives approximately 242,000 overnight visitors annually, of which approximately 70% are work-related[5]. These visitors largely represent repeat travel by FIFO and other workers rather than individual leisure tourists, and may use community aquatic and recreation facilities during their stay. However, their usage patterns are expected to differ from those of leisure visitors.

Accordingly, a conservative 5–15% allowance has been applied to the relevant leisure tourism cohort, with future tourism growth providing potential upside to demand.

9. Summary Indicative Range

Scenario	Estimated Annual Visitation
Low	~14,000–16,000 visits/year
Medium	~37,000–40,000 visits/year
High	~75,000+ visits/year

10. Alignment with Waterpark Hierarchy

Forecast visitation scenarios have been compared against indicative industry benchmarks for waterpark facility typologies outlined in Section 02 - Background Review, Research and Case Studies. This provides a high-level indication of how forecast utilisation aligns with different facility hierarchy levels and operational models. For comparative purposes, annual visitation scenarios have been converted to weekly equivalents (based on a 52-week operation) to enable direct comparison with these typology benchmarks.

Facility Type	Indicative Weekly Usage	Alignment
Incidental/ Urban Water Feature	Not routinely measured	Below identified demand profile; better suited to passive/ incidental use
Local/Neigh-hourhood Waterplay	~200–600/week (~10,000–31,000 visits/year)	Aligns with Low scenario
District/ Community Waterplay	~300–800/week (~16,000–42,000 visits/year	Aligns strongly with Medium scenario
Regional Waterpark	~2,500–3,000/week (~130,000–156,000 visits/year)	Above current demand outlook
Major/ Commercial Waterpark	~1,900–2,900/week (~99,000–151,000 visits/year)	Above current demand outlook

[1] REMPLAN, 2026
[5] Tourism WA Insights and Planning
[6] Australian Government, Bureau of Meterology, Monthly Climate Statistics (1971-2026), Karratha Aero

Demand Findings

The scenario outputs indicate a meaningful level of potential demand for waterpark infrastructure within the City, driven by a combination of climatic conditions, a strong existing culture of aquatic recreation, and a young, family-oriented population profile.

The City has an estimated population of approximately 25,429 residents, including 5,642 children aged 0–14 years. The City is forecast to grow from approximately 23,412 residents in 2021 to 27,824 residents by 2046 (+18.8%)[1], which is expected to further reinforce long-term demand for family-oriented recreation and cooling infrastructure. However, this projection may be conservative, with the Karratha Cumulative Impact Model indicating a population of approximately 29,557 by 2032 under major project delivery. This estimate reflects direct major project workers and their families and does not include indirect workforce impacts, indicating potential for population growth beyond the baseline projection.

Importantly, local survey findings indicate higher levels of household engagement with aquatic facilities than state-level participation benchmarks alone. This reinforces the likelihood that waterpark facilities would be well utilised, particularly given the region's extended periods of high temperatures and limited alternative outdoor cooling recreation options.

The results should be interpreted as indicative planning scenarios rather than precise forecasts. They provide a relative understanding of demand scale and sensitivity across low, medium, and high uptake conditions, supporting facility sizing,

concept development, and feasibility decision-making.

Within this context, the high scenario is considered conservative relative to observed behavioural indicators from community consultation, particularly in relation to frequency of use under extreme climatic conditions and the high proportion of households with children. Given the strength and consistency of demand signals across consultation, demographic profile, and climatic drivers, the high scenario represents a plausible upper-bound case under a well-designed and appropriately located facility.

Tourism growth also presents potential upside to demand. The City's assessment indicates that visitor numbers could increase by approximately 20–50% following completion of the Manuwarra Red Dog Highway, with further growth potential associated with the Murujuga World Heritage Listing, increased tourism development and proposed visitor accommodation.

Comparison against indicative industry visitation benchmarks suggests the forecast demand aligns most closely with a district/community-scale waterpark facility, with potential to support elements of a regional destination model over time. While forecast utilisation is below typical regional/commercial waterpark benchmarks, strong latent demand, climatic conditions, repeat visitation patterns and potential future population and tourism growth indicate potential for staged expansion and broader destination appeal if higher-quality facilities are delivered.

This demand profile supports the intent of the City of Karratha's vision of becoming "Australia's most liveable regional city," particularly in relation to enhancing family-friendly recreation opportunities and climate-responsive public infrastructure.

City of Karratha Council Plan 2025–2035 Vision:

"Australia's most liveable regional city."

Community Lens

Attract and retain residents and talent[1], and ensure our community is welcoming, connected, vibrant, healthy and safe[3].

With the City having a young population (25% under the age of 14) and 55.8% of households comprising couples with families and children, it is essential to provide accessible, family-friendly opportunities.

Tourism Lens

Karratha's strategic location: A hub for Pilbara tourism and a natural crossroads for travellers, connecting cultural, natural, and industrial experiences[4].

With an average stay of 6.5 nights in the City of Karratha, providing facilities that creates a strong sense of place and delivers a unique visitor experience is essential.

A family-focused facility that is highly accessible for young children and families, and provides a distinctive, place-based experience that enhances Karratha's appeal for residents and visitors travelling to and through the region.

[1] REMPLAN, 2026
[3] Council Plan 2025–2035
[4] Economic Development And Tourism Strategy 2025–2035

05
Site Analysis



Potential Sites

A total of 25 potential sites were identified and assessed across the study area, including locations within Karratha, Dampier, Wickham, Roebourne and Point Samson. The longlist was developed through a combination of consultant-led desktop review, stakeholder input from City staff and Council, community, and the inclusion of additional sites identified through the City's internal planning processes.

All sites were physically inspected as part of the feasibility study process to confirm site context, access conditions, surrounding land uses, and potential development constraints. This ensured a consistent baseline understanding of each site and supported robust comparative assessment.

The longlist intentionally included a diverse range of site types and scales, from larger regional-scale opportunities through to smaller community and coastal-based locations, allowing a broad assessment of potential facility outcomes across the study area.

The following table presents all potential sites identified and considered as part of the assessment process, including their reference IDs and location details. A spatial map on the following page illustrates the distribution of these sites across the study area.

Site Selection Analysis Maps have been prepared for each of the 25 assessed sites and are included as Appendix E. The maps include aerial imagery, site boundaries, addresses and Lot information.

Site Location	Site ID	Site Name	Lot/DP Reference
Dampier	D1	Dampier Foreshore	Lot N104743 LR3138/605; Lot 369 DP 4001927
	D2	Dampier Foreshore (inflatable site)	Offshore coastal waters
	D3	Dampier Community Centre	Lot S013207 DP 2896/277; Lot 390 DP 1795/593
	D4	Lions Park	Lot 325 DP 3104589
	D5	Dampier Football Oval	Lot 248 DP 217466; Lot 247 DP 217466
Karratha	K1	Karratha Leisureplex	Lot 556 LR3164/286
	K2	Karratha Leisureplex Alternate Sites	Lot 556 LR3164/286
	K3	Potential Hotel + Civic Buildings Site	Lot 7018 DP 2890/100; Lot 7020 DP 2862/261
	K4	Richardson Way/Country Club	Lot 4211 P187663; Lot 635 LR3161/566; Lot 503 LR3164/141
	K5	Baynton West Park	Lot 400 LR3158/880; Lot 401 LR2742/101
	K6	Balyarra Park & Pump Track	Lot 789 LR3160/902
	K7	Cattrall Park, Pegs Creek	Lot 1987 LR3014/192–193; Lot 1989 LR3014/194
	K8	Urban Open Space	Lot 7078 DP 2831/953; Lot 7079 DP 2927/416
	K9	Bulgarra Sporting Precinct	Lot 3001 LR3170/863; Lot 3000 LR3170/862; Lot 489 LR3014/170
	K10	Skatepark Site (Nickol West Park)	Lot R51924 LR3163/676; Lot 507 LR3155/205
	K11	Red Earth Arts Precinct	Lot 500 LR3174/907
	K12	Back Beach	DP 240165
Wickham	W1	Wickham Recreation Precinct	Lot 780 LR3131/210
	W2	Wickham Community Hub	Lot 362 P193365; Lot 780 LR3131/210
	W3	Wickham South Park	Lot 708 LR3166/263
Roebourne	R1	Roebourne Aquatic Centre	Lot 502 LR3158/914; Lot 503 LR3158/915; Lot 760 LR3063/637
	R2	Roebourne Public Library	Lot 2 D041696
	R3	Andover Park	Lot 473 LR3014/106
Point Samson	P1	Point Samson Community Park	Lot 278 LR3078/847; LR3014/63; LR3014/64
	P2	Point Samson Beach (inflateable site)	Offshore coastal waters

- D1 Dampier Foreshore
- D2 Dampier Foreshore (inflateable site)
- D3 Dampier Community Centre
- D4 Lions Park
- D5 Dampier Football Oval
- K1 Karratha Leisureplex
- K2 Karratha Leisureplex Alternate Sites
- K3 Potential Hotel + Civic Buildings Site
- K4 Richardson Way/Country Club
- K5 Baynton West Park
- K6 Balyarra Park & Pump Track
- K7 Cattrall Park, Pegs Creek
- K8 Urban Open Space
- K9 Bulgarra Sporting Precinct
- K10 Skatepark Site (Nickol West Park)
- K11 Red Earth Arts Precinct
- K12 Back Beach
- W1 Wickham Recreation Precinct
- W2 Wickham Community Hub
- W3 Wickham South Park
- R1 Roebourne Aquatic Centre
- R2 Roebourne Public Library
- R3 Andover Park
- P1 Point Samson Community Park
- P2 Point Samson Beach (inflateable site)



Site Analysis Methodology

This section outlines the methodology used to assess and compare potential sites for a new waterpark facility across Karratha, Dampier, Wickham, Roebourne, and Point Samson. The approach provides a consistent and transparent framework for evaluating site suitability and identifying locations for further investigation and concept development.

Development of the assessment framework

The site assessment framework was developed to enable a consistent and comparable evaluation of all identified sites. It was informed by the project brief, relevant strategic and planning documents, desktop analysis, and site inspections undertaken across the study area.

The framework considers a range of physical, environmental, planning, and servicing factors that influence the suitability of each site for a waterpark, ensuring alignment with both technical feasibility and broader community and strategic objectives.

The assessment framework also reflects the intended facility hierarchy, incorporating both district/community waterplay and regional water playground/waterpark typologies. These hierarchy types have been informed by Council direction, community feedback, and demand modelling, reflecting a clear preference for mid-to-large scale destination waterplay outcomes.

These typologies were translated into site-based requirements relating to indicative developable area, expansion potential, parking provision, servicing capacity, and the ability to accommodate supporting amenities such as shade structures, amenities buildings, and associated public realm infrastructure.

Assessment criteria

Sites were assessed against a structured set of criteria grouped into the following categories:

- Accessibility
- Planning constraints
- Environmental factors
- Servicing and infrastructure
- Future land use compatibility
- Site suitability and development potential

Each category is underpinned by a series of sub-criteria to ensure consistent application of the assessment framework across all sites.

The assessment criteria was developed by the project team (Tredwell) based on stakeholder engagement feedback and technical feasibility considerations. These were further reviewed and informed by Council workshop input.

Scoring methodology

Each sub-criterion was scored using a three-point qualitative scale:

- Low (0) - does not meet the requirement
- Medium (1) - partially meets the requirement
- High (2) - fully meets the requirement

Scores were aggregated at a category level and then weighted to reflect their relative importance in determining overall site suitability. This approach enables consistent comparison between sites while recognising the differing influence of each assessment category.

Weighting approach

Category weightings were applied to reflect their relative importance to the overall assessment outcome, as follows:

- Accessibility (25%)
- Planning constraints (20%)
- Environmental factors (15%)
- Servicing and infrastructure (10%)
- Future land use compatibility (10%)
- Site suitability and development potential (20%)

Weighted scores were combined to produce an overall site score, providing a comparative basis for shortlisting.

The weighting structure was developed by the project team (Tredwell) based on stakeholder engagement feedback and technical feasibility considerations. These were further reviewed and informed by Council workshop input.

Shortlisting approach

Sites were initially assessed and ranked based on weighted scores derived from the site assessment framework. The weighted scoring provided a consistent basis for comparison across all sites and supported an initial understanding of relative performance.

A general benchmark of 75 (out of 100) was used as an indicative guide to inform consideration for

shortlisting. However, the final shortlist was not determined by scoring alone.

The shortlisting process incorporated stakeholder input from City staff and the project team, alongside consideration of site-specific factors not fully captured within the scoring framework. This included strategic opportunities, local context, delivery considerations, alignment with the intended district/community and regional hierarchy, and their suitability for this scale of development.

As a result, the scoring outcomes were used as a guide rather than a determinant, with some lower-scoring sites progressed where they demonstrated strategic merit or locational advantage, and some higher-scoring sites not progressed where broader constraints, planned alternate uses or implementation considerations reduced their suitability, i.e. highest and best use of available land (future hotel site).

This combined approach ensures that the shortlist reflects both the outcomes of the technical assessment and informed stakeholder input. The detailed rationale for sites not progressed is provided following the Assessment Criteria Matrix Summary Table.

Assessment Criteria Matrix

The following table summarises the shortlisted sites progressed for further consideration and concept development. A complete site assessment table, including sub-criteria and scoring outcomes, is included as Appendix A.

Criteria Assessment (Summary Table)

Criteria L - Low (Does not meet criteria) M - Medium (Partially meets criteria H - High (Meets criteria)	Dampier					Karratha											Wickham			Roebourne			Point Samson	
	Dampier Foreshore	Dampier Foreshore (inflatable site)	Dampier Community Centre	Lions Park	Dampier Football Oval	Karratha Leisureplex	Karratha Leisureplex Alternate Sites	Potential Hotel + Civic Buildings Site	Richardson Way/ Country Club	Baynton West Park	Balyarra Park & Pump Track	Cattrall Park, Pegs Creek	Urban Open Space	Bulgarra Sporting Precinct	Skatepark Site	Red Earth Arts Precinct	Back Beach	Wickham Recreation Precinct	Wickham Community Hub	Wickham South Park	Roebourne Aquatic Centre	Roebourne Public Library	Andover Park	Point Samson Community Park	Point Samson Beach (inflatable site)
Accessibility (weighting 25%)	M	M	H	M	L	H	H	H	H	M	L	H	M	H	L	H	L	H	H	L	H	M	L	H	M
Planning Constraints (weighting 20%)	H	H	M	M	H	H	H	H	H	M	M	M	H	H	M	H	H	H	H	M	H	M	M	H	M
Environmental Factors (weighting 15%)	M	L	H	H	M	H	H	H	M	H	H	M	H	H	H	H	M	H	H	H	H	H	H	M	L
Servicing (weighting 10%)	H	L	M	M	H	H	M	M	M	H	L	M	L	H	M	M	L	H	M	L	H	L	L	M	M
Future Land Use Compatibility (weighting 10%)	H	H	M	M	H	H	M	M	H	M	M	H	L	H	H	M	M	M	L	H	M	H	M	H	H
Site Suitability (weighting 20%)	M	M	M	L	M	H	H	H	M	M	L	M	M	H	H	M	M	H	M	M	H	L	H	M	M
Assessment Score (out of total of 52)	35	28	37	31	34	49	42	43	38	39	25	37	33	49	36	40	25	48	39	27	43	31	31	37	30
Weighted Score (Out of 100)	67	57	69	56	64	92	81	81	75	71	45	69	61	92	66	76	51	89	73	51	80	57	57	73	58
Assessment Outcome (Shortlisted sites to score weighted Score of 75+ or highest scoring site in each town)	Shortlised	Discounted	Discounted	Discounted	Discounted	Shortlised	Shortlisted (removed)	Shortlisted (removed)	Shortlised	Discounted	Discounted	Discounted	Discounted	Shortlised	Discounted	Shortlisted (removed)	Discounted	Shortlisted (removed)	Discounted	Discounted	Shortlisted (removed)	Discounted	Discounted	Discounted	Discounted

Discounted Sites

The following section provides further detail on sites not progressed for further consideration, focusing on those with comparatively higher weighted scores, strategic relevance, or where specific site constraints warranted explicit clarification. Sites with lower relative scores and no material strategic implications are summarised collectively.

Karratha Leisureplex - Alternate Site

- Located within a bushfire prone area (low-moderate hazard level), presenting additional design and risk management considerations
- Sloping topography, increasing construction complexity and earthworks requirements
- Separated from the main Leisureplex facilities, requiring standalone servicing, access, parking, and operational management
- Overall site configuration limits integration efficiencies with existing recreation infrastructure

Potential Hotel + Civic Buildings Site (Welcome Road, Karratha)

- Partly located within a bushfire prone area (moderate hazard level)
- Identified Aboriginal heritage site/survey area (Karratha Hills), introducing significant planning and approval constraints
- Land owned by DevelopmentWA with existing mixed-use development approval (Walgu Development), limiting flexibility for alternative use
- Strategic land use intent is focused on civic and mixed-use development outcomes rather than recreation infrastructure

Red Earth Arts Precinct

- Existing civic facility operating at or near capacity with established cultural and community uses
- Limited opportunity for redevelopment or expansion without significant disruption to core civic functions
- More appropriately retained as a regional arts and cultural hub rather than adapted for water-based recreation use

Wickham Recreation Precinct

- High-scoring site within the assessment framework, reflecting its strategic role in servicing the eastern corridor and strong community interest in improved waterplay provision
- Community feedback identified a preference for improvements within the existing gated aquatic facility, rather than development of a new standalone/external waterplay asset, with a need for improvements to the existing pool area
- Given the preferred focus on Category 3-4 waterplay facilities, the site is potentially constrained by available land and servicing requirements for a facility of this scale.
- Land tenure held by Rio Tinto presents external governance and approval considerations
- Partly located within a bushfire prone area (low-moderate hazard level)
- Located approximately 40 minutes from the primary population centre of Karratha, reducing accessibility for the broader regional catchment and increasing reliance on private vehicle access
- While the site achieved a high assessment score, four concept scenarios were progressed based on Council and community feedback, with Karratha identified as the preferred location for further investigation
- Waterplay opportunities at Wickham should be considered as part of the proposed Wickham Recreation Precinct redevelopment (2026/27), subject to endorsement by Rio Tinto.

Roebourne Aquatic Centre

- High-scoring site within the assessment framework, reflecting its strategic importance in servicing the eastern corridor
- Community feedback identified a preference for improvements within the existing gated aquatic facility, rather than development of a new standalone/external waterplay asset, with a need for improvements to the existing pool area
- Given the preferred focus on Category 3-4 waterplay facilities, the existing site is potentially constrained by its footprint and servicing requirements for a facility of this scale

- Located partly within a designated bushfire prone area (moderate hazard level)
- Adjacency to flood-prone land increases environmental and design constraints
- Located approximately 30 minutes from the primary population centre of Karratha, reducing accessibility for the broader regional catchment
- The site is currently owned by the Department of Education, requiring an alternative approval process and resolution of ownership and management arrangements for any future waterplay development
- While the site achieved a high assessment score, four concept scenarios were progressed based on Council and community feedback, with Karratha identified as the preferred location for further investigation
- Waterplay opportunities at Roebourne should be considered at a later stage, pending resolution of ownership and management arrangements for the existing aquatic centre.

Dampier Community Centre

- To the north of the Community Centre:
  - The site has limited available site area, restricting the ability to accommodate the required waterplay footprint, supporting amenities, circulation and operational infrastructure
  - The site features significant existing vegetation, and Council staff noted significant birdlife values, which may create additional environmental considerations and potential design constraints
- To the south of the Community Centre:
  - The site has sloping topography, increasing earthworks requirements, accessibility considerations and construction complexity
  - Rocky ground conditions, potentially increasing excavation requirements, construction costs and delivery complexity

Remaining sites not progressed (summary exclusion)

The remaining sites were not progressed for further consideration due to a combination of lower relative weighted scores, limited developable area, servicing constraints, accessibility and parking, environmental considerations, and/or reduced alignment with the preferred district/regional hierarchy.

These sites are generally considered more suitable for continued local or passive recreation use and do not demonstrate sufficient capacity or strategic alignment for progression into concept design development.

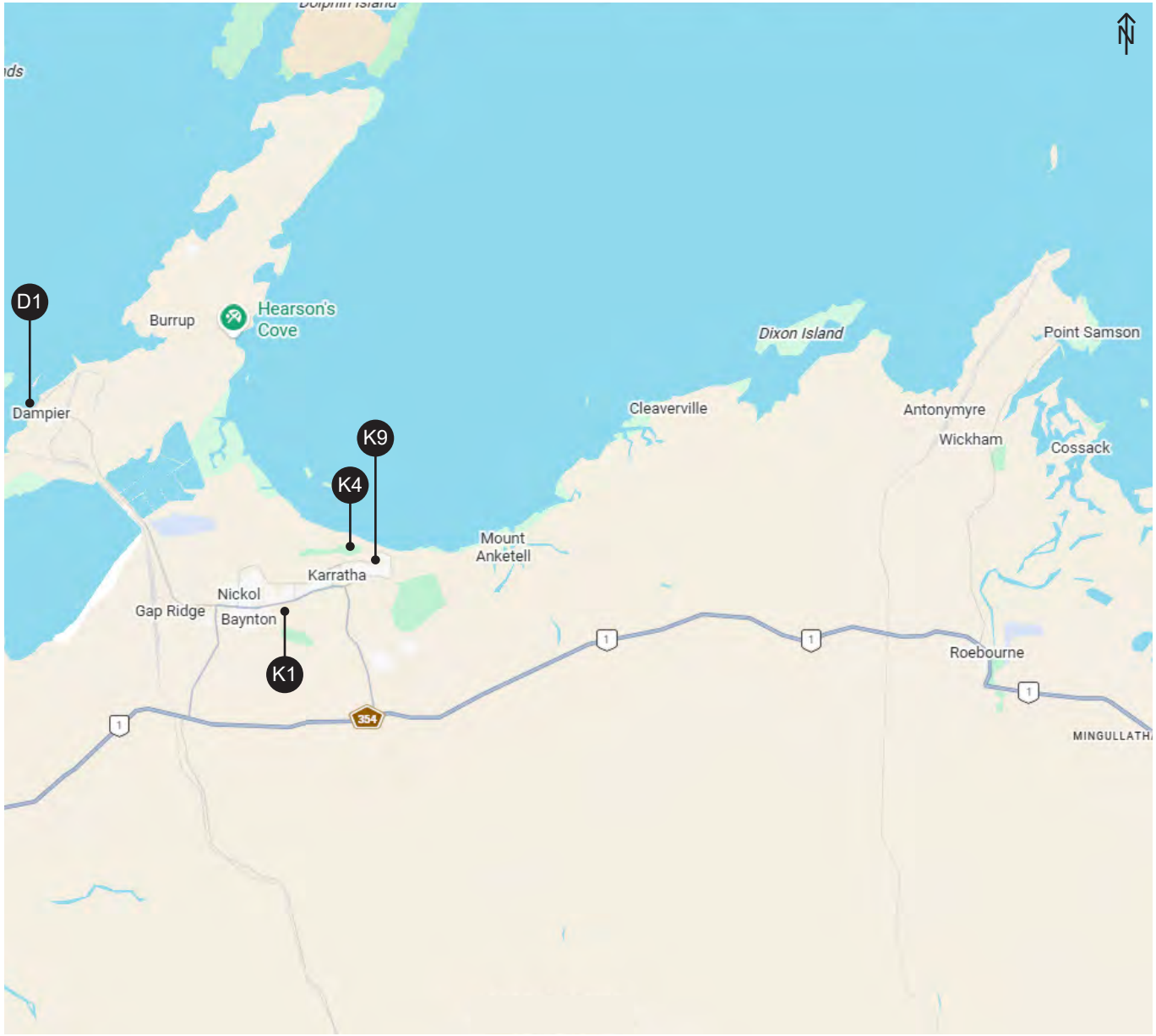
Shortlisted Sites for Further Consideration

The following section presents the sites that have been shortlisted for further consideration and concept design development. These sites represent the most suitable options identified through the site assessment process, incorporating weighted scoring outcomes, stakeholder input from Council and the project team, and alignment with the preferred district/community waterplay and regional water playground/waterpark hierarchy.

Each short-listed site is presented with a summary of its assessment outcome, strategic justification, key opportunities and constraints, and its role within the broader network of potential facility locations. Each site also includes additional evaluation including tenure constraints, Aboriginal heritage, Native Title, acquisition/management order requirements, and developmental readiness. This provides a clear rationale for progression and supports subsequent concept development stages.

Shortlisted sites:

- D1 Dampier Foreshore
- K1 Karratha Leisureplex
- K4 Richardson Way/Country Club*
- K9 Bulgarra Sporting Precinct



The Richardson Way site is vested to the City and is not part of the Country Club lease area. The existing driving range is located within this broader area.

Dampier Foreshore

The Dampier Foreshore site was progressed due to its prominent township role, coastal recreation setting, and strong accessibility. It operates as an active foreshore destination with high visibility, strong passive surveillance, and good integration with adjacent playground facilities, supporting both local and visitor use. Land use compatibility is generally favourable, although long-term tenure remains unresolved between Council, State, and Rio Tinto through the Dampier Land Transfer project. This is currently being worked through with all relevant parties.

Opportunities

- High visibility and passive surveillance in active foreshore setting
- Strong tourism and destination potential
- Good road access and existing parking provision
- Integration with adjacent playground facilities
- Contribution to broader coastal recreation network

Constraints and Considerations

- Coastal inundation, storm surge, and sea level rise exposure
- Unresolved land tenure
- Proximity to wastewater infrastructure and capacity constraints, with currently only septic systems provided
- Bushfire exposure in parts of site
- Coastal corrosion and ground condition challenges, including the presence of rock
- Utility servicing and contamination constraints reducing usable area
- Existing palm trees to be retained where possible
- The planned Dampier desalination plant (anticipated completion in 2026) may provide additional regional water security and support future development outcomes. As part of the feasibility assessment, discussions were held with Rio Tinto regarding water servicing and the potential implications of the desalination plant. Rio Tinto advised that water capacity requirements following commissioning of the desalination plant will be managed in conjunction with the Water Corporation; however, no specific information regarding future water capacity was available to inform the study at this stage. The existing Dampier Foreshore is serviced by City water connections, but the availability and capacity of these services to support a future waterplay facility have not been confirmed. Detailed hydraulic assessment, water quality testing and servicing investigations will therefore be required during subsequent project stages to confirm suitability, capacity and operational requirements

Role in Network

The site may accommodate a district/community waterplay typology, subject to resolution of tenure, servicing capacity, ground conditions and coastal hazard constraints. It represents a high-profile coastal destination, although with elevated delivery risk compared to inland alternatives.

Preferred Waterpark Development Area

The preferred development area for a waterpark at Dampier Foreshore is to the east of the pavilion. This location provides convenient access to existing car parking, relatively flat land with opportunities for terraced seating, and strong integration with adjacent playgrounds to the north and south as well as the ‘The Palms’ area. It also benefits from direct access to the foreshore footpath network and coastal views.

Dampier Foreshore - Additional Site Analysis Considerations

Refer to Appendix D - 'Additional Site Analysis Considerations' for mapping.

Consideration	Comments	Risk
Land tenure/management arrangements	A review of available Landgate cadastral and tenure information was undertaken. The site is located within a public foreshore reserve context and comprises multiple lot boundaries. The land is currently utilised for recreation purposes and is understood to be transitioning to City management. Confirmation of final tenure arrangements, reserve purpose and management responsibilities will be required prior to future development.	Moderate
Aboriginal heritage	A review of available Aboriginal heritage mapping indicates that no recorded Aboriginal heritage sites or places have been identified within the site area. Notwithstanding this, the Dampier Archipelago is recognised as having significant Aboriginal cultural values, and consultation with relevant Aboriginal parties and confirmation of heritage requirements will be required during future design development and approvals processes.	Moderate
Native title	A review of the Western Australian Native Title Visualisation (NTV) mapping was undertaken to identify potential Native Title interests relevant to the site. The site is located within an area subject to a Native Title determination that is in effect (finalised). No current Native Title applications or overlapping registered Native Title claims were identified within the site area based on the available mapping. Further confirmation of Native Title matters, including applicable procedural requirements and consultation obligations, will be required through subsequent project stages and statutory approval processes.	Low
Acquisition/management order requirements	The land is currently being transitioned to City management and is used for recreation purposes. Based on the current land use context, no significant acquisition constraints have been identified; however, confirmation of management arrangements, reserve purpose and any applicable management order requirements will be required prior to development.	Low
Site contamination	Iron ore contamination is present within the site area. Given the site's industrial history and proximity to port-related activities, further investigation will be required to confirm the extent and severity of contamination and identify any remediation requirements. A Preliminary Site Investigation (PSI) should be undertaken during subsequent project stages to inform detailed design, earthworks and construction requirements.	Moderate /High
Geotechnical suitability	The site presents potential geotechnical constraints associated with coastal conditions, including rock/latent ground conditions, saline groundwater, erosion risk and exposure to storm surge and coastal inundation events. Existing site conditions indicate potential excavation challenges, with previous works within the broader foreshore area experiencing significant rock conditions. These factors may influence excavation, footing design, construction methodology and infrastructure placement and will require confirmation through detailed geotechnical assessment in the selected location.	High
Site services	Water demand and servicing requirements will require confirmation through detailed hydraulic assessment. Existing power and water connections service the Dampier Foreshore; however, no sewer connection is currently available (septic tank servicing). Telstra and National Broadband Network (NBN) services are located nearby but not currently connected to the site. The future desalination plant (anticipated completion in 2026) may improve regional water security but will require consideration as part of future servicing investigations.	High


LEGEND
Lot Boundary
Preferred Waterpark Development Area
Playground
C
THE ESPLANDE
The Palms
Carparking
B
Pavillion
A
Hampton Oval
Playground
Lot 369 DP 4001927
Lot N104743
LR3138/605


A


B


C

Karratha Leisureplex

The site was progressed due to its regional hierarchy, strong alignment with the district community waterplay and regional water playground/waterpark categorisations and integration potential with the existing Leisureplex precinct. It benefits from a central Karratha location with strong road access, public transport connectivity, active transport linkages, and existing parking provision. The site also performs strongly across planning and land use criteria, including secure tenure, minimal surrounding land use conflict, and limited impact on adjacent residential areas. Its location within the Leisureplex provides significant operational advantages, including potential shared use of staffing, lifeguarding, amenities, and supporting infrastructure.

Opportunities

- Strong integration with existing recreation infrastructure and operations
- Centrally located with good accessibility and passive surveillance
- Sufficient land area to accommodate waterplay facilities, amenities, and parking if adjoining playing field land is made available for use
- Existing recreation precinct supports complementary land uses and shared infrastructure

Constraints and Considerations

- The main oval is subject to a joint use agreement with the Department of Education for use by Karratha High School, which presents an additional consideration for its potential use for waterpark development.
- Partial bushfire prone area with low–moderate hazard exposure
- Existing drainage infrastructure and underground services within parts of the precinct
- Development within the existing Leisureplex footprint would reduce available open space; however, there is potential to incorporate additional green space through the redevelopment of some or all of the underutilised volleyball court area. This should be considered as part of broader Leisureplex precinct master planning.
- Competing demands for use of available space such as site access and additional water space
- Increased visitation associated with new waterplay and recreation opportunities may place additional demand on existing amenities, parking and site circulation during peak periods

Role in Network

The Leisureplex is a highly utilised community facility with strong demand for additional aquatic and recreation services, including expanded learn-to-swim programs and associated additional water space. The site is considered suitable for a district/community waterplay (Category 3) outcome, and potentially a regional level facility if the playing field is made available for use.

Preferred Waterpark Development Area

The preferred locations for waterpark development at the Leisureplex are within the Leisureplex complex itself, including the open space north of the café area and the area east of the café adjacent to the existing splash pad, as well as the large playing fields to the north of the facility, which are subject to future master planning.

Karratha Leisureplex - Additional Site Analysis Considerations

Refer to Appendix D - 'Additional Site Analysis Considerations' for mapping.

Consideration	Comments	Risk
Land tenure/management arrangements	The site is located within the established Karratha Leisureplex recreation precinct and comprises land managed by the City for recreation and community purposes. The existing recreation land use presents a favourable tenure context for future development. Confirmation of land tenure, management arrangements and any applicable reserve purpose requirements should be undertaken through detailed Landgate review during subsequent project stages.	Low
Aboriginal heritage	A review of available Aboriginal heritage mapping indicates no recorded Aboriginal heritage sites or Aboriginal heritage areas directly identified within the site area. Given the site's long-established urban recreation context, Aboriginal heritage constraints are considered low; however, confirmation of heritage requirements and consultation with relevant Aboriginal parties, where required, should be undertaken during future design development and approvals processes.	Low
Native title	A review of the Western Australian Native Title Visualisation (NTV) mapping was undertaken to identify potential Native Title interests relevant to the site. The site is located within an area subject to a Native Title determination that is in effect (finalised). An Indigenous Land Use Agreement (ILUA) area is located immediately adjacent to the proposed site boundary but does not overlap the development area based on available mapping. Further confirmation of Native Title matters, including applicable procedural requirements and consultation obligations, will be required through subsequent project stages and statutory approval processes.	Low
Acquisition/management order requirements	No immediate acquisition requirements have been identified. The site forms part of the existing Leisureplex precinct and development is considered likely to be achievable within the existing land management framework, subject to confirmation of tenure, management responsibilities and any applicable reserve purpose requirements.	Low
Site contamination	The site is an established recreation and civic precinct with no known contamination constraints. Should excavation or significant ground disturbance be required, appropriate site investigations may be undertaken during subsequent design stages to confirm site conditions.	Low
Geotechnical suitability	The site presents a generally favourable development context, comprising predominantly developed land with relatively level areas. Existing drainage swales in proximity to the site will require consideration during detailed design. Site-specific geotechnical investigations should be undertaken during subsequent project stages to confirm ground conditions and construction requirements.	Low
Site services	The site offers a strong servicing advantage, with underground Horizon Power, Water Corporation water and sewer, Telstra and NBN infrastructure located nearby or within the precinct. Existing servicing is considered favourable; however, detailed hydraulic assessment will be required to confirm available capacity and identify any upgrades necessary to support the preferred waterplay concept.	Low


LEGEND
Lot Boundary
Preferred Waterpark Development Area
DAMPIER HIGHWAY
Lot 556 LR3164/286
Carparking
C
A
B
Leisureplex
Bus Stop
Carparking


A


B


C

Richardson Way/Country Club

The Richardson Way/Country Club site was progressed due to its central location, strong accessibility, and capacity to accommodate either a district/community or regional facility. The site benefits from high visibility, established and planned active transport connections, and opportunities to support broader recreation and open space functions, including its role as a proposed future location for complementary recreational infrastructure and as the subject of a future masterplan process.

Opportunities

- Central location with good road access and connectivity
- Established and planned active transport linkages
- Potential integration with future tourism and accommodation development and recreation precinct including large scale bike park and dog park, subject to those projects proceeding
- Capacity to accommodate waterplay and supporting infrastructure
- Suitable for either a district/community or regional facility
- Potential visitor and tourism benefits

Constraints and Considerations

- Exposure to coastal inundation, storm surge, sea level rise, and cyclone-related hazards
- Flood-prone areas requiring significant earthworks and fill
- Moderate bushfire hazard exposure
- Significant stormwater management requirements
- Existing servicing constraints
- Ground conditions due to the potential of clay and acid sulphate soils

Role in Network

The site has potential to accommodate either a district/community or regional facility, offering strong accessibility and visibility. However, its suitability is dependent on addressing flood risk, servicing requirements, ground conditions, and other environmental constraints that may affect development feasibility which are also being considered in current planning projects.

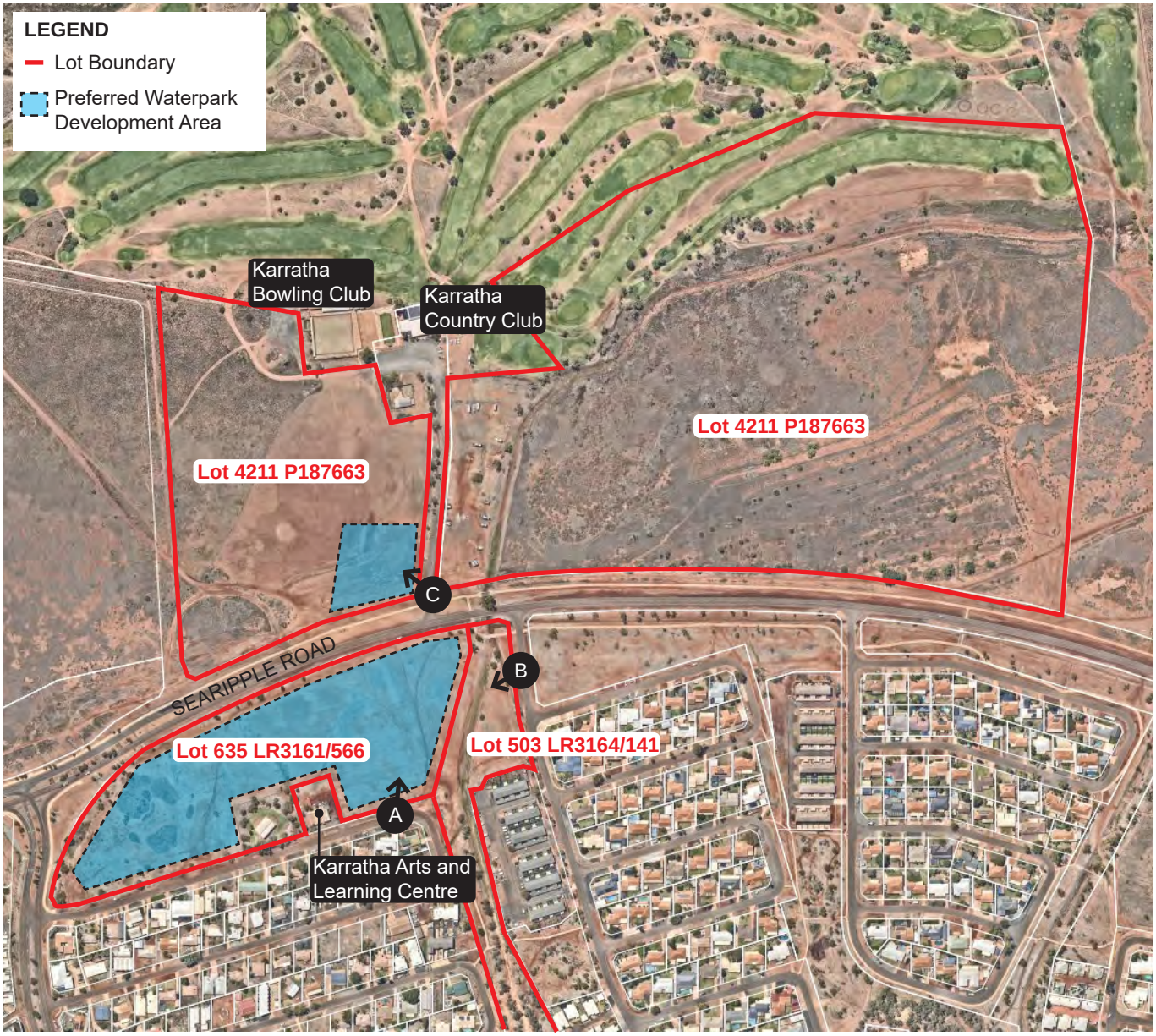
Preferred Waterpark Development Area

The preferred waterpark development locations at Richardson Way are the western parcel of land, which could integrate with a potential tourism park, and the southern parcel of land south of Searipple Road, which is subject to master planning including a proposed dog park and bike park.

Richardson Way/Country Club - Additional Site Analysis Considerations

Refer to Appendix D - 'Additional Site Analysis Considerations' for mapping.

Consideration	Comments	Risk
Land tenure/ management arrangements	The site comprises multiple land parcels, including areas identified under Land Registry references LR3014/205 and LR3161/566. Available mapping indicates the site is associated with recreation/open space use and is managed by the City for the purposes of parkland, recreation, drainage and public infrastructure. Land tenure and management arrangements will require confirmation through detailed Landgate tenure review. Given the existing recreational use and surrounding reserve context, no immediate tenure constraints have been identified; however, future development may require confirmation of land ownership, management responsibilities, approvals and any applicable reserve purpose requirements.	Low
Aboriginal heritage	A review of available Aboriginal heritage mapping indicates no recorded Aboriginal heritage sites or Aboriginal heritage areas directly identified within the site area. Notwithstanding this, Aboriginal cultural values may extend beyond mapped records, and confirmation of heritage requirements, including consultation with relevant Aboriginal parties where required, will be undertaken during future design and approvals processes.	Low
Native title	A review of the Western Australian Native Title Visualisation (NTV) mapping was undertaken to identify potential Native Title interests relevant to the site. The site is located within an area subject to a Native Title determination that is in effect (finalised). An Indigenous Land Use Agreement (ILUA) area is located adjacent to the proposed site boundary but does not overlap the development area based on available mapping. Further confirmation of Native Title matters, including applicable procedural requirements and consultation obligations, will be required through subsequent project stages and statutory approval processes.	Low
Acquisition/ management order requirements	No immediate acquisition requirements have been identified. The site is managed by the City for the purposes of parkland, recreation, drainage and public infrastructure; however, confirmation of land tenure, reserve purpose, management responsibilities and any applicable management order requirements will be required during subsequent project stages.	Low
Site contamination	The site benefits from an established recreation/open space context; however, preliminary mapping indicates potential flood and coastal inundation constraints. The site is subject to 1:100 and 1:500-year average recurrence interval flood events, with parts of the broader area also identified as being subject to coastal inundation considerations. No known contamination issues are known; however, confirmation through appropriate site investigations would be required during subsequent design stages if excavation or ground disturbance is proposed	High
Geotechnical suitability	Generally favourable development context; however, site-specific geotechnical investigations will be required to confirm ground conditions, soil composition and construction requirements. The Karratha Tourist Park Study identified potential clay and acid sulphate soils in the broader area, with potential implications for earthworks and fill requirements.	Moderate
Site services	Existing urban servicing is available, with underground services including Horizon Power, Water Corporation sewer and water, Telstra and NBN located nearby or within the broader site area. Servicing capacity appears favourable; however, detailed hydraulic assessment will be required to confirm water supply capacity, wastewater requirements and any upgrades required based on the final waterplay scale and operational model.	Moderate


LEGEND
Lot Boundary
Preferred Waterpark Development Area
Karratha Bowling Club
Karratha Country Club
Lot 4211 P187663
Lot 4211 P187663
SEARIPPLE ROAD
Lot 635 LR3161/566
Lot 503 LR3164/141
Karratha Arts and Learning Centre
A
B
C


A


B


C

Bulgarra Sporting Precinct

The Bulgarra Sporting Precinct site was progressed due to its location within an established recreation precinct, strong accessibility, existing supporting infrastructure, and capacity to accommodate a district/community Waterplay facility. The site benefits from Council ownership, good passive surveillance, and limited surrounding land use conflict, supporting integration with existing recreation activities.

Opportunities

- Good road access and connectivity
- Existing parking provision
- Strong passive surveillance from regular sporting and event activity
- Established recreation precinct with complementary uses
- Capacity to accommodate a district/community Waterplay facility
- Opportunity to integrate with ongoing precinct masterplanning

Constraints and Considerations

- Floodplain location with storm surge and cyclone-related risk
- Significant stormwater management requirements
- Moderate bushfire hazard exposure
- Existing event uses may limit operational flexibility
- Site design influenced by flood and drainage requirements

Role in Network

The site is considered suitable for a district/community Waterplay facility, offering strong accessibility, visibility and integration with the broader recreation network, subject to resolution of flood and stormwater management requirements.

Preferred Waterpark Development Area

The preferred locations at this site for the development of a waterpark facility include the expansive concrete slab north of the tennis courts, which would enable a centrally located waterpark with access to nearby parking and provide opportunities for shade and heat mitigation.

Bulgarra Sporting Precinct - Additional Site Analysis Considerations

Refer to Appendix D - 'Additional Site Analysis Considerations' for mapping.

Consideration	Comments	Risk
Land tenure/management arrangements	The site is located within an existing City-managed sporting reserve and comprises established recreation land. The current land use provides a favourable tenure context for future development; however, confirmation of land tenure, management arrangements and any applicable reserve purpose requirements should be undertaken through detailed Landgate review during subsequent project stages.	Low
Aboriginal heritage	A review of available Aboriginal heritage mapping indicates no recorded Aboriginal heritage sites or Aboriginal heritage areas directly identified within the site area. Given the established recreation context, Aboriginal heritage constraints are considered low; however, confirmation of heritage requirements and consultation with relevant Aboriginal parties, where required, should be undertaken during future design development and approvals processes.	Low
Native title	A review of the Western Australian Native Title Visualisation (NTV) mapping was undertaken to identify potential Native Title interests relevant to the site. The site is located within an area subject to a Native Title determination that is in effect (finalised). No current Native Title applications or overlapping registered Native Title claims were identified within the site area based on the available mapping. Further confirmation of Native Title matters, including applicable procedural requirements and consultation obligations, will be required through subsequent project stages and statutory approval processes.	Low
Acquisition/management order requirements	No immediate acquisition requirements have been identified. Development would likely require integration with, or reconfiguration of, existing recreation infrastructure, including the skatepark, basketball courts and hit-up wall, together with confirmation of any applicable management arrangements.	Low
Site Constraints	The site is located within an established sporting precinct; however, preliminary mapping indicates the site is located within a flood plain and is subject to stormwater management considerations.	Moderate
Site contamination	The site is an established sporting reserve with no known contamination constraints are known. Should excavation or significant ground disturbance be required, appropriate site investigations may be undertaken during subsequent design stages to confirm site conditions.	Low
Geotechnical suitability	Site-specific geotechnical investigations should be undertaken during subsequent project stages to confirm ground conditions and construction requirements.	Moderate
Site Services	The site benefits from access to existing urban infrastructure, including Horizon Power, Water Corporation water and sewer, Telstra and NBN services located nearby or within the precinct. Existing servicing is considered favourable; however, detailed hydraulic assessment will be required to confirm available capacity and identify any upgrades necessary to support the preferred waterplay concept.	Low


LEGEND
Lot Boundary
Preferred Waterpark Development Area
Lot 3001 LR3170/863
SEARIPPLE ROAD
Lot 3000 LR3170/862
Carparking
Carparking
B
C
A
Playground
Sporting Fields
Sporting Oval
Lot 489 LR3014/170
Carparking
Frank Butler Community Centre
Bus Stop
HUNT WAY

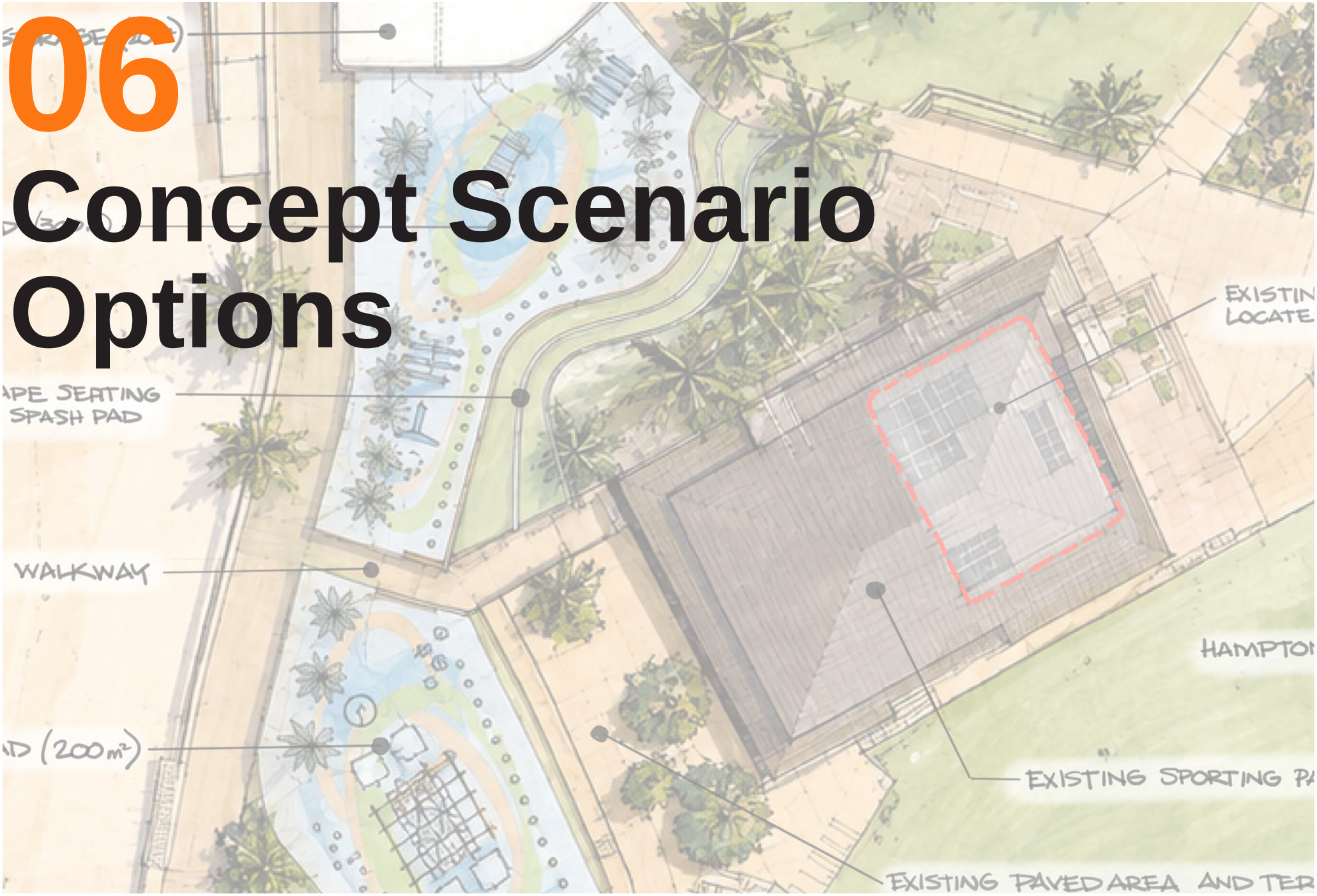

A


B


C

06

Concept Scenario Options



Recommended Suitable Facility Type

As determined in Section 04 Demand and Community Needs Assessment, the forecast demand (including consultation, demographic profile, and climatic drivers) for a waterpark in the City aligns most closely with a district/community-scale waterpark facility, with potential to support elements of a regional destination model over time. While forecast utilisation is below typical regional/commercial waterpark benchmarks, strong latent demand, climatic conditions, and repeat visitation patterns indicate capacity for staged expansion and broader destination appeal if higher-quality facilities are delivered.

The following accommodation schedule outlines the requirements for a waterpark facility of district/community and regional scales. This accommodation schedule has driven the concept scenario design options, ensuring that they meet the required level of provision and area for the arrival and entry area, waterplay precinct, amenities, back of house and site systems for the City.

Accommodation Schedule

Functional Group	Design Element	3. District/Community Waterpark	4. Regional Water Playground/Waterpark	Provision/Area	Comments/Design Considerations
Arrival & Entry	Entry/Arrival Zone	Informal park-based entry integrated with reserve.	Formal destination entry with controlled access and forecourt.	District: open entry forecourt. Regional: larger plaza with queue/entry control.	Defines arrival experience and operational control level.
	Vehicle Access, Parking & Bus Facilities	60–120 car parks (~1,800–3,800 m² total parking area) with informal overflow capacity.	180–350 car parks (~5,000–11,000 m² total parking area) including structured bus/coach provision.	28–32 m² per standard car bay including circulation and landscaping allowance.	Parking demand driven by peak seasonal visitation and event clustering. Bus access required for school and group visitation, particularly in regional model.
	Perimeter Control (Fencing & Access)	Fenced perimeter defining operational boundary.	Controlled perimeter with formal entry/exit points.	Secure boundary treatment integrated into site edge.	Required for safety, asset protection and operational control.
Waterplay Precinct	Splash Pad/ Interactive Waterplay Zone	Moderate splash pad with jets, sprays and ground features.	Large multi-zone immersive waterplay precinct.	District: 500–1,500 m². Regional: 1,500–4,000+ m².	Core facility driver of scale and visitation.
	Adventure Waterplay Structures	Moderate climbing, tipping buckets and interactive elements.	Large multi-level themed adventure structures.	Scaled structural play integrated within waterplay zone.	Major capital cost and experiential driver.

Functional Group	Design Element	3. District/Community Waterpark	4. Regional Water Playground/Waterpark	Provision/Area	Comments/Design Considerations
Waterplay Precinct Continued	Waterslides	Optional small-scale slides.	Multiple large-scale waterslides with run-out zones.	District: optional. Regional: multiple slide systems.	Significant impact on staffing and safety requirements.
	Toddler/Junior Zone	Dedicated shallow sensory play zone.	Expanded junior precinct with separation and seating.	Defined low-depth waterplay area.	Requires spatial separation from high-energy zones.
	Youth/High Activity Zone	Moderate challenge play integrated in main zone.	Dedicated high-energy youth/adventure precinct.	Additional climbing and interactive features.	Supports broader age range and dwell time.
	Inclusive & Accessible Design	Accessible splash elements and graduated play.	Fully integrated inclusive design across all zones.	Accessible circulation and transfer points.	Mandatory design requirement.
	Dry Play/Multi-Use Activation	Selected elements designed for seasonal dry use.	Major structures designed for wet/dry dual activation.	Structural and landscape dual-use design.	Enhances year-round utilisation and value.
	Water Activation Systems (Timed/ Zoned)	Push-button or sensor-based activation.	Automated zoned activation with programmable sequencing.	Integrated control systems within water infrastructure.	Supports sustainability and operational efficiency.
Amenity Zone	Toilets & Change Facilities	~80–150 m² total amenity building comprising male, female, accessible toilets and baby change facilities.	~200–400 m² total amenity provision including multiple toilet blocks and expanded aquatic-style change facilities with showers.	Include amenity provision requirements as per Section 2.4 Sanitary Requirements of the *WA Water Spray Grounds and Interactive Water Features Application, Design & Operating Requirements Environmental Health Guide*	Core compliance-driven facility. Drives significant hydraulic, plumbing and structural cost.
	Accessible Facilities	Accessible toilets and basic change provision.	Dedicated accessible aquatic change facilities.	Inclusive access integrated into amenities.	Equity and compliance requirement.

Functional Group	Design Element	3. District/Community Waterpark	4. Regional Water Playground/Waterpark	Provision/Area	Comments/Design Considerations
Amenity Zone Continued	Food & Beverage Tenancy	Optional kiosk/small café.	Café/kiosk with indoor and outdoor seating.	District: 20–40m². Regional: 50–150m².	Potential revenue-generating use.
	BBQ/Picnic Areas	Informal BBQ and picnic areas in park setting.	Expanded picnic terraces and group spaces.	Distributed picnic nodes.	Supports family use and dwell time.
	Seating & Supervision Areas	Provision for low–moderate group use and passive supervision	Provision for high-capacity group use and extended dwell time	Distributed seating across all precincts	Supports supervision, family use and dwell time
	Shade Provision	Shade provision covering 50–70% of high-use areas	Shade provision covering 70–90% of high-use areas	Applied to waterplay, seating and toddler zones	In North West WA climate, shade is a critical operational requirement not optional amenity
	Drinking Fountains/ Refill Stations	Distributed drinking fountains.	Multiple refill stations across site.	Minimum 1–2 per precinct cluster.	Supports health and sustainability.
	Flexible Landscape/ Overflow Capacity	~500–1,500 m² flexible landscape/overflow capacity integrated within park setting.	~2,000–6,000 m² programmed flexible landscape and event overflow areas supporting peak demand.	Flexible landscape areas designed to accommodate peak seasonal demand, school groups and event overflow.	Supports capacity management during peak visitation periods and provides multi-use green space function.
	Event/Group Use Areas	Informal group/birthday spaces.	Defined event-capable zones.	Flexible open space allocation.	Supports programmed activation.
Back Of House (BOH)	Plant Room/Water Treatment	~150–300 m² total BOH provision including pump room, filtration, chemical storage and basic staff space.	~400–900 m² BOH provision including full-scale mechanical plant, chemical systems, storage and staff/admin areas.	Sized to hydraulic load, peak flow rates and treatment capacity.	One of the highest-risk under-designed components if undersized.
	Storage/Operations	Small maintenance and seasonal storage.	Expanded BOH storage (chemicals, equipment).	District: minor storage. Regional: multiple BOH areas.	Scales with operational complexity.

Functional Group	Design Element	3. District/Community Waterpark	4. Regional Water Playground/Waterpark	Provision/Area	Comments/Design Considerations
Back Of House Continued	Staff & Administration	Minimal operational workspace.	Dedicated staff/admin facilities.	District: small workspace. Regional: 20–60m².	Required for regional staffing model.
	First Aid Facilities	Basic first aid provision.	Dedicated first aid room.	Regional: ~10–20m².	Required for higher-risk facilities.
Site Systems	Safety Systems (CCTV & Fencing)	Perimeter fencing + recommended CCTV.	Full CCTV coverage and controlled access.	Integrated surveillance system.	Required for safety and liability management.
	Operational Model	Carer-supervised, minimal staffing.	Fully supervised with lifeguards.	District: Technical oversight. Regional: Full staffing.	Major operational cost driver.
	Transport Integration	Local parking + pedestrian access focus.	Formal parking + bus/ coach infrastructure.	Structured transport system.	Key constraint in site planning.
	Plant & Infrastructure Capacity	Moderate hydraulic/ mechanical systems.	High-capacity water treatment systems.	Scaled infrastructure design.	Core engineering driver.
	Indicative Usage	~300–800 visits/week (seasonal).	~2,500–3,000 visits/week (~150,000 annually).	Demand-based planning input.	Drives sizing assumptions.
	Indicative Capital Cost	~$5M–$10m	$10m+	High-level feasibility range.	Subject to scope and theming.
	Indicative Operating Cost	~$300k–$500k	$500k+	Annual operating estimate.	Staffing and systems driven.

Sustainability and Waterwise Design Considerations

Sustainability, water efficiency and climate-responsive design were identified as key priorities for the future development of waterplay infrastructure within the City. The assessment framework developed through the study process identified environmental sustainability, including water efficiency, climate responsiveness and long-term operational performance, as key considerations in evaluating potential waterplay outcomes. The concept scenarios have therefore been developed having regard to the principles of the Waterwise Council Program and the sustainability priorities identified by the City through this study.[9]

Given the City's hot and arid climate, limited water availability, and exposure to extreme environmental conditions, any future waterplay development will require careful consideration of resource efficiency, resilient design and operational sustainability. At a feasibility level, the concept scenarios have been developed with consideration of waterwise principles, recognising that sustainable outcomes should be embedded from the earliest stages of planning and design.

While all waterplay facilities require water treatment, replenishment and ongoing management, appropriate design approaches can significantly reduce water demand, improve operational efficiency and support long-term asset sustainability.

Alignment with the Waterwise Council Program

The concept scenarios have been developed to support the objectives of the Waterwise Council Program through the following design responses[9]:

- Water efficiency: Reducing potable water demand through on-demand activation systems and closed-loop water recirculation and treatment
- Sustainable water management: Incorporating efficient treatment systems, operational controls and opportunities to minimise water consumption over the asset lifecycle
- Climate resilience: Designing for local climatic conditions through shade provision, durable materials, cyclone-resilient infrastructure and heat-responsive design.
- Long-term operational sustainability: Considering whole-of-life operational, maintenance and lifecycle requirements to support efficient and sustainable asset management

Collectively, these design responses support the objectives of the Waterwise Council Program and have informed the development of the concept scenarios presented within this report.

Water Supply and Availability Considerations

Water availability and supply requirements represent a critical feasibility consideration for any future waterplay development within the City. At a feasibility level, high-level water demand considerations have been incorporated into the concept assessment, including consideration of facility scale, operational requirements, climatic conditions and expected water losses associated with evaporation and overspray.

Preliminary advice from comparable regional local governments indicates that water losses in hot climate environments may be in the order of 10-15% per day due to evaporation, overspray and operational factors (Shire of Broome). These figures are indicative only and have informed the sustainability measures and design responses incorporated within the concept scenarios.

Detailed hydraulic assessment, water balance modelling and servicing investigations would be undertaken during subsequent design and project development stages to confirm the final water requirements, system capacity, servicing arrangements and operational parameters for the selected concept. These investigations will inform detailed design development and ensure the final facility design incorporates appropriate water efficiency measures and aligns with the objectives of the Waterwise Council Program.

Future investigations should consider:

- Available water supply capacity, servicing requirements and connection considerations
- Expected water demand based on facility size, operating hours, seasonal visitation and operational programming
- Evaporation and operational losses associated with the local climatic conditions
- Opportunities to minimise potable water demand through efficient system design, water reuse and operational controls

[9] Water Corporation. Waterwise Council Program. Government of Western Australia.

- Potential integration with broader City water management initiatives where feasible

Key Sustainability Design Principles

The concept scenarios have incorporated a range of sustainability measures to improve water efficiency, user comfort and resilience within the Pilbara environment.

Climate-Responsive Design:

Waterplay facilities should be designed specifically for the City's climatic conditions, incorporating resilient materials, durable infrastructure and design responses that improve user comfort, reduce environmental impacts and support long-term asset performance.

Key considerations include:

- Designing infrastructure to withstand local conditions, including extreme heat, high winds, cyclonic events, dust and coastal exposure where relevant
- Incorporating natural shade opportunities where available through existing vegetation and landscape design
- Providing approximately 75% shade coverage over high-use waterplay areas to reduce heat exposure, improve user comfort and minimise evaporation
- Orientating play areas, seating and supporting infrastructure to maximise shade benefits and minimise heat gain

In relation to the local climate, shade should be considered an essential operational requirement rather than an additional amenity, as it directly influences user comfort, visitation patterns, facility utilisation and seasonal operating potential.

Water-Efficient Activation Systems:

The use of on-demand water activation systems is recommended to improve water efficiency and reduce unnecessary water consumption.

On-demand activation systems operate by activating waterplay features only when required through push-button or sensor-based controls. This approach reduces continuous water flow, minimises evaporation losses and provides greater operational control over facility use.

Key benefits include:

- Reduced water consumption during periods of low utilisation
- Improved operational control during shoulder seasons and lower demand periods
- Ability to adjust activation times and water sequences in response to usage patterns
- Improved alignment with waterwise principles and responsible resource management

Water Recirculation and Treatment Systems:

Future splash pad and interactive waterplay facilities should incorporate appropriate water treatment and recirculation systems to minimise water consumption while maintaining public health and safety requirements.

A typical recirculation system may include[10]:

1. On-Demand Activation - Activates the waterplay sequence
2. Controller & Manifold - Directs water flow to play features
3. Drain - Collects water and filters large debris
4. Diverter & Strainer - Removes debris and diverts rainwater
5. Holding Tank - Stores and pumps water for treatment
6. Water Treatment System - Filters, disinfects and recirculates water

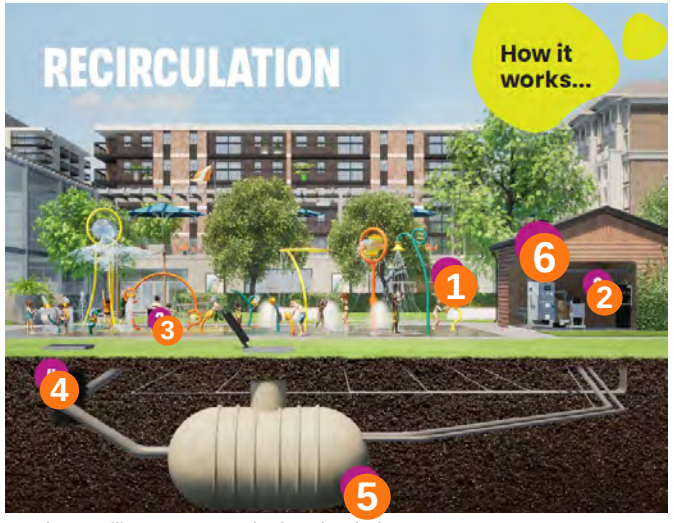


Image illustrates a typical recirculating water management system adapted from Waterplay Solutions Corp.[10]

[10] Waterplay Solutions Corp. Water Management Systems.

The integration of recirculation and treatment systems reduces reliance on continuous potable water supply, minimises water wastage and supports more sustainable facility operation. The specific treatment and recirculation requirements will depend on the final facility typology, water feature selection, operating model and applicable health regulations.

Sustainability Implications for Concept Development

All concept scenarios have been developed on the basis that future waterplay facilities would incorporate sustainable design measures, including:

- Water-efficient activation systems
- Water recirculation and treatment systems
- Extensive shade provision over high-use areas
- Climate-responsive design approaches
- Durable materials and infrastructure suitable for Pilbara conditions

The level of sustainability infrastructure and operational requirements will vary depending on facility scale and complexity. Larger facilities incorporating additional water features, waterslides and increased visitation capacity will require greater hydraulic capacity, more complex treatment systems and increased operational oversight.

Collectively, these measures demonstrate that water efficiency and sustainability can be embedded within future waterplay design outcomes. Further detailed engineering assessment during subsequent project stages will provide the opportunity to refine these measures and confirm the final servicing requirements, ensuring the selected facility solution is appropriately designed for the local climatic conditions, available infrastructure capacity and long-term operational requirements.

Concept Scenario Options

This section outlines the development of high-level Concept Scenario Options for waterplay/ waterpark provision, establishing a structured set of alternative approaches to inform subsequent evaluation. It defines the scope and intent of waterplay scenarios and presents four (4) distinct concept options, each located at one of the shortlisted sites: Dampier Foreshore, Karratha Leisureplex, Richardson Way/Country Club, and the Bulgarra Sporting Precinct. Each option is developed at a broad, strategic level and is intended to test how waterplay provision could be integrated within different existing or proposed precinct contexts.

Each scenario includes indicative layouts supported by visual guide imagery examples to communicate overall form, character, and spatial arrangement, rather than detailed design outcomes. The intent is to provide a clear understanding of how each site could accommodate waterplay infrastructure in a way that responds to its surrounding land uses, activity patterns, and broader precinct role.

The four options are intentionally varied in scale, typology, and location to enable meaningful comparison and to test different delivery approaches across the shortlisted sites. Each scenario is accompanied by an overview of its key advantages, disadvantages, risks, and indicative capital cost ranges to support early-stage feasibility understanding and expectation management. All proposals are developed with consideration of relevant Australian Standards and applicable guidelines to ensure they remain achievable within accepted design and safety parameters. Importantly, the scenarios also reflect place-based aspirations, extending beyond purely functional outcomes to consider broader objectives such as town centre activation, community destination-making, and youth engagement.

At this stage, all concepts are strictly indicative and conceptual in nature. They do not constitute detailed design and remain subject to further technical investigation, including geotechnical assessment, detailed site analysis, and the normal progression of design development stages. Mitigation measures are also identified at a high level only, recognising that refinement and resolution will occur through detailed design processes and site-specific investigations.

In addition to technical and physical feasibility, each option is intended to be assessed in terms of potential engagement outcomes, with these mapped against each scenario in the following sections to support a comprehensive evaluation framework.

Scenario Option Comparison Table

Item	Concept Scenario Option 1 - Dampier Foreshore	Concept Scenario Option 2 - Karratha Leisureplex	Concept Scenario Option 3 - Richardson Way/Country Club	Concept Scenario Option 4 - Bulgarra Sporting Precinct
Splash Pad Area	500 m²	300 m²	450 m²	600 m²
Waterslides	No	2 Slides	4 Slides	No
Amenities Building	No	Existing KLP	180 m² (incl. kiosk/ admin/ amenities)	35 m²
Plant Building	85 m²	120 m²	180 m²	85 m²
Operations Storage	20 m²	30 m²	50 m²	20 m²
Shade Structures	450 m²	225 m²	815 m²	375 m²
Parking	Existing	Existing	New dedicated parking	Existing
Built Area (buildings)	140 m²	210 m²	490 m²	120 m²
Category (hierarchy scale)	3	3 / 4	4	3

Concept Scenario Option 1 - Dampier Foreshore



Concept Scenario Option 1 - Dampier Foreshore

Concept Scenario Option 1 Overview

This concept is located on the Dampier Foreshore between the existing Dampier Foreshore Playground and Adventure Climbing Playground. The site adjoins the popular events area known as The Palms and is bordered by the Hampton Oval pavillion to the east, positioning it within a well-utilised and prominent recreation and tourism precinct.

The concept proposes a wet/dry splash play facility designed to operate through an activation-button system, reducing unnecessary water consumption and supporting operational sustainability. The facility has also been developed with consideration of the region's cyclone-prone environment, incorporating durable and resilient infrastructure designed to withstand local climatic conditions.

The concept comprises two distinct splash pad environments designed to cater to different age groups and play experiences. A larger family splash pad of approximately 300m² functions as the primary destination attraction, while a 200m² junior splash pad provides lower-intensity and sensory-focused waterplay opportunities for younger children. Supporting infrastructure includes a dedicated water treatment facility, operations and storage areas, extensive shade structures covering approximately 75% of splash play areas, and associated landscaping, circulation and recreation spaces. The total development footprint is approximately 1,995m².

The concept is intended to establish a family-oriented coastal recreation destination that complements the existing foreshore precinct. Through the provision of distinct yet connected splash play environments, the facility is designed to cater to a broad range of age groups while integrating with surrounding recreation, tourism and community assets. Coastal-themed waterplay features and landscape treatments reinforce the character of the Dampier Foreshore and contribute to the site's appeal as both a local and visitor destination.

Key Design Features

Component	Area (m²)
Family Splash Pad	300
Junior Splash Pad	200
Water Treatment Plant	100
Operations & Storage	20
Shade Structures	375
Circulation & Hardstand	250
Landscape & Recreation Areas	750
Total Site Development Area	1,995 m²

Other	
Design Scale	District/Community Waterplay
Shade Coverage	~75% of waterplay areas
Parking Provision	Existing

Engagement Outcomes Assessment - Dampier Foreshore

Overall, this option demonstrates strong alignment with community expectations around scale and experience, however accessibility constraints and operational cost implications will require careful consideration in determining long-term viability.

Engagement Outcome	Alignment
Strong community support for new waterplay facilities	Strong
Preferred mid-large scale (district/ community to regional)	Strong
Demand for waterslides and adventure waterplay	Partial
Need for shade and heat mitigation	Strong
Inclusion of multiple age groups (toddler-teen-family)	Strong
Accessibility and equity of access across the City of Karratha	Partial
Transport and parking capacity suitability	Partial
Operational and financial viability (long-term sustainability, cost control, user-pays support)	Limited
Safety and environmental considerations (incl. flood, wind, coastal context)	Limited
Strategic alignment with precinct/ open space/recreation network	Strong
Activation potential (dwell time, visitation, destination value)	Strong

Concept Scenario Option 1 - Dampier Foreshore

Potential Phasing Options

The concept has the potential to be delivered in two stages should funding availability or project delivery considerations necessitate a staged implementation approach.

Stage 1:

- Family splash pad (300m²)
- Water treatment plant
- Operations and storage facilities
- Shade structures
- Circulation and hardstand areas
- Associated landscaping and supporting infrastructure

Stage 2:

- Junior splash pad (200m²)
- Remaining landscape works
- Supporting infrastructure associated with the junior play area

While a staged delivery approach is possible, construction of the concept as a single project is recommended. Delivering the facility in one stage would provide cost and construction efficiencies, minimise disruption to the surrounding foreshore precinct, and avoid duplication of mobilisation, site establishment, and construction activities associated with a future second stage.

Concept Scenario Option 1 - Selected Waterplay Elements and Theming









Concept Scenario Option 1 - Dampier Foreshore

Concept Scenario 1 Pros, Cons, and Risks and Mitigation Measures

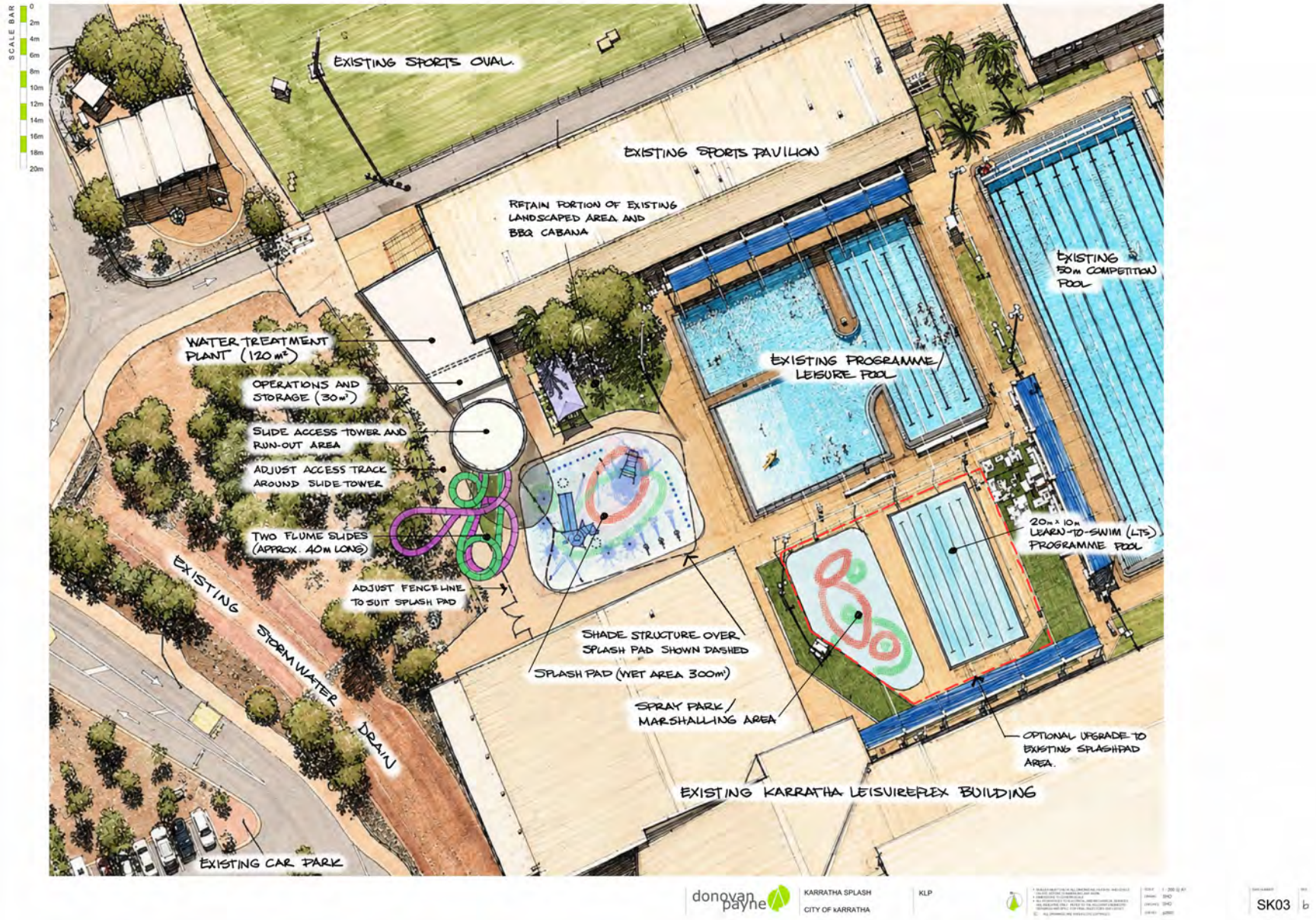
The primary risks associated with this option relate to coastal exposure, long-term operational sustainability, servicing constraints and peak-period capacity pressures. These risks are considered manageable through appropriate design responses, asset planning and operational management.

Pros	Cons	Risks and Mitigation Measures
• Strong precinct integration: Located within an established recreation and tourism precinct, adjoining the Dampier Foreshore Playground, Adventure Climbing Playground, The Palms events area and existing community facilities. • Strong community alignment: Responds well to community preferences for a mid-large scale waterplay facility, multiple age groups and family-oriented recreation. • Distinct age-based play zones: Two separate splash pad environments provide different play experiences for younger children, families and broader users. • Destination value: Coastal-themed waterplay elements and landscape treatments reinforce the character of the Dampier Foreshore and enhance its appeal as a local and visitor destination. • High shade provision: Approximately 75% shade coverage across waterplay areas supports heat mitigation, user comfort and climate resilience. • Efficient waterplay operation: Wet/dry activation-button system reduces unnecessary water consumption and supports operational sustainability. • Reduced operational complexity: Splash pad-based design and proposed water feature elements are not required to have lifeguard supervision, reducing staffing requirements compared with higher-order aquatic facilities. • Climate-responsive design: Cyclone-resilient design approach responds to local environmental conditions.	• Accessibility limitations: Engagement identified partial alignment regarding accessibility and equity of access across the City, reflecting the site's location within Dampier rather than a centrally located facility in the main population area of Karratha. • Parking and transport capacity: Reliance on existing parking infrastructure may create constraints during peak tourism periods, events and high visitation periods. • Operational cost considerations: Although lower complexity than traditional aquatic facilities, ongoing costs associated with water treatment, maintenance, energy and asset management will remain. • Existing vegetation impacts: Removal or relocation of existing palm trees within the northern area may be required to facilitate development. • Wastewater servicing constraints: Proximity to existing wastewater infrastructure and current reliance on septic systems may require further investigation and likely upgrades. • Limited adventure waterplay elements: The concept only partially addresses community demand for larger slides and adventure-based waterplay experiences.	• Coastal inundation, storm surge and sea level rise exposure: Undertake coastal hazard assessment and incorporate appropriate finished levels, drainage solutions and resilient construction methods. • Coastal corrosion and harsh environmental conditions: Specify corrosion-resistant materials, undertake geotechnical investigations and incorporate asset protection measures suitable for coastal environments. • Climate-related asset deterioration: Consider local conditions including heat, dust and cyclone exposure when selecting equipment, materials and maintenance approaches. • Water supply and servicing resilience : Confirm water supply arrangements, including future desalination capacity, connection requirements and operational implications. • Water quality management requirements: Incorporate robust water treatment, monitoring and maintenance systems consistent with waterpark operating requirements. • Peak visitation pressures: Tourism periods, events and high-use periods may increase demand on parking, amenities and surrounding recreation areas. Confirm capacity requirements and consider supporting infrastructure improvements where required.

Concept Scenario Option 1 - Dampier Foreshore

Pros (continued)	Cons (continued)	Risks and Mitigation Measures (continued)
• Passive surveillance and safety benefits: Integration within an active foreshore precinct supports visibility, natural surveillance and community safety. • Existing supporting infrastructure: Utilises existing recreation assets, surrounding amenities and established access routes, reducing the need for additional supporting development. • Future water security opportunity: Planned Dampier desalination plant may provide an opportunity to improve long-term water resilience, subject to confirmation of capacity, timing and servicing requirements.	• Staged delivery considerations: While staged delivery is possible, delivering the facility in multiple stages may reduce construction efficiencies and increase mobilisation, cost and disruption. • Reduction in existing public open space: Development of the waterpark would reduce available informal green space currently used for unstructured recreation, community events and passive foreshore activities. • Foreshore character and coastal amenity impacts: Introduction of built infrastructure, plant and operational requirements may influence the existing passive coastal character and foreshore user experience. • Operational noise impacts: Mechanical plant and water treatment infrastructure may generate operational noise requiring consideration to minimise impacts on the surrounding foreshore environment. • Coastal climate exposure: Exposure to coastal winds, heat and evaporation may influence user comfort, water efficiency and ongoing operational requirements. • Limited revenue opportunities: Free community access model provides strong social outcomes but limited direct income generation potential.	• Potential conflict between waterplay users and existing pedestrian movements: Establish clear circulation routes, define active play areas and incorporate site planning measures to minimise conflicts. • Bushfire exposure: Incorporate bushfire-resilient design principles, landscape management and emergency access considerations where applicable. • Long-term operational sustainability: Develop detailed maintenance requirements and lifecycle planning to confirm ongoing service provision. • Construction impacts within an active recreation precinct: Develop construction staging and site management plans to minimise disruption to existing foreshore users, events and surrounding facilities. • Water quality management and operational compliance: A new standalone water treatment system will require establishment of operating procedures, testing regimes and maintenance protocols. Appropriate plant sizing, automated treatment systems and operational planning will be required to maintain water quality compliance.

Concept Scenario Option 2 - Karratha Leisureplex



Concept Scenario Option 2 - Karratha Leisureplex

Concept Scenario Option 2 Overview

This concept scenario option is located within the existing Karratha Leisureplex site, utilising and enhancing the established aquatic centre precinct. The proposal is intended to leverage existing facilities, amenities and operational infrastructure to improve delivery efficiency and reduce long-term operational costs through integration with the current Leisureplex operations.

The concept enhances the existing aquatic offering through targeted upgrades to two key areas: the current splash pad and the grassed area to the west of the beach entry pool. The existing splash pad is proposed to be removed and redeveloped, with the eastern portion converted into a dedicated learn-to-swim (LTS) pool and program space, while the western portion is reconfigured as a small spray park and marshalling area to support programming and visitor flow.

A new primary splash pad of approximately 300m² is located on the eastern grassed area adjacent to the beach entry pool. This forms the main waterplay destination and includes a range of interactive features, anchored by a signature waterslide tower comprising two 40m flume-style slides with associated run-outs and elevated access structure.

Supporting the splash play areas is a comprehensive suite of waterplay infrastructure, including ground sprays, tipping bucket features, water cannons, and elevated interactive play structures. Approximately 75% of the splash pad precinct is proposed to be covered by cyclone-rated shade structures, supporting user comfort and year-round use within the Pilbara climate.

The concept also includes a significant waterslide attraction component, positioning the facility as a destination rather than a local-only aquatic upgrade. The integration of waterslides, splash play, and learn-to-swim programming creates a diversified aquatic precinct catering to a broad range of ages, uses and visitation types.

Key Design Features

Component	Area (m²)
Splash Pad	300
Waterslide Tower	60
Waterslide Structures & Run-outs	350
Water Treatment Plant	120
Operations & Storage	30
Shade Structures	225
Circulation & Hardstand	300
Existing Splash Pad Repurposing (LTS Pool & Spray Park)	Allowance
Total Site Development Area	1,385 m² + LTS

Other	
Design Scale	District/community waterplay - regional water playground/waterpark
Shade Coverage	~75% of waterplay areas
Parking Provision	Existing

Engagement Outcomes Assessment - Karratha Leisureplex

This option demonstrates strong alignment with expectations for a higher-order aquatic facility, particularly in relation to destination appeal, increased recreation offering, and improved programming flexibility. The integration of waterslides and splash play significantly enhances the attraction value of the existing Leisureplex precinct.

However, the complexity of integrating new infrastructure within an operating aquatic facility introduces staging, operational continuity, and construction interface considerations that will require careful management.

Engagement Outcome	Alignment
Strong community support for new waterplay facilities	Strong
Preferred mid-large scale (district/community to regional)	Strong
Demand for waterslides and adventure waterplay	Strong
Need for shade and heat mitigation	Strong
Inclusion of multiple age groups (toddler-teen-family)	Strong
Accessibility and equity of access across the City	Strong
Transport and parking capacity suitability	Strong

Concept Scenario Option 2 - Karratha Leisureplex

Engagement Outcome	Alignment
Operational and financial viability (long-term sustainability, cost control, user-pays support)	Partial
Safety and environmental considerations (incl. flood, wind, coastal context)	Strong
Strategic alignment with precinct/ open space/recreation network	Strong
Activation potential (dwell time, visitation, destination value)	Strong

Potential Phasing Options

The concept can be delivered in a staged approach to support funding flexibility and maintain operational continuity of the Karratha Leisureplex during construction. A staged delivery model also allows early activation of core splash play infrastructure while deferring higher-cost elements.

Stage 1 - Core Splash Pad and Infrastructure:

- Construction of new 300m² splash pad
- Water treatment plant and associated hydraulic infrastructure
- Shade structures and circulation pathways
- Site servicing upgrades and connections
- Landscape integration works

This stage establishes the primary waterplay offering and enables early activation of the precinct.

Stage 2 - Learn-to-Swim Conversion and Spray Park:

- Conversion of existing splash pad into learn-to-swim/program pool
- Development of adjacent spray park and marshalling area
- Reconfiguration of surrounding operational and circulation spaces
- Integration with Leisureplex programming and aquatic operations

This stage enhances programmatic capacity and improves facility utilisation across multiple user groups.

Stage 3 - Waterslide Attraction Expansion:

- Construction of dual flume-style waterslides (approx. 40m each)
- Shared access tower and elevated dispatch platform
- Slide run-outs and supporting hydraulic infrastructure
- Final integration of destination attraction elements

This stage delivers the signature destination component of the facility, significantly elevating the regional drawcard and visitor experience.

Concept Scenario Option 2 - Selected Waterplay Elements and Theming









Concept Scenario Option 2 - Karratha Leisureplex

Concept Scenario 2 Pros, Cons and Risks

The primary risks associated with this option relate to integration within an existing operating aquatic facility, increased operational complexity associated with waterslides, infrastructure capacity, and the need to maintain Leisureplex operations during construction. These risks are considered manageable through detailed design, staged delivery, operational planning and appropriate lifecycle management.

Pros	Cons	Risks and Mitigation Measures
• Strong integration with existing aquatic precinct: Utilises the established Karratha Leisureplex site, existing amenities, operational systems and aquatic expertise, providing efficiencies in delivery and long-term management. • Regional destination potential: Combination of splash play, waterslides and learn-to-swim facilities significantly increases the attraction value of the existing aquatic precinct and supports visitation. • Strong community alignment: Demonstrates strong alignment with community expectations for a higher-order waterplay facility, including demand for waterslides, adventure waterplay and multiple age groups. • Improved accessibility and equity of access: Central location provides strong accessibility outcomes for the broader City community. • Multiple user outcomes: Provides opportunities for toddler, family, teen, learn-to-swim and programmed aquatic activities, increasing utilisation across different user groups. • Water-efficient operation: Wet/dry activation systems reduce unnecessary water consumption and support operational sustainability.	• Limited available space within existing Leisureplex site: Integration of new infrastructure within the existing boundary may limit design flexibility and future expansion opportunities. • Loss or relocation of existing recreation uses: The proposed waterpark and slide area currently functions as highly utilised grassed space during summer periods, requiring relocation of existing activities such as beach volleyball. • Existing infrastructure constraints: Underground services, drainage infrastructure and existing site conditions may influence construction complexity and cost. • Higher complexity than splash pad-only options: Waterslide components increase design, operational and compliance requirements. • Construction disruption: Delivery within an operating aquatic precinct will impact existing users, programming and facility operations. • Increased operational staffing requirements: The addition of waterslides and higher-order aquatic attractions will require increased staffing, supervision, maintenance and operational management compared with lower-complexity waterplay facilities.	• Waterslide safety, compliance and supervision requirements: Waterslide operation will require appropriate safety systems, operating procedures, trained staff and consideration of lifeguard supervision requirements. • Increased operational complexity and staffing requirements: Additional attractions may increase staffing, maintenance and operational demands. Develop detailed operating models and workforce plans to confirm long-term sustainability. • Water treatment and plant capacity requirements: Higher usage and additional water attractions may place increased demand on filtration, pumping and treatment systems. Undertake detailed hydraulic design and ensure plant infrastructure is appropriately sized with future capacity considerations. • Construction interface with existing Leisureplex operations: Staged delivery, construction management planning and clear separation between construction and operational areas will be required to minimise disruption.

Concept Scenario Option 2 - Karratha Leisureplex

Pros (continued)	Cons (continued)	Risks and Mitigation Measures (continued)
• Existing aquatic operations and compliance framework: Integration within the Karratha Leisureplex provides access to established water quality monitoring procedures, trained aquatic staff, existing operational systems and technical expertise, reducing implementation risk. • High shade provision: Approximately 75% shade coverage supports user comfort and climate resilience. • Cyclone-responsive design: Cyclone-rated structures and resilient design principles respond to Pilbara environmental conditions. • Existing amenities and café integration: Location supports passive surveillance and provides opportunities for increased café patronage through improved viewing opportunities for parents and guardians. • Reduced residential interface impacts: Location within the existing Leisureplex precinct reduces potential noise impacts on surrounding residential areas, supporting the delivery of higher-energy waterplay and aquatic attractions. • Free access: Opportunity for free access to waterplay and waterslides through separate, controlled access and fencing from the existing paid aquatic facilities. • Future expansion potential: The broader precinct provides potential for future expansion to the north, allowing the facility to respond to future demand and funding opportunities.	• Reduced accessibility compared with free public waterplay facilities: A higher-order attraction model may introduce additional access considerations, including potential entry costs, operating hours and capacity limitations, compared with freely accessible community waterplay facilities. • Increased demand on existing Leisureplex infrastructure: Additional visitation generated by the waterpark may place increased pressure on existing amenities, parking, transport networks and site circulation during peak periods, requiring consideration as part of future precinct masterplanning.	• Asset maintenance and lifecycle costs: Additional mechanical systems, waterslide infrastructure and high-use components may increase maintenance requirements. Implement preventative maintenance programs and lifecycle renewal planning. • Peak visitation and capacity pressures: Increased destination appeal may place pressure on parking, amenities, circulation areas and existing Leisureplex facilities. Confirm capacity requirements and consider supporting infrastructure upgrades. • Existing drainage and underground services constraints: Undertake detailed site investigations, service locating and engineering design to minimise construction risks. • Bushfire exposure: Incorporate bushfire-resilient design principles, emergency access requirements and appropriate landscape management where applicable. • Increased water treatment demand: Additional splash pad and waterslide infrastructure may increase hydraulic and treatment requirements. Detailed design will be required to confirm plant capacity and ensure existing operational systems can accommodate increased demand.

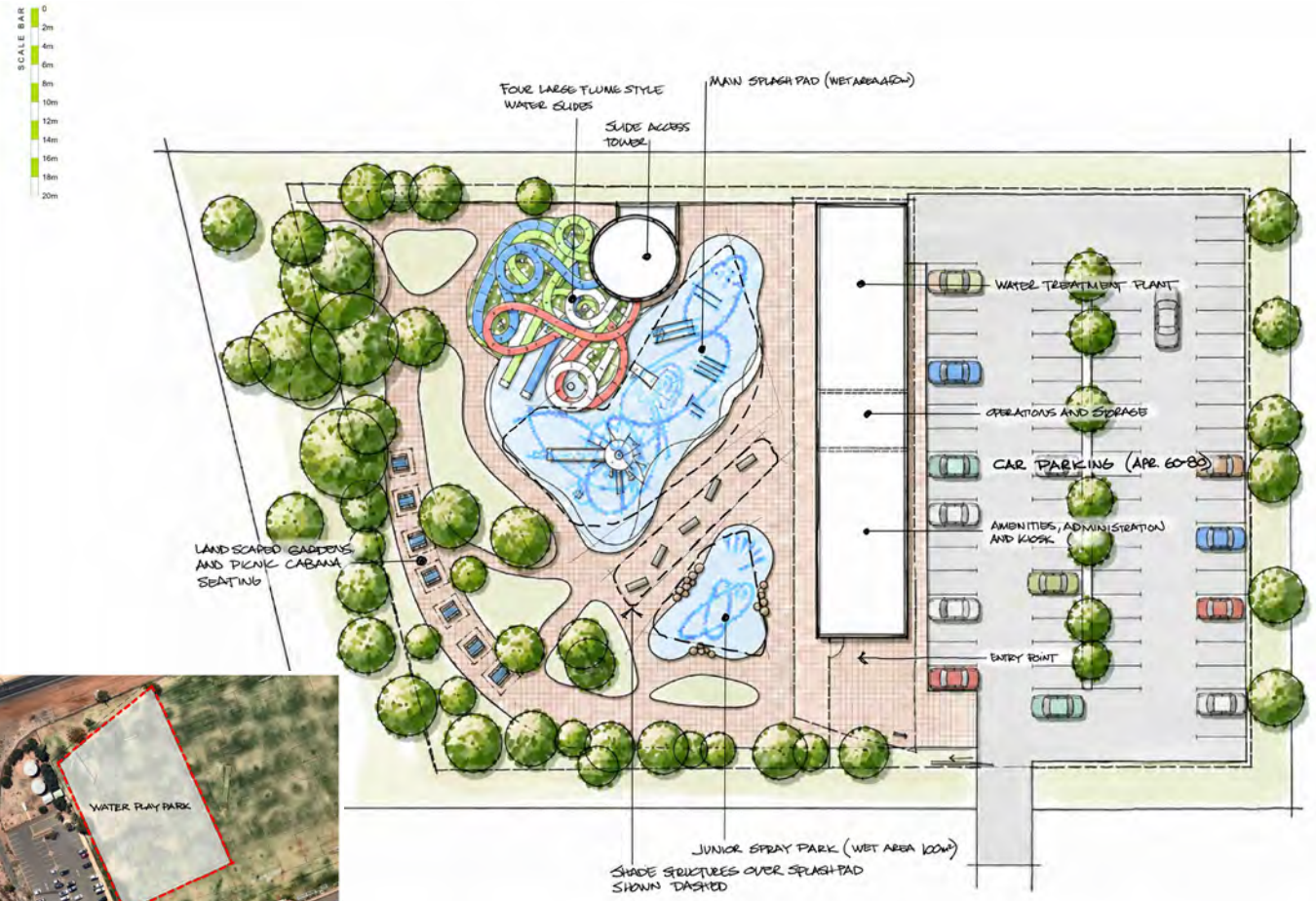
Concept Scenario Option 2 - Karratha Leisureplex

Potential Alternative Location Configuration

While the regional water playground/waterpark concept (Concept Scenario Option 3) has been developed and assessed based on a greenfield site at Richardson Way/Country Club (presented on the following pages), the layout and facility components are not intrinsically tied to this location. Subject to further investigation, the concept could also be adapted and integrated within the playing field areas located to the north of the Karratha Leisureplex, which is earmarked to undergo masterplanning.

This approach may provide opportunities to retain the scale and functionality of the regional water playground/waterpark concept while leveraging the accessibility, supporting infrastructure and operational synergies associated with the broader Karratha Leisureplex precinct. Further site planning, servicing investigations and assessme of impacts on existing sporting uses would be required to determine the feasibility of this approach.

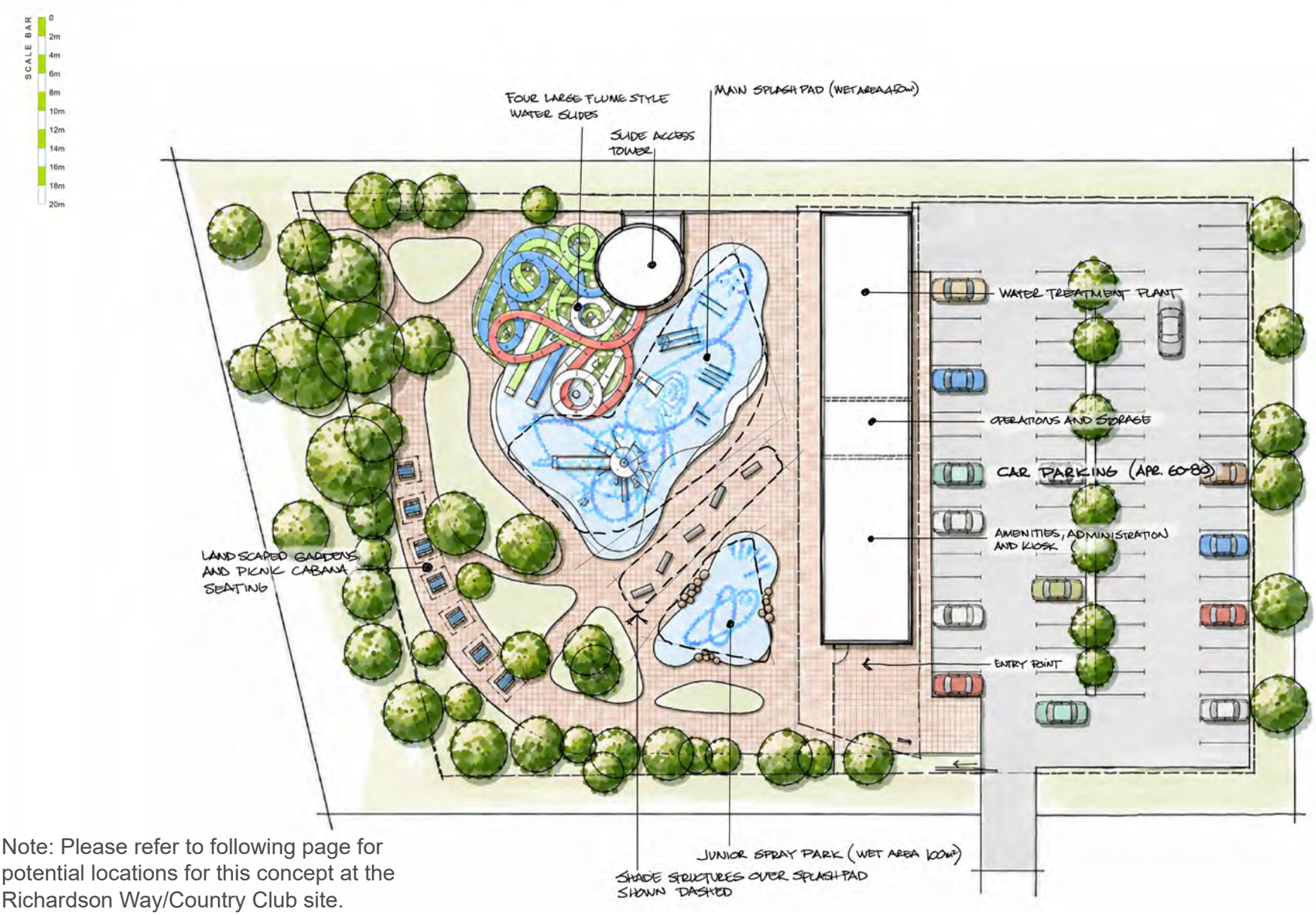
The concept and its potential location are shown on this page.





SITE A - LEISUREPLEX NORTH SPORTS OVAL

Concept Scenario Option 3 - Richardson Way/Country Club



Note: Please refer to following page for potential locations for this concept at the Richardson Way/Country Club site.

Concept Scenario Option 3 - Richardson Way/Country Club



SITE B - NORTH OF BAYVIEW ROAD



SITE C - NORTH OF RICHARDSON WAY

donovan payne | KARRATHA SPLASH | CITY OF KARRATHA | REGIONAL WATER PLAY PARK OPTIONAL SITE LOCATIONS | SK2.2 b

Concept Scenario Option 3 - Richardson Way/Country Club

Concept Scenario Option 3 Overview

This concept scenario is located on a large undeveloped land parcel at Richardson Way/ Country Club site within Karratha. The site is currently a greenfield location, providing flexibility for layout optimisation and potential integration with broader site masterplanning.

The site is identified as being within a flood-prone area, requiring careful consideration of stormwater management, finished surface levels, and resilience strategies. Wind exposure and cyclone conditions will also need to be addressed through structural design, landscape buffering, and shelter planning.

The concept proposes a regional-scale destination recreation precinct, of which the regional water playground/waterpark forms a key anchor component. The broader masterplanned precinct may incorporate complementary recreation uses such as a bike park and dog exercise area, creating a diversified outdoor recreation hub for the wider community. The waterpark would also compliment and benefit from the proposed tourism park situated to the north of Searipple Road.

The waterpark includes a 450m² main splash pad, anchored by a medium-sized elevated play structure and a range of interactive water features, supported by a 100m² junior spray park designed for younger children and sensory play experiences.

A major feature of the development is the waterslide precinct, comprising four large flume-style waterslides supported by a shared access tower and elevated dispatch platform, establishing a strong regional destination drawcard.

Supporting infrastructure includes a central amenities, administration and kiosk building, water treatment and operational facilities, and extensive landscaped recreation areas. Approximately 75% of waterplay areas are proposed to be shaded to support thermal comfort and year-round usability in the local climate.

The wider precinct context allows for integrated passive recreation spaces, including picnic areas, lawns, shaded gathering spaces, and potential future recreation facilities such as a bike park and dog exercise area, creating a multi-use destination with broad community appeal.

Key Design Features

Component	Area (m²)
Main Splash Pad	450
Junior Spray Park	100
Waterslide Precinct	550
Amenities/Administration/Kiosk	180
Water Treatment Plant	180
Operations & Storage	50
Shade Structures	815
Landscape & Recreation Areas	1,500–2,000
Parking	2,000–2,500
Circulation & Hardstand	500
Total Site Development Area	6,325 - 7,325 m²

Other	
Design Scale	Regional water playground/ waterpark
Shade Coverage	~75% of waterplay areas
Parking Provision	60–80 bays

Engagement Outcomes Assessment - Richardson Way/Country Club

This option demonstrates very strong alignment with aspirations for a high-order regional destination recreation precinct. The inclusion of a major waterplay park alongside potential complementary recreation uses such as a bike park and dog exercise area significantly strengthens the breadth of community offering and increases year-round precinct activation.

The scale and diversity of the proposal position it as a multi-use recreational hub rather than a single-purpose facility, improving its strategic value at a regional level. However, the greenfield nature of the site introduces infrastructure delivery complexity, particularly in relation to servicing, flood mitigation, access, and staged development of multiple precinct components.

Engagement Outcome	Alignment
Strong community support for new waterplay facilities	Strong
Preferred mid-large scale (district/ community to regional)	Strong
Demand for waterslides and adventure waterplay	Strong
Need for shade and heat mitigation	Strong

Concept Scenario Option 3 - Richardson Way/Country Club

Engagement Outcome	Alignment
Inclusion of multiple age groups (toddler-teen-family)	Strong
Accessibility and equity of access across the City of Karratha	Strong
Transport and parking capacity suitability	Partial
Operational and financial viability (long-term sustainability, cost control, user-pays support)	Partial
Safety and environmental considerations (incl. flood, wind, coastal context)	Partial
Strategic alignment with precinct/ open space/recreation network	Strong
Activation potential (dwell time, visitation, destination value)	Strong

Potential Phasing Options

The concept can be delivered in staged components depending on funding availability, servicing constraints, and broader precinct activation strategy.

Stage 1 - Core Waterplay Facility:

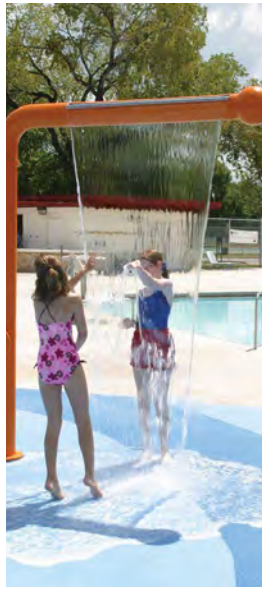
- 450m² main splash pad
- 100m² junior spray park
- Water treatment plant and operational infrastructure
- Amenities, kiosk and administration building
- Shade structures and core landscaping
- Initial access, servicing and circulation infrastructure

Stage 2 - Waterslide Attraction:

- Four flume-style waterslides
- Shared access tower and elevated platform
- Run-out and splash infrastructure
- Hydraulic and electrical integration

Early establishment of servicing, flood mitigation, and access infrastructure will be critical to enable efficient precinct development. The waterslides represent higher-cost and higher-complexity elements that may be staged depending on funding and delivery strategy.





Concept Scenario Option 3 - Selected Waterplay Elements and Theming







Concept Scenario Option 3 - Richardson Way/Country Club

Concept Scenario 3 Pros, Cons and Risks

The primary risks associated with this option relate to greenfield development requirements, flood and environmental constraints, infrastructure servicing, and the long-term operational sustainability of a higher-order regional facility. These risks are considered manageable through detailed site investigations, appropriate infrastructure planning, staged delivery and development of a sustainable operating model.

Pros	Cons	Risks and Mitigation Measures
• Regional destination facility: Provides a high-order regional waterplay facility capable of attracting local users, visitors and supporting tourism outcomes. • Multi-use recreation precinct opportunity: Enables integration with broader recreation uses including potential bike park, dog exercise area, passive recreation spaces and future tourism accommodation opportunities, creating a diversified community destination. • Flexible greenfield site: Large undeveloped site provides flexibility to optimise layout, integrate supporting infrastructure and accommodate future precinct expansion. • Strong community alignment: Responds strongly to community demand for larger-scale waterplay, adventure features, multiple age groups and destination recreation opportunities. • Central location and connectivity: Provides good road access and integration with existing and planned active transport linkages. • Strong accessibility and equity outcomes: Central location supports broader access across the City community.	• Greenfield development requirements: Unlike existing precinct-based options, the site requires establishment of supporting infrastructure, access, servicing and operational systems. • Higher capital investment requirements: Regional-scale development, waterslides, amenities and supporting infrastructure will require significant upfront investment. • Existing servicing constraints: Additional infrastructure connections and upgrades may be required to support development. • Operational cost exposure: Regional-scale facilities require ongoing funding commitments, maintenance resources and potentially permanent staffing. • Security and management of isolated facility: Standalone facilities may require additional measures to manage security and prevent vandalism when not operating. • Transport and parking limitations: Engagement identified only partial alignment regarding transport and parking suitability, requiring confirmation of access and peak demand requirements.	• Flood risk and stormwater management: Undertake detailed flood modelling, establish appropriate finished levels, incorporate drainage infrastructure and consider flood-resilient design responses. • Cyclone, wind and extreme weather exposure: Incorporate cyclone-resilient structural design, appropriate shelter planning, durable materials and landscape buffering. • Coastal inundation, storm surge and sea level rise exposure: Confirm site-specific coastal hazard exposure and incorporate appropriate resilience measures where required. • Ground conditions and acid sulphate soils: Undertake geotechnical investigations and environmental assessments to inform earthworks, foundations and construction methodologies. • Infrastructure servicing and delivery complexity: Confirm availability and capacity of utilities, access roads and supporting infrastructure prior to development. • High operational complexity and staffing requirements: Waterslides and regional-scale attractions will require appropriate operating models, qualified staff, supervision requirements and long-term workforce planning.

Concept Scenario Option 3 - Richardson Way/Country Club

Pros (continued)	Cons (continued)	Risks and Mitigation Measures (continued)
• Capacity for supporting infrastructure: Site provides sufficient space for waterplay areas, amenities, parking, landscaping and future recreation elements. • Revenue generation opportunities: Inclusion of kiosk and supporting amenities provides opportunities for supplementary revenue streams. • High shade provision: Approximately 75% shade coverage supports user comfort and climate resilience. • Regional tourism opportunity: Potential to benefit from proximity to future tourism and accommodation development, subject to those projects proceeding. • Adaptable concept design: Layout flexibility allows the facility to be delivered as either a district/community or regional-scale facility depending on funding and demand.		• Asset maintenance and lifecycle costs: Higher-order facilities include greater mechanical, hydraulic and structural components requiring preventative maintenance programs and lifecycle funding. • Water quality and treatment requirements: Larger waterplay areas and increased visitation require appropriately sized treatment systems, monitoring procedures and operational controls. • Long-term financial sustainability: Develop detailed capital and operational cost modelling, investigate revenue opportunities and confirm funding mechanisms to support ongoing operation. • Bushfire exposure: Incorporate bushfire-resilient design principles, emergency access and landscape management requirements where applicable. • Security and anti-social behaviour: Incorporate CPTED principles, lighting, surveillance, controlled access and operational security measures to minimise vandalism and misuse. • Adjacent Searipple Road interface: Consider noise, safety, access and pedestrian connectivity impacts associated with proximity to a major road. • Water quality management and operational compliance: A new standalone water treatment system will require establishment of operating procedures, testing regimes and maintenance protocols.

Concept Scenario Option 4 - Bulgarra Sporting Precinct



Concept Scenario Option 4 - Bulgarra Sporting Precinct

Concept Scenario Option 4 Overview

This concept scenario is located within the Bulgarra Sporting Precinct in Karratha, positioned to the east of the Karratha Recreation Club building between two existing playing fields. The site utilises a portion of the existing concrete slab area currently accommodating half courts, a hit-up wall, and skatepark elements.

The proposed splash pad is located within the north-eastern portion of the slab and is designed to project outward to the north and north-east, avoiding impacts on surrounding sporting fields and existing recreational uses. The facility is integrated within the broader open space network and maintains existing site functionality, including parking provision, oval use, and event activities such as the FeNaCING Festival.

The concept proposes a community-focused splash pad of approximately 500–600m², designed as a free and accessible waterplay destination for local families and children. The facility is organised into a series of distinct play zones to support a range of age groups and play experiences, including a tipping bucket feature, ground spray plaza, water cannon zone, toddler discovery area, and water journey play elements.

Supporting infrastructure includes a small amenities building, water treatment plant, operations and storage facilities, shaded areas, seating, and associated landscape works. Approximately 75% of the splash pad area is proposed to be shaded through cyclone-rated shade structures designed for local conditions.

The overall concept is intended to enhance the existing recreational precinct through the introduction of a simple, efficient, and highly accessible waterplay facility that complements surrounding sporting and community uses without displacing existing functions. The design ensures existing event access from the car park to the oval is maintained.

Key Design Features

Component	Area (m²)
Splash Pad	600
Amenities Building	35
Operations & Storage	20
Water Treatment Plant	85
Shade Structures	450
Circulation & Hardstand	250
Landscape & Recreation Areas	1,000
Total Site Development Area	2,440 m²

Other	
Design Scale	District/Community Waterplay
Shade Coverage	~75% of waterplay areas
Parking Provision	Existing

Engagement Outcomes Assessment - Bulgarra Sporting Precinct

This option demonstrates strong alignment with community recreation needs through the provision of a highly accessible, centrally located splash pad within an established sporting and event precinct. The concept performs well in terms of equity of access, integration with existing infrastructure, and low-disruption delivery within a functioning community hub.

The primary strengths of this option relate to its simplicity, ease of integration, and minimal impact on existing oval and event functions. However, the constrained site environment and co-location with multiple active uses may introduce operational interface considerations during peak sporting and event periods.

Engagement Outcome	Alignment
Strong community support for new waterplay facilities	Strong
Preferred mid-large scale (district/ community to regional)	Partial
Demand for waterslides and adventure waterplay	Partial
Need for shade and heat mitigation	Strong
Inclusion of multiple age groups (toddler-teen-family)	Strong
Accessibility and equity of access across the City of Karratha	Strong
Transport and parking capacity suitability	Strong

Concept Scenario Option 4 - Bulgarra Sporting Precinct

Engagement Outcome	Alignment
Operational and financial viability (long-term sustainability, cost control, user-pays support)	Strong
Safety and environmental considerations (incl. flood, wind, coastal context)	Strong
Strategic alignment with precinct/ open space/recreation network	Strong
Activation potential (dwell time, visitation, destination value)	Partial

Potential Phasing Options

The concept is well suited to single-stage delivery due to its relatively compact footprint, integration with existing infrastructure, and limited external servicing requirements.

However, a staged approach could be considered if required.

Stage 1 - Core Splash Pad Facility

- 500–600m² splash pad construction
- Water treatment plant and hydraulic infrastructure
- Shade structures and seating
- Amenities building
- Basic landscaping and circulation works

Stage 2 - Enhancement Works (Optional)

- Additional shading or cabana areas
- Expanded seating and picnic facilities
- Minor upgrades to surrounding open space integration
- Potential future play or recreation enhancements within slab precinct

Concept Scenario Option 4 - Selected Waterplay Elements and Theming









Concept Scenario Option 4 - Bulgarra Sporting Precinct

Concept Scenario 4 Pros, Cons and Risks

The primary risks associated with this option relate to flood exposure, integration with existing sporting and event uses, security of an unstaffed community facility, and ongoing maintenance requirements. These risks are considered manageable through appropriate design responses, operational procedures and asset management planning.

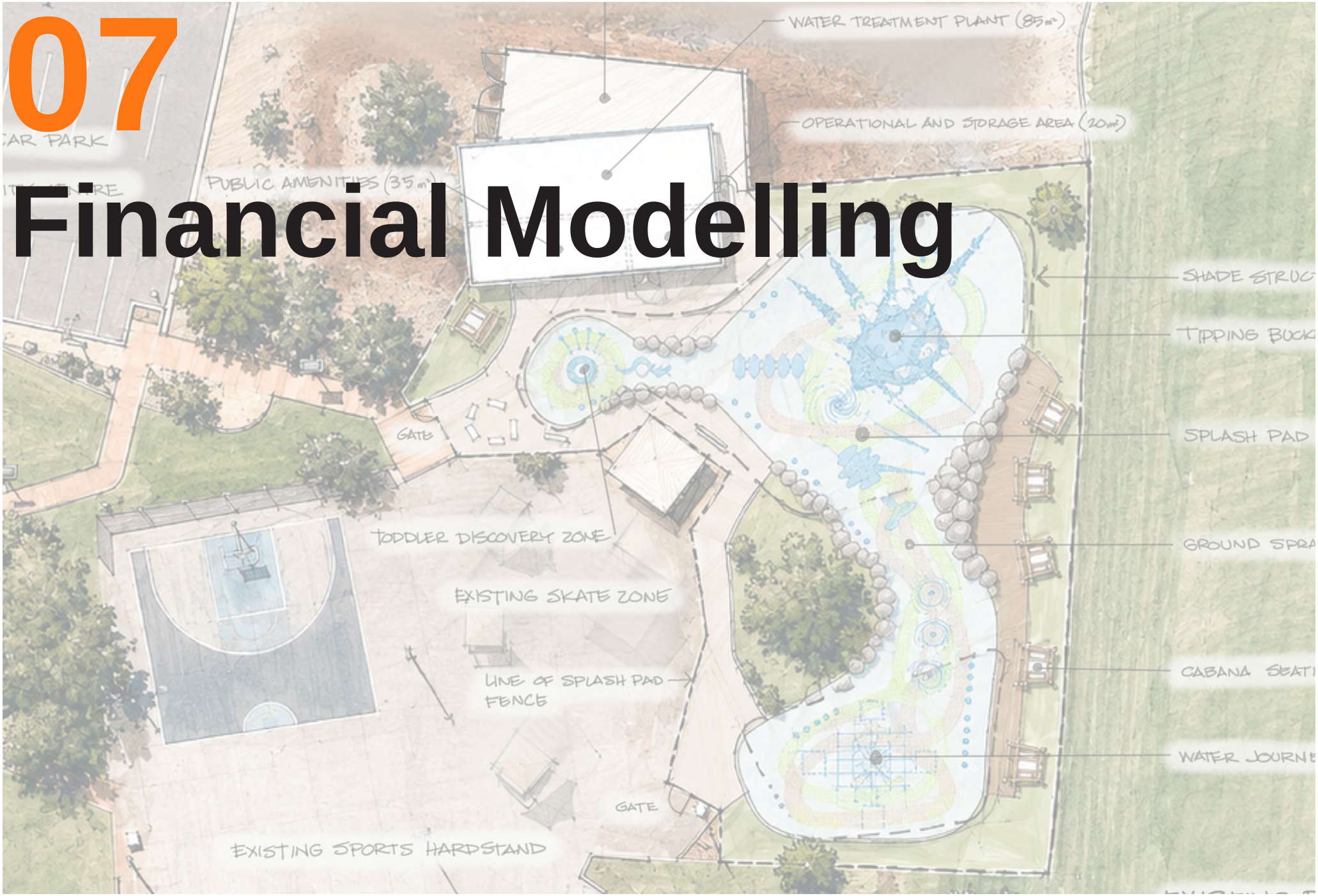
Pros	Cons	Risks and Mitigation Measures
• Highly accessible community facility: Provides a centrally located splash pad within an established sporting and recreation precinct, supporting equitable access for local families and children. • Strong precinct integration: Complements existing recreational uses including skatepark, basketball courts, hit-up wall, sporting fields and community events. • Efficient use of existing infrastructure: Utilises existing hardstand areas, parking, access and surrounding amenities, reducing construction complexity and cost. • Low operational complexity: Splash pad-based design does not require lifeguard supervision, reducing staffing requirements compared with higher-order aquatic attractions. • Strong community recreation outcomes: Supports daily local recreation, cooling, family activity and informal play opportunities. • Heat mitigation benefits: Provides cooling and improved amenity within an existing expansive concrete area. • Multiple age group experiences: Provides a range of play zones including toddler, junior and family-focused waterplay areas.	• Limited regional destination value: Community-scale design does not fully address demand for larger adventure waterplay elements or regional attraction outcomes. • Limited future expansion potential: Constrained by existing slab footprint, surrounding sporting uses and available land. • Event and sporting interface considerations: Co-location with active sporting fields and events may create operational conflicts during peak periods. • Potential access impacts: Fencing requirements may affect existing movement routes between car parking areas and eastern playing fields. • Limited revenue opportunities: Free community access model provides strong social outcomes but limited direct income generation potential. • Interface with adjacent recreation and social uses: The proximity of the tavern and recreation club may require consideration of differing user groups, operating hours and activity patterns to ensure the family-focused nature of the waterpark is appropriately supported.	• Flooding and inundation exposure: Undertake detailed flood assessment and incorporate appropriate drainage, finished levels, resilient infrastructure and maintenance strategies to manage stormwater impacts. • Interface with surrounding recreation uses and events: Establish clear circulation routes, access arrangements, landscape buffers and operational procedures to minimise conflicts between the waterpark, adjacent sporting activities, tavern/recreation club uses and events. • Security, vandalism and anti-social behaviour: Incorporate passive surveillance, lighting, durable materials, clear sightlines and appropriate access controls to minimise misuse when the facility is unattended. • Water quality management requirements: Incorporate appropriately sized treatment systems, regular monitoring procedures, maintenance schedules and operational protocols consistent with public waterplay facilities. • Asset durability and lifecycle maintenance: Consider exposure to heat, dust and high public use when selecting materials, mechanical equipment and maintenance approaches.

Concept Scenario Option 4 - Bulgarra Sporting Precinct

Pros (continued)	Cons (continued)	Risks and Mitigation Measures (continued)
• Water-efficient operation: Wet/dry activation system reduces unnecessary water consumption and supports operational sustainability. • High shade provision: Approximately 75% shade coverage supports user comfort and climate resilience. • Cyclone-responsive design: Cyclone-rated shade structures and resilient infrastructure respond to local conditions. • Maintains existing precinct functionality: Concept avoids impacts on playing fields, oval operations and event access routes.		• Peak visitation pressures during events and summer periods: Confirm capacity of parking, amenities and surrounding precinct infrastructure to accommodate increased use. • Ongoing operational sustainability: While staffing requirements are lower, confirm ongoing costs associated with cleaning, water treatment, inspections, repairs and asset management. • Water quality management and operational compliance: Although the splash pad does not require lifeguard supervision, ongoing water quality monitoring, testing and maintenance will still be required. Appropriate operational arrangements will be required to manage compliance obligations.

07

Financial Modelling



Operational and Management Models

Management Model Options

The four proposed facilities vary in scale, complexity, risk profile and operational intensity. As a result, the appropriate management model differs by site.

The following table presents a structured comparison of the three viable management models and how they apply to each site.

Management Model Option	Description	Strengths	Risks/Limitations	Best Suited For
Council Operated Model (In-House)	City directly manages all operations, staffing, maintenance, compliance, and customer service.	• High control over safety, quality, and community outcomes • Strong alignment with public-good objectives • Easier integration with existing City teams (e.g. Leisureplex)	• Highest staffing cost • Requires specialist aquatic operations capability • Council carries all operational risk	• Small to medium sized splash pads (i.e. local/ neighbourhood and district/community level) • Facilities integrated into existing City operations • Sites with low revenue potential
Hybrid Model (Council + Contracted Services)	City manages core operations; specialist contractors deliver defined functions (e.g. plant maintenance, cleaning, kiosk, lifeguards).	• Reduces staffing burden • Access to specialist technical skills • Flexible and scalable • Lower operational risk for Council	• Requires strong contract management • Potential variability in service quality Still requires • City oversight and compliance management	• Medium to large sized splash pads (e.g. district/ community and regional level) • Facilities with moderate complexity • Sites with seasonal peaks
Fully Contracted/ Outsourced Operator	A commercial or not-for-profit operator manages the entire facility under contract or lease.	• Lowest operational burden for Council • Operator carries staffing and operational risk • Potential for stronger commercial performance (e.g. slide revenue)	• Reduced Council control • Requires a strong market (not always present in regional WA) • Operator may prioritise revenue over community access • Contract negotiation and monitoring required	• High-complexity, high-revenue facilities • Waterslide-based regional attractions • Sites with strong visitation and commercial potential

Recommended Model by Site

Below is a site-by-site recommendation based on scale, complexity, and operational risk.

Concept Scenario 1 - Dampier Foreshore

Complexity: Lower

Revenue potential: Low

Staffing: 1.0 FTE

Plant: Small recirculating system

Recommended Model: Council-Operated (In-House)

Rationale:

- Limited complexity plant
- Lower risk
- Community-focused facility
- No commercial operator interest
- Seasonal operation possible

Concept Scenario 2 - Karratha Leisureplex

Complexity: Higher

Revenue potential: Moderate (slide wristbands) and uplift in food and beverage revenue

Staffing: 3.5 FTE

Plant: Medium-large, integrated with existing aquatic centre

Recommended Model: Council-Operated (Integrated with Leisureplex)

Rationale:

- Must integrate with existing aquatic centre operations due to location
- Lifeguard supervision and plant operations already in-house
- Strong safety and compliance requirements
- Revenue can be captured directly by the City

Concept Scenario 3 - Richardson Way/Country Club

Complexity: Very High

Revenue potential: High (slides, kiosk uplift, cabanas, parties)

Staffing: 6 FTE

Plant: Large, multi-zone, high-risk

Recommended Model: Hybrid or Fully Contracted Operator

Rationale:

- High-complexity, high-risk facility
- Stronger commercial potential
- Requires specialist operational expertise
- Council may prefer to shift operational risk to an operator
- Contracted operator can maximise revenue (slides, kiosk, events)

Two alternate pathways:

Option A - Hybrid (Preferred for community outcomes)

Council manages governance, pricing, community access

Contractor manages:

- Lifeguards
- Plant operations
- Cleaning
- Kiosk
- Balanced risk and control

Option B - Fully Outsourced Operator (Commercial Model)

- Operator manages entire facility
- Council receives lease fee or revenue share
- Best for maximising commercial performance
- Requires strong contract management

Concept Scenario 4 - Bulgarra Sporting Precinct

Complexity: Medium

Revenue potential: Low

Staffing: 1.0 FTE

Plant: Larger recirculating system, higher patronage

Recommended Model: Council-Operated (In-House)

Rationale:

- Limited complexity plant
- Lower risk
- Community-focused facility
- No commercial operator interest
- Seasonal operation possible

Summary of Recommended Management Model by Site

Site	Facility Type	Complexity	Revenue Potential	Recommended Model
Concept Scenario 1 - Dampier Foreshore	Splash pad	Low	Low	Council Operated
Concept Scenario 2 - Karratha Leisureplex	Splash pad + 2 water slides	High	Moderate	Council Operated (Integrated)
Concept Scenario 3 - Richardson Way/Country Club	Splashpad + 4 water slides	Very High	Higher	Hybrid or Fully Contracted Operator
Concept Scenario 4 - Bulgarra Sporting Precinct	Splash pad	Medium	Low	Council Operated

Key Considerations for Council

Risk vs Control:

More complex facilities require stronger operational capability; outsourcing reduces risk but reduces control.

Commercial vs Community Outcomes:

Waterslide-based facilities can generate significant revenue; Council must decide how commercial it wants the model to be.

Integration with Leisureplex:

The KLP expansion should be managed as part of the existing aquatic centre.

Seasonality:

All facilities will have seasonal peaks; hybrid models allow flexible staffing.

Capital, Operational and Lifecycle Costs

Financial modelling has been prepared for the four options to evaluate indicative high-level capital, operational and lifecycle cost estimates for each option. This will inform the long-term financial sustainability and investment feasibility for the City. The financial modelling includes:

- Capital cost estimates (prepared by Quantity Surveyor)
- Operational cost projections (10-year projections)
- Revenue forecasts (entry fees, programs, events - 10-year projections)
- Lifecycle costings
- Funding sources (grants, partnerships, City investment)

Note: The financial modelling presented in this report is intended to provide high-level, indicative estimates only. The analysis is based on a series of assumptions, industry benchmarks and information available at the time of preparation. Actual capital costs, operating expenses, revenues and lifecycle requirements may vary and should be refined through detailed design, business planning and market testing prior to any investment or implementation decisions.

For the Karratha Leisureplex concept, the capital cost estimate excludes the proposed Learn-to-Swim pool. The Learn-to-Swim pool is estimated to cost approximately $12 million and is considered a separate component of the broader Karratha Leisureplex redevelopment. It is therefore more appropriately considered as part of the current Leisureplex master planning process rather than the proposed waterpark, and has not been included in the indicative waterpark capital cost estimate presented in this report.

Similarly to many aquatic facilities and waterparks operated by Councils across Western Australia, all options will require a significant ongoing operational subsidy and lifecycle costs that will need to be funded by the City and included in the long term financial plan.

The higher operating subsidy per visit for the Karratha Leisureplex option ($27.43 per visit in Year 1, compared with $17.52 per visit for the Richardson Way/Country Club option) is primarily attributable to the higher staffing requirements associated with operating the water slides at Karratha Leisureplex and the lower revenues generated under this model. In comparison, the Richardson Way/Country Club concept is modelled as a higher-profile, stand-alone regional waterpark that would be commercially operated, providing greater revenue-generating potential. This higher revenue potential needs to be considered alongside the substantially higher initial capital cost of the Richardson Way/Country Club option.

Capital Cost Estimates

Summary of Indicative Costs

Concept Scenario Option	Building Works	Builder's Preliminaries	Contingencies	Public Art	Professional Fees	Total - Perth	Escalation	District Loading	Total - Karratha
1 - Dampier Foreshore	$3,634,645	$755,467	$1,163,380	$55,535	$666,419	**$6,275,446**	$1,481,253	$4,206,770	**$11,963,469**
2 - Karratha Leisureplex	$4,120,580	$832,434	$1,317,319	$62,883	$754,600	**$7,087,816**	$1,677,253	$4,763,412	**$13,528,481**
3 - Richardson Way/Country Club	$8,378,490	$1,728,428	$2,678,333	$127,853	$1,534,230	**$14,447,334**	$3,410,141	$9,684,828	**$27,542,303**
4 - Bulgarra Sporting Precinct	$3,262,550	$679,149	$1,044,550	$49,862	$598,350	**$5,634,462**	$1,329,955	$3,777,084	**$10,741,501**

Refer to Appendix B - 'Order of Probable Costs' for detailed cost workings and justification of the 75% District Loading allowance.

Costs exclude GST.

The following items are specifically excluded from this Cost Indication:

- Development Approvals
- Karratha Splash - Optional upgrade to existing splashpad area
- Credits for salvaged materials
- Costs associated with land acquisition
- Relocation Costs and Lost Revenue during construction
- Holding and Finance charges
- Legal costs
- Escalation beyond December 2029 (Assumed Completion date)

Operational Cost Projections (10-year Projections)

Summary 10-Year Operational & Lifecycle Model

Refer to Appendix C - 'Detailed 10-Year Operational and Lifecycle Models' for the full operational and lifecycle cost models.

Concept Scenario Option 1 - Dampier Foreshore	
Operating Cost Year 1	-$453,622
10-Year Operating Cost	-$5,446,234
Lifecycle Renewals 20 Year	$3,713,722
Operating Subsidy per Visit (Year 1)	-$18.14

Concept Scenario Option 2 - Karratha Leisureplex	
Operating Cost Year 1	-$685,672
10-Year Operating Cost	-$8,232,247
Lifecycle Renewals 20 Year	$4,259,638
Operating Subsidy per Visit (Year 1)	-$27.43

Concept Scenario Option 2 - Karratha Leisureplex (Free entry)	
Operating Cost Year 1	-$835,672
10-Year Operating Cost	-$10,033,163
Lifecycle Renewals 20 Year	$4,259,638
Operating Subsidy per Visit (Year 1)	-$33.43

Concept Scenario Option 3 - Richardson Way/ Country Club	
Operating Cost Year 1	-$876,008
10-Year Operating Cost	-$10,517,448
Lifecycle Renewals 20 Year	$9,970,146
Operating Subsidy per Visit (Year 1)	-$17.52

Concept Scenario 4 - Bulgarra Sporting Precinct	
Operating Cost Year 1	-$443,230
10-Year Operating Cost	-$5,321,471
Lifecycle Renewals 20 Year	$3,749,952
Operating Subsidy per Visit (Year 1)	-$17.73

Note: Revenue modelling has been undertaken across the concept scenarios based on potential revenue streams, including admission fees, event and function hire, food and beverage, retail sales, advertising and sponsorship, and other ancillary revenue. Concept Scenario Option 2 - Karratha Leisureplex includes both paid-entry and free-entry models, while Concept Scenario Option 3 - Richardson Way/Country Club has been modelled as a paid-entry facility. Concept Scenario Options 1 - Dampier Foreshore and 4 - Bulgarra Sporting Precinct have been designed as free-entry facilities.

Revenue Forecasts

Revenue Forecasts (Entry Fees, Programs, Events - 10-Year Projections)

Refer to Appendix C - 'Detailed 10-Year Operational and Lifecycle Models' for the full revenue forecast models.

Note: Revenue modelling has been undertaken across the concept scenarios based on potential revenue streams, including admission fees, event and function hire, food and beverage, retail sales, advertising and sponsorship, and other ancillary revenue. Concept Scenario Option 2 - Karratha Leisureplex includes both paid-entry and free-entry models, while Concept Scenario Option 3 - Richardson Way/Country Club has been modelled as a paid-entry facility. Concept Scenario Options 1 - Dampier Foreshore and 4 - Bulgarra Sporting Precinct have been designed as free-entry facilities.

Concept Scenario Option 1 - Dampier Foreshore

Item	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10
Revenue										
Total	$-	$-	$-	$-	$-	$-	$-	$-	$-	$-

Expenses										
Total	$453,622	$471,767	$490,638	$510,263	$530,674	$551,900	$573,976	$596,936	$620,813	$645,645
Surplus/ Deficit	-$453,622	-$471,767	-$490,638	-$510,263	-$530,674	-$551,900	-$573,976	-$596,936	-$620,813	-$645,645

Concept Scenario Option 2 - Karratha Leisureplex

Item	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10
Revenue										
Total	$181,250	$188,500	$196,040	$203,882	$212,037	$220,518	$229,339	$238,513	$248,053	$257,975

Expenses										
Total	$867,260	$901,951	$938,029	$975,550	$1,014,572	$1,055,155	$1,097,361	$1,141,256	$1,186,906	$1,234,382
Surplus/ Deficit	-$686,010	-$713,451	-$741,989	-$771,668	-$802,535	-$834,637	-$868,022	-$902,743	-$938,853	-$976,407

Concept Scenario Option 2 - Karratha Leisureplex (Free Entry)

Item	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10
Revenue										
Total	$31,250	$32,500	$33,800	$35,152	$36,558	$38,020	$39,541	$41,123	$42,768	$44,478
Expenses										
Total	$866,922	$901,598	$937,662	$975,169	$1,014,176	$1,054,743	$1,096,932	$1,140,810	$1,186,442	$1,233,900
Surplus/ Deficit	-$835,672	-$869,098	-$903,862	-$940,017	-$977,618	-$1,016,722	-$1,057,391	-$1,099,687	-$1,143,674	-$1,189,421

Concept Scenario Option 3 - Richardson Way/Country Club

Item	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10
Revenue										
Total	$625,000	$650,000	$676,000	$703,040	$731,162	$760,408	$790,824	$822,457	$855,356	$889,570
Expenses										
Total	$1,501,008	$1,561,048	$1,623,490	$1,688,430	$1,755,967	$1,826,206	$1,899,254	$1,975,224	$2,054,233	$2,136,403
Surplus/ Deficit	-$876,008.14	-$911,048	-$947,490	-$985,390	-$1,024,806	-$1,065,798	-$1,108,430	-$1,152,767	-$1,198,878	-$1,246,833

Concept Scenario Option 4 - Bulgarra Sporting Precinct

Item	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10
Revenue										
Total	$-	$-	$-	$-	$-	$-	$-	$-	$-	$-
Expenses										
Total	$443,230	$460,960	$479,398	$498,574	$518,517	$539,257	$560,828	$583,261	$606,591	$630,855
Surplus/ Deficit	-$443,230	-$460,960	-$479,398	-$498,574	-$518,517	-$539,257	-$560,828	-$583,261	-$606,591	-$630,855

Potential Funding Sources

For a waterpark/splash pad in the City, a funding strategy would typically involve a combination of City investment, State and Federal grants, industry partnerships and philanthropic contributions. Similar projects around Australia have successfully combined multiple funding sources rather than relying on a single source of funding.

City of Karratha

- Municipal reserves and capital works budgets
- Borrowings
- Developer contributions
- Reserve funds
- Co-contributions to leverage external grants

Western Australian Government

Community Sporting and Recreation Facilities Fund (CSRFF)

The purpose of the program is to provide Western Australian Government financial assistance to community groups and local government authorities to develop basic infrastructure for sport and recreation.

The program aims to increase participation in sport and recreation, with an emphasis on physical activity, through rational development of sustainable, good quality, well-designed and well-utilised facilities.

Through the CSRFF, the State Government will invest annually in the development of high-quality physical environments in which people can enjoy sport and recreation.

Typical funding is up to $2.5 million depending on category and round.

Note this program is currently paused.

Refer: https://www.cits.wa.gov.au/funding/sport-and-recreation-funding/community-sporting-and-recreation-facilities-fund

Lotterywest/Healthway

Lotterywest and Healthway regularly funds community infrastructure, accessibility and inclusive recreation projects and local governments are eligible applicants. Regional projects have previously received support.

Refer: https://www.lotterywest.wa.gov.au/grants/grant-opportunities

Australian Government Funding

Growing Regions Program

The Federal Government has funded community waterparks and splash parks under this program.

Suitable project outcomes include:

- Regional liveability
- Community wellbeing
- Tourism
- Economic development

Potential contribution: $500,000–$15 million

Note this program is opening soon.

Refer: https://www.infrastructure.gov.au/territories-regions/regional-australia/regional-and-community-programs/growing-regions-program

Regional Precincts and Partnerships Program

Supports:

- Community infrastructure
- Place activation
- Recreation and tourism assets

Potential contribution: $500,000–$50 million

Note this program is currently paused.

Refer: https://www.infrastructure.gov.au/territories-regions/regional-australia/regional-and-community-programs/regional-precincts-and-partnerships-program

Major Pilbara Industry Partners e.g. Rio Tinto, Woodside, Pilbara Ports

- Community grants
- Social investment programs
- Naming rights opportunities
- Ongoing sponsorship

Trusts and Foundations

A range of trusts and foundations have funding available for community based and recreation focused projects such as waterparks and splash pads.

Refer: https://www.philanthropy.org.au/

08 Management and Operations



Image: Vortex Aquatic Structures International

Management and Operations

The long-term success of any waterplay facility is dependent not only on the quality of its design and construction, but also on the establishment of effective management, operational and maintenance practices. Waterplay facilities require ongoing oversight to ensure public health, safety, regulatory compliance and asset performance are maintained throughout their operational life.

This section outlines the key management and operational considerations relevant to the proposed concept scenarios, including facility classification, water quality management, patron supervision, maintenance requirements and supporting infrastructure. The assessment has been informed by the *Code of Practice for the Design, Construction, Operation, Management and Maintenance of Aquatic Facilities (Department of Health Western Australia)* and the *Aquatic Facilities – Water Spray Grounds and Interactive Water Features: Application, Design & Operating Requirements Environmental Health Guide (Department of Health Western Australia).* Together, these documents establish the minimum requirements for the design, operation and ongoing management of water spray grounds and interactive water features.

The following sections summarise the key regulatory and operational requirements applicable to the proposed concept scenarios and highlight the operational implications associated with each option.

Regulatory Framework and Facility Classification

Water spray grounds and interactive water features are classified as aquatic facilities and are therefore subject to the operational, maintenance and public health requirements applicable to aquatic environments. These facilities comprise interactive water features such as sprays, fountains, jets, tipping buckets and similar elements where water is collected, treated and recirculated for reuse[7].

Under the *Code of Practice for the Design, Construction, Operation, Management and Maintenance of Aquatic Facilities*, operational requirements vary according to the classification of the facility[8]. Where a water spray ground forms part of an existing aquatic centre containing pools, spas or waterslides, it adopts the same classification and operational requirements as the broader aquatic facility. Conversely, standalone splash pads without pools, spas or waterslides are generally classified as Group 4 aquatic facilities, requiring ongoing technical operation and maintenance but not routine lifeguard supervision[7,8].

This distinction has direct implications for the concept scenarios assessed within this study. The Karratha Leisureplex concept would operate within the existing aquatic facility management framework as a Group 1 facility, as well as Richardson Way/Country Club. Dampier Foreshore and Bulgarra Sporting Precinct concepts would generally operate as standalone Group 4 facilities.

Operational Requirements

Regardless of facility scale, all waterplay facilities require appropriately qualified personnel to oversee the operation and maintenance of water treatment systems, plant and associated infrastructure. Management is responsible for ensuring the facility is operated safely, water quality is maintained, equipment is appropriately serviced, and routine inspections and preventative maintenance are undertaken[8].

Standalone splash pads have lower operational complexity than larger aquatic facilities as they generally do not require permanent lifeguard supervision. However, they still require qualified technical operators to oversee the ongoing operation of filtration systems, chemical dosing equipment, pumps and associated mechanical infrastructure[8]. This reinforces that, although splash pads are comparatively simple facilities, they remain regulated aquatic environments requiring ongoing operational oversight.

Facilities incorporating waterslides introduce additional operational requirements. Waterslide landing areas and flume exits should be supervised by appropriately qualified personnel with emergency care qualifications, while competent supervision is also required at waterslide entry points[8]. Consequently, concept scenarios incorporating waterslides have higher staffing, operational and compliance requirements than standalone splash pad facilities.

[7] Department of Health Western Australia. Aquatic Facilities – Water Spray Grounds and Interactive Water Features: Application, Design & Operating Requirements Environmental Health Guide.
[8] Department of Health Western Australia. Code of Practice for the Design, Construction, Operation, Management and Maintenance of Aquatic Facilities.

Water Quality Management

Maintaining water quality is a fundamental operational requirement for all waterplay facilities. Water treatment systems must be appropriately designed, operated and maintained to ensure compliance with public health requirements and minimise risks associated with microbial contamination.

In addition to automated treatment systems, facilities are required to maintain an approved manual water testing kit onsite. Water quality should be manually tested 30 minutes prior to opening each day and at 2 hour intervals throughout operation to verify that filtration, disinfection and chemical dosing systems are operating effectively[7]. These ongoing monitoring requirements have implications for staffing, operational procedures and lifecycle costs and should be incorporated into the long-term management of any waterplay facility.

The case study review undertaken as part of this feasibility study identified water quality management as one of the most consistent operational challenges across comparable facilities. Appropriate sizing of treatment systems, preventative maintenance programs and robust operational procedures will therefore be critical to the successful operation of any future facility.

Environmental Health Requirements

Consultation with the City's Environmental Health Officers identified the following operational and regulatory considerations for any future waterplay development.

Should waterplay facilities proceed, they would be incorporated into the City's scheduled monthly water quality sampling program. Laboratory testing costs are covered by the Department of Health, with the City responsible for associated courier and staff costs. Sampling equipment, including eskies, sample bottles and ice bricks, is provided through PathWest, with transportation arrangements managed through existing processes.

Prior to construction, relevant applications and approvals will be required to be submitted to the Department of Health. Following completion of the facility, the City's Environmental Health team would undertake final inspections on behalf of the Department of Health, along with ongoing water quality sampling. The outcomes of inspections and sampling results would inform the final Department of Health approval process.

These requirements should be considered in future planning and operational assessments, including ongoing staffing, compliance responsibilities and lifecycle management considerations associated with any proposed waterplay facility.

Patron Supervision and Safety

The level of patron supervision required is dependent upon the classification and operational characteristics of the facility[8].

Standalone splash pads generally do not require dedicated lifeguard supervision. However, operators remain responsible for implementing appropriate operational procedures, maintaining safe facility conditions and ensuring patrons are provided with adequate information regarding safe use. Additional management measures may include appropriate signage, operational rules, passive surveillance, and routine inspections[8].

Facilities incorporating waterslides require a higher level of operational supervision, including qualified personnel to supervise waterslide operations and provide emergency care where required[8]. These requirements have direct implications for staffing levels, operational costs and ongoing management.

The requirement for lifeguard supervision is not determined solely by water depth or splash pad size, but by the overall facility classification and the inclusion of higher-risk aquatic features. Standalone splash pads without pools, spas or waterslides are generally classified as Group 4 aquatic facilities and do not require routine lifeguard supervision. However, facilities incorporating waterslides, or those operating as part of a broader aquatic centre, adopt the operational classification of that facility and require additional supervision and emergency

[7] Department of Health Western Australia. Aquatic Facilities – Water Spray Grounds and Interactive Water Features: Application, Design & Operating Requirements Environmental Health Guide.
[8] Department of Health Western Australia. Code of Practice for the Design, Construction, Operation, Management and Maintenance of Aquatic Facilities.

care personnel in accordance with the *Code of Practice for the Design, Construction, Operation, Management and Maintenance of Aquatic Facilities*[8].

Accordingly, Concept Scenarios 1 (Dampier Foreshore) and 4 (Bulgarra Sporting Precinct) would generally not require routine lifeguard supervision, whereas Concept Scenarios 2 (Karratha Leisureplex) and 3 (Richardson Way/ Country Club) would require additional supervision associated with the proposed waterslide attractions, resulting in increased operational complexity and staffing requirements.

For the purposes of the C*ode of Practice for the Design, Construction, Operation, Management and Maintenance of Aquatic Facilities*, a lifeguard is defined as:

A person who is appropriately qualified and experienced, with primary responsibility for observation of water areas to anticipate problems, control behaviours and hazards, identify emergencies, carry out rescues, give immediate first aid, communicate with swimmers and recreational water users, enforce regulations where appropriate, promote awareness of specific and general hazards, and report incidents[8].

The Code further specifies that personnel responsible for aquatic facility operations must hold qualifications relevant to technical operations, patron supervision and emergency care, as detailed in Section 6.2 of the *Code of Practice*.[8]

Supporting Infrastructure

Appropriate supporting infrastructure contributes to both user experience and operational efficiency. Water spray grounds should provide access to supporting amenities appropriate to the scale and intended use of the facility, including toilets, handwashing facilities and nappy changing facilities[7].

For standalone splash pad developments, shower and change room facilities are not mandatory under the Department of Health guidelines. However, consideration should still be given to the provision of supporting amenities appropriate to the anticipated level of use, surrounding recreation facilities and overall visitor experience[7]. The Department of Health has advised that amenities need to be within 90m of the splash pad area.

[7] Department of Health Western Australia. Aquatic Facilities – Water Spray Grounds and Interactive Water Features: Application, Design & Operating Requirements Environmental Health Guide.
[8] Department of Health Western Australia. Code of Practice for the Design, Construction, Operation, Management and Maintenance of Aquatic Facilities.

Operational Implications for Concept Scenarios

The operational requirements vary between the concept scenarios due to differences in facility scale, operational complexity and integration with existing infrastructure.

Concept Scenario	Operational Implications
Concept Scenario 1 - Dampier Foreshore	Standalone Group 4 splash pad requiring ongoing technical operation, water quality monitoring, routine maintenance and asset management. Routine lifeguard supervision would generally not be required, although qualified technical operators would be required to manage water treatment systems and ensure ongoing regulatory compliance.
Concept Scenario 2 - Karratha Leisureplex	Integration with the existing aquatic facility provides established operational procedures, qualified staff, water quality management systems and emergency response capability. As the facility incorporates waterslides and forms part of an existing aquatic centre, additional lifeguard supervision and emergency care personnel would be required in accordance with the facility classification.
Concept Scenario 3 - Richardson Way/Country Club	Standalone regional-scale facility requiring dedicated operational systems, technical operators, water quality management procedures and ongoing staffing arrangements. The inclusion of waterslides would require qualified supervision and emergency care personnel, resulting in higher operational complexity and staffing requirements than a standalone splash pad.
Concept Scenario 4 - Bulgarra Sporting Precinct	Standalone Group 4 splash pad with comparatively low operational complexity. Routine lifeguard supervision would generally not be required; however, ongoing technical management, water quality monitoring, preventative maintenance and regulatory compliance would still be required.

Overall, the management and operational requirements demonstrate that all concept scenarios require ongoing investment in technical operation, water quality management, maintenance and regulatory compliance[7,8]. While standalone splash pads generally have lower operational complexity than larger aquatic facilities, they are not maintenance-free assets and require appropriately trained personnel to ensure safe operation throughout their lifecycle. Of the concepts assessed, the Karratha Leisureplex option offers the greatest operational efficiencies through integration with existing aquatic infrastructure and management systems, while the standalone concepts would require the establishment of dedicated operational and maintenance arrangements.

[7] Department of Health Western Australia. Aquatic Facilities – Water Spray Grounds and Interactive Water Features: Application, Design & Operating Requirements Environmental Health Guide.
[8] Department of Health Western Australia. Code of Practice for the Design, Construction, Operation, Management and Maintenance of Aquatic Facilities.

09 Recommendation



Feasibility and Decision Matrix

Feasibility and Decision Matrix Methodology

To ensure consistency in comparing the concept scenarios, a comparative feasibility framework has been developed in accordance with the project brief and Councillor-identified priorities.

The framework evaluates the strengths, opportunities, constraints and risks of each scenario. At this concept stage, detailed design, capital costing and operational modelling remain indicative, and the assessment is used to support comparison between options.

Each scenario has been assessed against Council-endorsed criteria reflecting environmental, community, site, financial, operational, risk and strategic considerations.

A traffic light rating system has been used in place of numerical scoring. This provides a clear comparison of scenario performance, with supporting commentary used to describe qualitative and contextual factors. Ratings indicate relative performance between scenarios.

The assessment is informed by investigations, concept design development, stakeholder and community engagement outcomes, strategic planning considerations, indicative cost inputs, and relevant industry benchmarking.

Evaluation Criteria

The following criteria are used to assess and compare the relative feasibility of each scenario option.

Evaluation Criterion	Description
Environmental Sustainability	Water consumption, water supply requirements and limitations, energy consumption, climate responsiveness, environmental impacts, resource efficiency, and overall sustainability performance.
Community Value	Accessibility, inclusion, affordability, participation opportunities, health and wellbeing outcomes, social benefits, equity of access, and broader community value.
Site Suitability	Site location, accessibility, public transport connections, visibility, servicing capacity, land tenure considerations, Native Title considerations, environmental constraints, and future expansion opportunities.
Risk and Compliance	Planning feasibility, statutory approvals, legislative requirements, industry standards, public safety considerations, operational compliance requirements, and overall delivery risk.
Tourism Benefits	Ability to attract visitors, enhance visitor experience, increase length of stay, support visitor expenditure, strengthen destination appeal, and contribute to regional tourism outcomes.
Capital Cost (CAPEX)	Relative capital investment requirements, including land development, site servicing, construction, infrastructure provision, contingencies, and overall project affordability.
Operational and Lifecycle Cost (OPEX)	Long-term operating, maintenance, renewal and asset lifecycle costs, together with potential revenue generation and overall financial sustainability.
Operational Complexity	Staffing requirements, management intensity, operating hours, security requirements, climate impacts, programming requirements, child protection considerations, and operational resilience.
Strategic Alignment	Alignment with Council, State and Federal strategies and objectives relating to recreation, health and wellbeing, community development, economic growth, tourism, youth engagement, and crime reduction.
Impact on Existing Facilities	Potential impacts on existing aquatic, recreation and community facilities, including competition, displacement of use, complementary functions, service integration, and optimisation of the broader facility network.

Assessment Basis

Ratings have been determined through a comparative assessment of the evidence presented throughout the feasibility study, including site investigations, concept development, stakeholder and community engagement, strategic planning considerations, indicative capital and operational cost inputs, and relevant technical and industry information.

For each criterion, the performance of each concept was considered relative to the other scenarios. A High rating indicates comparatively stronger performance or greater opportunity, with limited material constraints identified. A Medium rating indicates a generally favourable or mixed outcome, with constraints or uncertainties requiring further consideration. A Low rating indicates comparatively greater constraints, risks, costs or implementation challenges.

The overall rating for each concept reflects the balance of these considerations across the evaluation criteria. The key factors supporting the comparative ratings are summarised below.

Criteria	Concept Scenario Option 1 - Dampier Foreshore	Concept Scenario Option 2 - Karratha Leisureplex	Concept Scenario Option 3 - Richardson Way/ Country Club	Concept Scenario Option 4 - Bulgarra Sporting Precinct
Environmental Sustainability	L	H	L	M
Community Value	M	H	H	H
Site Suitability	L	H	M	M
Risk & Regulatory Compliance	L	H	L	H
Tourism Benefits	H	H	H	M
Capital Cost (CAPEX)	M	M	L	M
Operational & Lifecycle Cost (OPEX)	M	L	L	M
Operational Complexity	L	H	L	M
Strategic Alignment	H	H	H	H
Impact on Existing Facilities	M	M	L	H
Overall Score	L	H	L	M

Traffic Light Assessment Framework Rating Definition

- H — High - The option performs well against the criterion and presents limited constraints, risks or barriers to implementation.
- M — Medium - The option generally satisfies the criterion but presents some constraints, challenges or uncertainties requiring further consideration.
- L — Low - The option presents significant constraints, risks, costs or challenges that may adversely affect feasibility or long-term performance.

Assessment Rationale

Concept	Key factors supporting overall rating
Option 1 - Dampier Foreshore	Strong tourism and coastal destination potential, but increased coastal, tenure, servicing, environmental and ground condition constraints.
Option 2 - Karratha Leisureplex	Strongest integration with existing aquatic infrastructure, established operations and services, central location, accessibility and reduced operational and delivery risk.
Option 3 - Richardson Way/ Country Club	Strong regional destination potential and community value, but higher capital and operational requirements, servicing needs and site/delivery constraints.
Option 4 - Bulgarra Sporting Precinct	Strong community value, accessibility and precinct integration with comparatively lower-cost delivery, but more limited regional destination and tourism potential.

Alignment with Council Priorities

The evaluation criteria have been assessed in accordance with the priorities identified by Council through the stakeholder workshop process. The criteria are presented in order of importance, reflecting Council's identified priorities for evaluating future waterpark outcomes.

Each concept scenario has been assessed against these criteria to determine its relative alignment with Council's priorities, considering the opportunities, constraints, risks and feasibility considerations associated with each option. The assessment provides a qualitative comparison of the scenarios and assists in identifying which options demonstrate the strongest overall alignment with Council's desired outcomes.

Recommendation

The feasibility assessment has identified a clear strategic need and community demand for enhanced waterplay infrastructure within the City of Karratha. The assessment demonstrates that investment in a waterplay facility would deliver significant community, health, recreation and liveability benefits while supporting the City's strategic objectives relating to active recreation, community wellbeing, youth engagement and climate resilience.

Based on the demand assessment, stakeholder and community engagement, site investigations, concept design development, financial assessment and comparative feasibility analysis, a district/community-scale waterplay facility is considered the most appropriate level of provision for the City at this time. This scale aligns with forecast demand, provides the greatest balance between community benefit and financial sustainability, and retains flexibility for future expansion should demand increase over time.

While all four concept scenarios are considered capable of delivering a successful waterplay outcome, each presents varying opportunities, risks and implementation challenges. The comparative feasibility assessment identified Concept Scenario 2 - Karratha Leisureplex as the strongest overall option.

The Karratha Leisureplex concept consistently performed most favourably across the assessment criteria due to its:

- Existing aquatic infrastructure and servicing capacity
- Opportunity to integrate with established operational, staffing and management systems
- Central and accessible location within the City's recreation network
- Reduced delivery risk relative to the alternative sites
- Strong community accessibility and year-round utilisation potential
- Opportunity for staged expansion and incorporation of additional regional destination elements over time

While the Karratha Leisureplex represents the preferred option from a feasibility perspective, the assessment also identified that each alternative concept offers distinct strategic opportunities.

- Concept Scenario 1 - Dampier Foreshore presents the strongest tourism and destination setting but is constrained by coastal hazards, servicing requirements, tenure considerations and environmental exposure
- Concept Scenario 3 - Richardson Way/Country Club provides the greatest opportunity for a future regional destination facility but would require substantially greater capital investment, servicing infrastructure and resolution of flood, geotechnical and planning constraints
- Concept Scenario 4 - Bulgarra Sporting Precinct provides a cost-effective community-focused waterplay opportunity that integrates well within an existing recreation precinct and could be considered should a lower-cost delivery model be preferred

The feasibility assessment concludes that Concept Scenario 2 - Karratha Leisureplex represents the preferred option for progression to the next stage of project development, having demonstrated the strongest overall feasibility profile across the assessment criteria.

Should the City wish to progress the project, the following next steps are recommended

- Refine Council's preferred concept to confirm the facility layout, scale, staging opportunities and integration with the existing precinct
- Undertake detailed technical investigations, including geotechnical, hydraulic, servicing, traffic, environmental and statutory approvals assessments
- Complete detailed engineering design, water balance modelling and operational planning to confirm servicing requirements, water efficiency measures and lifecycle performance
- Prepare a detailed business case and funding strategy to support future capital investment
- Investigate opportunities for staged delivery, including the incorporation of additional regional destination elements should future demand, land availability and funding permit
- Continue to investigate complementary neighbourhood-scale waterplay opportunities within other communities, including Wickham and Roebourne, to improve equitable access to waterplay infrastructure across the City

Overall, the study demonstrates that investment in waterplay infrastructure is strategically justified and strongly supported by the community. A district/community-scale facility at the Karratha Leisureplex represents the most balanced outcome, delivering the strongest combination of community benefit, operational efficiency, affordability and long-term sustainability, while retaining flexibility to accommodate future growth and expansion as demand and investment opportunities evolve.

More broadly, the findings of this study provide a robust evidence base to inform future recreation planning, business case development, funding investigations and the ongoing implementation of the City's strategic planning framework, including the future Public Open Space Strategy and broader recreation and community infrastructure planning.

10 Appendices



Image: Kununurra Water Park - Water Features By Design

Appendices Contents

Appendix A - Site Selection Criteria Matrix

Appendix B - Order of Probable Costs

Appendix C - Detailed 10-Year Operational and Lifecycle Models

Appendix D - Additional Site Analysis Considerations

Appendix E - Site Selection Analysis Maps

Appendix F - Concept Scenario Option Plans

Appendix A - Site Selection Criteria Matrix

City of Karratha Waterpark Feasibility Study
Shortlist Site Assessment Criteria Matrix

Criteria Assessment																										
	Dampier					Karratha												Wickham			Roebourne			Point Samson	
Criteria L - Low (Does not meet criteria) M - Medium (Partially meets criteria H - High (Meets criteria)	Dampier Foreshore	Dampier Foreshore (potential inflateable site)	Dampier Community Centre	Lion Park	Dampier Football Oval	Karratha Leisureplex	Karratha Leisureplex Alternate Sites	Potential Hotel + Civic Buildings Site	Richardson Way / Country Club	Baynton West Park	Balyarra Park & Pump Track	Cattrall Park, Pegs Creek	Urban Open Space	Hockey and AFL Oval	Skatepark Site	Red Earth Arts Precinct	Back Beach	Wickham Recreation Precinct	Wickham Community Hub	Wickham South Park	Roebourne Aquatic Centre	Roebourne Public Library	Andover Park	Point Samson Community Park	Point Samson Beach (potential inflateable site)
Accessibility (weighting 25%)	M	M	H	M	L	H	H	H	H	M	L	H	M	H	L	H	L	H	H	L	H	M	L	H	M
Centrally located (to township/community)	1	1	1	0	1	2	2	2	2	0	0	1	2	1	0	2	0	2	2	0	2	2	0	2	1
Good site and road access and can accommodate high vehicular traffic/traffic management	2	1	2	2	2	2	1	2	2	1	1	2	1	2	1	2	2	2	2	1	2	1	2	2	1
Established or proposed public transport linkages (bus)	0	0	2	2	0	2	2	1	1	2	0	0	1	2	0	2	0	2	2	0	2	0	0	2	2
Established or proposed active transport linkages (shared paths or cycle routes)	0	0	0	0	0	2	2	2	2	0	0	2	1	1	0	0	0	2	1	1	0	0	0	0	0
Existing on-site carparking	2	1	2	1	1	2	1	1	1	2	0	2	0	2	1	2	1	2	2	1	2	2	0	2	2
Existing on-street carparking	2	2	2	1	0	1	1	2	1	2	1	2	0	2	1	1	0	1	0	0	1	1	2	1	1
Raw Total (out of 12)	7	5	9	6	4	11	9	10	9	7	2	9	5	10	3	9	3	11	9	3	9	6	4	9	7
Weighted Total (out of 25)	15	10	19	13	8	23	19	21	19	15	4	19	10	21	6	19	6	23	19	6	19	13	8	19	15
Planning Constraints (weighting 20%)	H	H	M	M	H	H	H	H	H	M	M	M	H	H	M	H	M	H	H	M	H	M	M	H	M
In suitable Land Use/Zoning area	2	2	2	2	2	2	2	2	2	2	2	2	1	2	2	2	2	2	2	2	2	2	2	2	0
Council-owned land or land with secureable tenure by Council	1	1	1	2	1	2	2	1	2	2	2	2	2	2	2	2	2	1	1	1	1	2	2	1	1
Minimal surrounding land-use impact (noise and light pollution to surrounding residents)	2	2	1	0	2	2	2	2	2	1	1	1	2	2	1	2	2	2	2	1	2	0	0	2	2
Low traffic impact on surrounding residents, with capacity for increased traffic flow, traffic management opportunities, and pedestrian safety	2	2	1	1	2	2	2	2	2	1	0	1	2	2	0	2	2	2	2	1	2	1	0	2	2
Raw Total (out of 8)	7	7	5	5	7	8	8	7	8	6	5	6	7	8	5	8	8	7	7	5	7	5	4	7	5
Weighted Total (out of 20)	18	18	13	13	18	20	20	18	20	15	13	15	18	20	13	20	20	18	18	13	18	13	10	18	13
Environmental Factors (weighting 15%)	M	L	H	H	M	H	H	H	M	H	H	M	H	H	H	H	M	H	H	H	H	H	H	M	L
Minimal environmental and ecological impact (including protected vegetation clearing and biodiversity loss)	1	1	2	2	2	2	2	2	2	2	1	2	2	2	2	2	1	2	2	1	2	2	2	1	0
Low exposure to cyclone-related hazards, with suitable conditions to support resilient infrastructure and safe operation.	0	0	1	1	0	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	0	0
Minimal flood risk, or site maintains sufficient spatial adequacy under flood risk conditions (including coastal flooding, flood-prone areas, flood fringe areas, and urban stormwater flood hazards)	1	1	1	2	1	1	1	2	0	1	2	0	2	1	1	1	1	2	2	2	1	2	1	1	2
Site is located outside areas vulnerable to coastal inundation, storm surge, or projected sea level rise impacts.	0	0	2	2	0	2	2	2	1	2	2	2	2	2	2	2	0	2	2	2	2	2	2	0	0
Extent to which the site is affected by bushfire prone area classification	1	2	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	2
Site allows for effective shade provision and favourable microclimate conditions to mitigate extreme heat and support user comfort.	2	0	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	0
Raw Total (out of 12)	5	4	9	10	6	9	9	10	7	9	9	8	11	9	9	9	5	10	10	9	9	10	9	5	4
Weighted Total (out of 15)	6	5	11	13	8	11	11	13	9	11	11	10	14	11	11	11	6	13	13	11	11	13	11	6	5
Servicing (weighting 10%)	H	L	M	M	H	H	M	M	M	H	L	M	L	H	M	M	L	H	M	L	H	L	L	M	M
Adequate connections to utility and site services	1	1	1	1	1	2	1	2	2	2	1	2	2	2	2	2	0	2	2	1	2	2	2	1	1
Sufficient existing carparking or suitable land area to develop additional or new carparking	2	1	1	1	2	2	1	2	2	1	0	1	0	2	1	1	1	1	1	0	1	1	0	2	2
Proximity to existing public toilets	2	0	2	2	2	2	1	0	0	2	2	2	0	2	2	2	0	2	1	0	2	0	1	2	2
Proximity to existing changerooms	2	0	0	0	2	2	1	0	0	2	0	1	0	2	0	0	0	2	0	0	2	0	0	0	0
Raw Total (out of 8)	7	2	4	4	7	8	4	4	4	7	3	6	2	8	5	5	1	7	4	1	7	3	3	5	5
Weighted Total (out of 10)	9	3	5	5	9	10	5	5	5	9	4	8	3	10	6	6	1	9	5	1	9	4	4	6	6
Future Land Use Compatibility (weighting 10%)	H	H	M	M	H	H	M	M	H	M	M	H	L	H	H	M	M	M	L	H	M	H	M	H	H
No significant demolition of existing structures or removal of vegetation needed	1	2	1	1	2	2	2	2	2	1	1	1	2	2	2	1	1	1	1	2	1	2	1	2	2
No planned developments on-site which would impact success and feasibility of Waterpark/play	2	2	2	2	2	2	1	1	2	2	2	2	0	2	2	2	2	2	1	2	2	2	2	2	2
Raw Total (out of 4)	3	4	3	3	4	4	3	3	4	3	3	3	2	4	4	3	3	3	2	4	3	4	3	4	4
Weighted Total (out of 10)	8	10	8	8	10	10	8	8	10	8	8	8	5	10	10	8	8	8	5	10	8	10	8	10	10
Site Suitability (weighting 20%)	M	M	M	L	M	H	H	H	M	M	L	M	M	H	H	M	M	H	M	M	H	L	H	M	M
CPTED Principles to promote safety and reduce vandalism (street presence, visibility, busy location)	2	1	2	1	1	2	2	2	1	1	1	1	2	2	2	2	0	2	2	1	2	1	1	1	1
High natural activity levels to support passive surveillance and activation	2	1	2	1	1	2	2	2	1	2	1	2	2	2	2	2	0	2	1	1	2	1	1	1	0
Sufficient land area on-site to accommodate a District / Community and Regional waterpark hierarchy, amenities and carparking	1	2	1	0	1	2	2	2	2	1	0	1	0	2	2	1	2	2	2	1	1	0	2	2	2
Capacity of existing site based on existing and proposed usage or alternative activities (events, sport, casual use and gatherings)	1	2	1	0	1	2	2	1	2	1	0	1	0	2	2	0	2	2	0	0	1	1	2	2	2
Suitable land conditions and topography requiring minimal earthworks (including tidal environment for inflatable)	0	0		1	2	1	1	2	0	2	1	0	2	2	2	1	1	2	2	2	2	0	2	1	0
Raw Total (out of 10)	6	6	7	3	6	9	9	9	6	7	3	5	6	10	10	6	5	10	7	5	8	3	8	7	5
Weighted Total (out of 20)	12	12	14	6	12	18	18	18	12	14	6	10	12	20	20	12	10	20	14	10	16	6	16	14	10
Assessment Score (out of total of 52)	35	28	37	31	34	49	42	43	38	39	25	37	33	49	36	40	25	48	39	27	43	31	31	37	30
Weighted Score (Out of 100)	67	57	69	56	64	92	81	81	75	71	45	69	61	92	66	76	51	89	73	51	80	57	57	73	58
Assessment Outcome (Shortlisted sites to score weighted Score of 75+ or highest scoring site in each town)	Shortlised	Discounted	Discounted	Discounted	Discounted	Shortlised	Discounted	Discounted	Shortlised	Discounted	Discounted	Discounted	Discounted	Shortlised	Discounted	Discounted	Discounted	Discounted	Discounted	Discounted	Discounted	Discounted	Discarded	Discounted	Discounted

Site Selection Criteria Matrix - City of Karratha Facility Maintenance Team Notes/Comments

Dampier Foreshore:

- Utilities (Rio Tinto manage electricity, water and wastewater) - wastewater services/ treatment at capacity
- Subject to coastal inundation
- Land Tenure - Dampier Land Transfer ongoing between City of Karratha, State and Rio Tinto
- Proximity to contaminated sites and buffers from waste water treatment plant
- Partly bushfire prone area
- Rock/latent conditions (6m deep light pole footings at the oval took 1 week per footing to excavate)
- Balance tanks would be excavating through rock; would potentially be below the water table if near Palms
- Corrosion issues
- Hardened water - water testing suggested for suitability
- Iron ore contamination issues

Dampier Foreshore (potential inflateable site):

- Proximity to Waste water treatment plant

Dampier Commnuity Centre:

- Utilities (Rio Tinto manage electricity, water and wastewater) - wastewater services/ treatment at capacity
- Aboriginal Heritage Area
- Moderate Bushfire Hazard Level
- Site too restrictive from space perspective
- Privately owned land (portion)

Lions Park:

- Utilities (Rio Tinto manage electricity, water and wastewater) - wastewater services/ treatment at capacity
- Land Tenure (Dampier Land Transfer)
- Bushfire prone area - moderate bushfire hazard level
- Capacity to accommodate car parking

Karratha Leisureplex

- Land availability (competing uses and current masterplanning)
- The tree area (drain/basin) captures the KLP and contains a lot of services

Karratha Leisureplex Alternate Sites

- Bushfire prone area - low-moderate hazard level
- Access from Dampier Highway - car parking
- Sloping land
- Separated from main facilities and would require own services and management

Potential Hotel + Civic Buildings Site

- Site partly within a bushfire prone area with a moderate hazard level
- Located with registered Aboriginal Heritage site/survey area (Karratha Hills)
- Tenure - owned by DevelopmentWA
- Existing Develpoment Approval for Mixed Use (Walgu Development)

Richardson Way/Country Club

- Subject to significant coastal inundation
- Stormwater management
- Bushfire prone area - part subject to moderate hazard level
- Only proceed subject to feasibility of caravan park

Baynton West Park

- Car parking is limited

Balyarra Park & Pump Track

- Car parking is limited

Cattrall Park, Pegs Creek

- Subject to flooding/inundation - forms part of the City's drainage network
- Site partly within a bushfire prone area - moderate hazard level

Urban Open Space

- Development approval for hotel

Bulgarra Sporting Precinct

- Stormwater management
- Subject to storm surge (500 year extent)
- Moderate bushfire hazard level but not within a bushfire prone area
- Masterplan to be prepared for site in 2026
- Consider that this location is currently home to the annual FeNaCING Festival
- Festival Map - FeNaCING Festival 2026
- Site is in the flood plain

Red Earth Arts Precinct

- Site at capacity with other uses

Wickham Recreation Precinct

- Land tenure - Rio Tinto
- Site is partly located within bushfire prone area with a moderate-low hazard level

Wickham Community Hub

- Land Tenure - Rio Tinto
- Site is partly located within bushfire prone area with a moderate-low hazard level

Wickham South Park

- Partly located within a designated bushfire prone area
- Car parking is limited

Roebourne Aquatic Centre

- Site is partly located within a designated bushfire prone area with a moderate hazard level
- Adjacent to flood prone area

Point Samson Community Park

- Land tenure issues need to be resolved
- Utilities - Point Samson is reliant on septic systems for wastewater disposal
- Point Samson is highly susceptible to inundation with a very small population

Appendix B - Order of Probable Costs

NBQSS

City of Karratha

Waterpark Options

Site 1 - Dampier Foreshore
Site 2 - Karratha Leisureplex Splash Pad
Site 3 - Richardson Way/Country Club
Site 4 - Bulgarra Oval

Cost Indication
75% Location Allowance

Amended 06/08/2026

29 June 2026

Tredwell Management

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DRAWINGS

The following drawings were used in the preparation of this Cost Indication:

DPA - SK01b - Dampier Foreshore	1:200	A1
DPA - SK02.1b - Regional Water Play Park	1:200	A1
DPA - SK02.2b - Regional Water Play Park - Optional Site Locations	1:1000	A1
DPA - SK03b - Karratha Splash	1:200	A1
DPA - SK04b - Bulgarra Oval	1:200	A1

EXCLUSIONS

The following items are specifically excluded from this Cost Indication:

- Development Approvals
- Karratha Splash - Optional upgrade to existing splashpad area
- Credits for salvaged materials
- Costs associated with land acquisition
- Relocation Costs and Lost Revenue during construction
- Holding and Finance charges
- Legal costs
- Escalation beyond December 2029 (Assumed Completion date)

DISTRICT LOADING

The District Loading has been included at 175.0 (Perth 100.0) due to the following comments:

> Current global conditions causing increases in material costs and fuel costs above the normal anticipated escalation costs.

> Major suppliers of materials advising rising costs up to 3 months in advance to cover for these conditions

> The cost of importing materials and manufactured products has also increased due to the increase of fuel. Most suppliers have added a Fuel Levy to deliver goods to sites and places of manufacturing

The District Loading also takes into account the following items:

> Nature and volume of work that will take place in the area.

> Increase in design requirements over and above those required in a base building in Perth

The District Loading has to take all these considerations into account

The District Loading has been applied across all items in this Cost Plan to cover for possible "Ups" and 'Downs" in the costs of items included in the project

The District Loading is a guide only to the potential cost and can be reassessed at any time to reflect current conditions including volume of work in the area being tendered at the time and the volume of work being carried out at the time not only in Karratha but within other areas of the State.

NOTES

Please note that this information is for indicative budgeting purposes only and should not be used as the basis for making a financial commitment

Prior to making a financial commitment a detailed budget should be prepared based on input from the architect and the relevant consultants

Overall Summary

	Area	Building Works	Builder's Preliminaries	Contingencies	Public Art	Professional Fees	Total - Perth	Escalation	District Loading	Total - Karratha
Site 1 - Dampier Foreshore		$ 3,634,645	$ 755,467	$ 1,163,380	$ 55,535	$ 666,419	$ 6,275,446	$ 1,481,253	$ 4,206,770	$ 11,963,469
Site 2 - Karratha Splash - With LTS Pool		$ 7,770,580	$ 1,603,746	$ 2,484,196	$ 118,585	$ 1,423,023	$ 13,400,130	$ 3,162,959	$ 8,982,831	$ 25,545,920
Site 2 - Karratha Splash - Without LTS Pool		$ 4,120,580	$ 832,434	$ 1,317,319	$ 62,883	$ 754,600	$ 7,087,816	$ 1,677,253	$ 4,763,412	$ 13,528,481
Site 3 - Richardson Way/Country Club		$ 8,378,490	$ 1,728,428	$ 2,678,333	$ 127,853	$ 1,534,230	$ 14,447,334	$ 3,410,141	$ 9,684,828	$ 27,542,303
Site 4- Bulgarra Oval		$ 3,262,550	$ 679,149	$ 1,044,550	$ 49,862	$ 598,350	$ 5,634,462	$ 1,329,955	$ 3,777,084	$ 10,741,501

SUMMARY

	Area	Building Works	Builder's Preliminaries	Contingencies	Public Art	Professional Fees	Total - Perth	Escalation	District Loading	Total - Karratha
Site 1 - Dampier Foreshore										
1.1	Site Preparation	$ 264,875	$ 55,054.7	$ 84,781.4	$ 4,047.1	$ 48,565.3	$ 457,324	$ 107,946.4	$ 306,568.7	$ 871,839
1.2	Fencing and Gates	$ 25,520	$ 5,304.4	$ 8,168.5	$ 389.9	$ 4,679.1	$ 44,062	$ 10,400.3	$ 29,537.1	$ 83,999
1.3	Landscaping and Paving	$ 202,500	$ 42,090.0	$ 64,816.3	$ 3,094.1	$ 37,128.8	$ 349,629	$ 82,526.3	$ 234,375.3	$ 666,531
1.4	Shade Structures	$ 587,250	$ 122,060.9	$ 187,967.4	$ 8,972.8	$ 107,673.4	$ 1,013,925	$ 239,326.2	$ 679,688.3	$ 1,932,939
1.5	Splashpads	$ 267,500	$ 55,600.3	$ 85,621.6	$ 4,087.2	$ 49,046.6	$ 461,856	$ 109,016.2	$ 309,606.9	$ 880,479
1.6	Water Features	$ 852,000	$ 177,089.7	$ 272,708.8	$ 13,018.0	$ 156,215.8	$ 1,471,032	$ 347,221.6	$ 986,112.3	$ 2,804,366
1.7	Shared Slide Tower & Flume-Style Waterslides	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
1.8	Water Treatment Plantroom	$ 1,050,000	$ 218,244.3	$ 336,084.7	$ 16,043.3	$ 192,519.5	$ 1,812,892	$ 427,914.0	$ 1,215,279.3	$ 3,456,085
1.9	Operations and Storage Facility	$ 70,000	$ 14,549.6	$ 22,405.6	$ 1,069.6	$ 12,834.6	$ 120,859	$ 28,527.6	$ 81,018.6	$ 230,406
1.10	Public Amenities	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
1.11	Administration & Kiosk	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
1.12	Dedicated Visitor Parking	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
1.13	Services Infrastructure - Internal	$ 210,000	$ 43,648.9	$ 67,216.9	$ 3,208.7	$ 38,503.9	$ 362,578	$ 85,582.8	$ 243,055.9	$ 691,217
1.14	Services Infrastructure - External	$ 105,000	$ 21,824.4	$ 33,608.5	$ 1,604.3	$ 19,251.9	$ 181,289	$ 42,791.4	$ 121,527.9	$ 345,609
	Total	$ 3,634,645	$ 755,467	$ 1,163,380	$ 55,535	$ 666,419	$ 6,275,446	$ 1,481,253	$ 4,206,770	$ 11,963,469

Site 2 - Karratha Splash	**With LTS Pool**									
1.1	Site Preparation	$ 88,500	$ 18,265	$ 28,293	$ 1,351	$ 16,207	$ 152,616	$ 36,023	$ 102,306	$ 290,945
1.2	Fencing and Gates	$ 14,480	$ 2,988	$ 4,629	$ 221	$ 2,652	$ 24,970	$ 5,894	$ 16,739	$ 47,603
1.3	Landscaping and Paving	$ 157,750	$ 32,558	$ 50,431	$ 2,407	$ 28,889	$ 272,035	$ 64,211	$ 182,360	$ 518,606
1.4	Shade Structures	$ 352,350	$ 72,720	$ 112,644	$ 5,377	$ 64,526	$ 607,617	$ 143,422	$ 407,318	$ 1,158,357
1.5	Splashpads	$ 192,500	$ 39,729	$ 61,541	$ 2,938	$ 35,252	$ 331,960	$ 78,356	$ 222,531	$ 632,847
1.6	Water Features	$ 450,000	$ 92,874	$ 143,862	$ 6,867	$ 82,408	$ 776,011	$ 183,169	$ 520,202	$ 1,479,383
1.7	Shared Slide Tower & Flume-Style Waterslides	$ 1,400,000	$ 288,942	$ 447,570	$ 21,365	$ 256,381	$ 2,414,258	$ 569,860	$ 1,618,407	$ 4,602,525
1.8	Water Treatment Plantroom	$ 1,100,000	$ 227,026	$ 351,662	$ 16,787	$ 201,442	$ 1,896,917	$ 447,747	$ 1,271,606	$ 3,616,270
1.9	Operations and Storage Facility	$ 95,000	$ 19,607	$ 30,371	$ 1,450	$ 17,397	$ 163,825	$ 38,669	$ 109,820	$ 312,314
1.10	Public Amenities	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
1.11	Administration & Kiosk	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
1.12	Dedicated Visitor Parking	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
1.13	Services Infrastructure - Internal	$ 110,000	$ 22,703	$ 35,166	$ 1,679	$ 20,144	$ 189,692	$ 44,775	$ 127,161	$ 361,627
1.14	Services Infrastructure - External	$ 160,000	$ 33,022	$ 51,151	$ 2,442	$ 29,301	$ 275,915	$ 65,127	$ 184,961	$ 526,003
1.15	20m x 8 Lane Learn to Swim Programme Pool	$ 3,650,000	$ 753,312	$ 1,166,878	$ 55,702	$ 668,423	$ 6,294,315	$ 1,485,707	$ 4,219,419	$ 11,999,440
	Total	$ 7,770,580	$ 1,603,746	$ 2,484,196	$ 118,585	$ 1,423,023	$ 13,400,130	$ 3,162,959	$ 8,982,831	$ 25,545,920

Site 3 - Richardson Way/Country Club											
1.1	Site Preparation	$ 221,100	$ 45,612	$ 70,679	$ 3,374	$ 40,487	$ 381,251	$ 89,990	$ 255,573	$ 726,814	
1.2	Fencing and Gates	$ 97,500	$ 20,114	$ 31,168	$ 1,488	$ 17,854	$ 168,123	$ 39,684	$ 112,702	$ 320,508	
1.3	Landscaping and Paving	$ 446,350	$ 92,079	$ 142,684	$ 6,811	$ 81,734	$ 769,658	$ 181,670	$ 515,943	$ 1,467,270	
1.4	Shade Structures	$ 1,276,290	$ 263,290	$ 407,989	$ 19,476	$ 233,708	$ 2,200,753	$ 519,465	$ 1,475,284	$ 4,195,501	
1.5	Splashpads	$ 286,250	$ 59,052	$ 91,505	$ 4,368	$ 52,417	$ 493,591	$ 116,507	$ 330,881	$ 940,979	
1.6	Water Features	$ 725,000	$ 149,563	$ 231,759	$ 11,063	$ 132,759	$ 1,250,144	$ 295,083	$ 838,039	$ 2,383,266	
1.7	Shared Slide Tower & Flume-Style Waterslides	$ 2,250,000	$ 464,160	$ 719,253	$ 34,334	$ 412,010	$ 3,879,757	$ 915,776	$ 2,600,810	$ 7,396,343	
1.8	Water Treatment Plantroom	$ 1,550,000	$ 319,755	$ 495,485	$ 23,652	$ 283,829	$ 2,672,721	$ 630,868	$ 1,791,669	$ 5,095,258	
1.9	Operations and Storage Facility	$ 145,000	$ 29,913	$ 46,352	$ 2,213	$ 26,552	$ 250,029	$ 59,017	$ 167,608	$ 476,653	
1.10	Public Amenities	$ 240,000	$ 49,510	$ 76,720	$ 3,662	$ 43,948	$ 413,841	$ 97,683	$ 277,420	$ 788,943	
1.11	Administration & Kiosk	$ 450,000	$ 92,832	$ 143,851	$ 6,867	$ 82,402	$ 775,951	$ 183,155	$ 520,162	$ 1,479,269	
1.12	Dedicated Visitor Parking	$ 246,000	$ 50,748	$ 78,638	$ 3,754	$ 45,046	$ 424,187	$ 100,125	$ 284,355	$ 808,667	
1.13	Services Infrastructure - Internal	$ 210,000	$ 43,322	$ 67,130	$ 3,205	$ 38,454	$ 362,111	$ 85,472	$ 242,742	$ 690,325	
1.14	Services Infrastructure - External	$ 235,000	$ 48,479	$ 75,122	$ 3,586	$ 43,032	$ 405,219	$ 95,648	$ 271,640	$ 772,507	
	Total	$ 8,378,490	$ 1,728,428	$ 2,678,333	$ 127,853	$ 1,534,230	$ 14,447,334	$ 3,410,141	$ 9,684,828	$ 27,542,303	
Site 4- Bulgarra Oval											
1.1	Site Preparation	$ 161,000	$ 33,515	$ 51,546	$ 2,461	$ 29,527	$ 278,049	$ 65,630	$ 186,391	$ 530,071	
1.2	Fencing and Gates	$ 45,250	$ 9,419	$ 14,487	$ 692	$ 8,299	$ 78,147	$ 18,446	$ 52,386	$ 148,979	
1.3	Landscaping and Paving	$ 249,750	$ 51,989	$ 79,961	$ 3,817	$ 45,804	$ 431,321	$ 101,809	$ 289,138	$ 822,268	
1.4	Shade Structures	$ 704,700	$ 146,694	$ 225,619	$ 10,770	$ 129,242	$ 1,217,025	$ 287,266	$ 815,838	$ 2,320,129	
1.5	Splashpads	$ 305,000	$ 63,490	$ 97,650	$ 4,661	$ 55,937	$ 526,739	$ 124,331	$ 353,101	$ 1,004,171	
1.6	Water Features	$ 406,000	$ 84,515	$ 129,986	$ 6,205	$ 74,460	$ 701,167	$ 165,503	$ 470,030	$ 1,336,700	
1.7	Shared Slide Tower & Flume-Style Waterslides	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	
1.8	Water Treatment Plantroom	$ 911,350	$ 189,711	$ 291,781	$ 13,928	$ 167,141	$ 1,573,912	$ 371,505	$ 1,055,078	$ 3,000,496	
1.9	Operations and Storage Facility	$ 70,000	$ 14,572	$ 22,411	$ 1,070	$ 12,838	$ 120,891	$ 28,535	$ 81,040	$ 230,465	
1.10	Public Amenities	$ 129,500	$ 26,957	$ 41,461	$ 1,979	$ 23,750	$ 223,648	$ 52,790	$ 149,923	$ 426,361	
1.11	Administration & Kiosk	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	
1.12	Dedicated Visitor Parking	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	
1.13	Services Infrastructure - Internal	$ 230,000	$ 47,878	$ 73,638	$ 3,515	$ 42,182	$ 397,213	$ 93,758	$ 266,273	$ 757,244	
1.14	Services Infrastructure - External	$ 50,000	$ 10,408	$ 16,008	$ 764	$ 9,170	$ 86,351	$ 20,382	$ 57,885	$ 164,618	
	Total	$ 3,262,550	$ 679,149	$ 1,044,550	$ 49,862	$ 598,350	$ 5,634,462	$ 1,329,955	$ 3,777,084	$ 10,741,501	
Site 2 - Karratha Splash	**Without LTS Pool**										
1.1	Site Preparation	$ 88,500	$ 17,879	$ 28,293	$ 1,351	$ 16,207	$ 152,229	$ 36,023	$ 102,306	$ 290,559	
1.2	Fencing and Gates	$ 14,480	$ 2,925	$ 4,629	$ 221	$ 2,652	$ 24,907	$ 5,894	$ 16,739	$ 47,540	
1.3	Landscaping and Paving	$ 157,750	$ 31,868	$ 50,432	$ 2,407	$ 28,889	$ 271,346	$ 64,211	$ 182,360	$ 517,917	
1.4	Shade Structures	$ 352,350	$ 71,181	$ 112,644	$ 5,377	$ 64,526	$ 606,078	$ 143,422	$ 407,318	$ 1,156,818	
1.5	Splashpads	$ 192,500	$ 38,889	$ 61,541	$ 2,938	$ 35,252	$ 331,120	$ 78,356	$ 222,531	$ 632,006	
1.6	Water Features	$ 450,000	$ 90,908	$ 143,862	$ 6,867	$ 82,408	$ 774,046	$ 183,169	$ 520,202	$ 1,477,417	
1.7	Shared Slide Tower & Flume-Style Waterslides	$ 1,400,000	$ 282,826	$ 447,570	$ 21,365	$ 256,381	$ 2,408,142	$ 569,860	$ 1,618,407	$ 4,596,410	
1.8	Water Treatment Plantroom	$ 1,100,000	$ 222,221	$ 351,662	$ 16,787	$ 201,443	$ 1,892,112	$ 447,747	$ 1,271,606	$ 3,611,465	
1.9	Operations and Storage Facility	$ 95,000	$ 19,192	$ 30,371	$ 1,450	$ 17,397	$ 163,410	$ 38,669	$ 109,820	$ 311,899	
1.10	Public Amenities	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	
1.11	Administration & Kiosk	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	
1.12	Dedicated Visitor Parking	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	
1.13	Services Infrastructure - Internal	$ 110,000	$ 22,222	$ 35,166	$ 1,679	$ 20,144	$ 189,211	$ 44,775	$ 127,161	$ 361,146	
1.14	Services Infrastructure - External	$ 160,000	$ 32,323	$ 51,151	$ 2,442	$ 29,301	$ 275,216	$ 65,127	$ 184,961	$ 525,304	
1.15	20m x 8 Lane Learn to Swim Programme Pool	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	
	Total	$ 4,120,580	$ 832,434	$ 1,317,319	$ 62,883	$ 754,600	$ 7,087,816	$ 1,677,253	$ 4,763,412	$ 13,528,481	

Site 1 - Dampier Foreshore					
Item		**Unit**	**Quantity**	**Rate**	**Cost**
	Site Area	m2	1995		
1.0	**Site Works**				
1.1	**Site Preparation**				
	It has been assumed that the site will only require minor cut/fill to form the platform form for splashpools and associated building works	Note			
1.1.01	Site clearance of grass, palm trees etc area of new splashpools	m2	865	$ 75.00	$ 64,875
1.1.02	Allowance for preliminary siteworks to reduce levels for construction of splash pools etc	Item			$ 100,000
1.1.03	Allowance for rock excavation	Item			$ 100,000
1.2	**Fencing and Gates**				
1.2.01	1200 high metal pool fencing to perimeter of splash pads	m	112	$ 185.00	$ 20,720
1.2.02	Single gate to match pool fencing	No	4	$ 1,200.00	$ 4,800
1.3	**Landscaping and Paving**				
1.3.01	Allowance for lawns and reticulation	m2	500	$ 51.00	$ 25,500
1.3.02	Allowance for pathways - Existing	Item			$ 24,000
1.3.03	Allowance for soft landscaping	Item	250		$ 20,000
1.3.04	Allowance for terraced seating	m	60	$ 550.00	$ 33,000
1.3.05	Allowance for site furniture (Seats, bike racks, waste bins, etc	Item			$ 25,000
1.3.06	Allowance for area lighting	Item			$ 50,000
1.3.07	Allowance for interpretive signage	Item			$ 25,000
1.4	**Shade Structures**				
1.4.1	Structural steel framing with perforated metal screening panels designed to provide solar protection including all footings	m2	375	$ 1,566.00	$ 587,250
1.5	**Splashpads**				
1.5.01	Splashpad - Junior	m2	200	$ 375.00	$ 75,000
1.5.02	Splashpad - Family	m2	300	$ 375.00	$ 112,500
1.5.03	Area lighting to splashpad	Item			$ 80,000
1.6	**Water Features**				
1.6.01	VOR 0130 Supersplash No 2	No	1	$ 25,000.00	$ 25,000
1.6.02	VOR 0509 Palm tree	No	7	$ 25,000.00	$ 175,000
1.6.03	VOR 0510 Wavy palm	No	6	$ 25,000.00	$ 150,000
1.6.04	VOR 0519 Spray Loop	No	5	$ 10,000.00	$ 50,000
1.6.05	VOR 05122 Water tunnel/Classic tunnel feature	No	1	$ 25,000.00	$ 25,000
1.6.06	VOR 3053 Spraylink box	No	4	$ 5,000.00	$ 20,000
1.6.07	VOR3058 Spraylink Cylinder	No	2	$ 5,000.00	$ 10,000
1.6.08	VOR 7213.0001 Snake No 1- Project configuration variant	No	1	$ 25,000.00	$ 25,000
1.6.09	VOR 7216 - Turtle No 2	No	4	$ 25,000.00	$ 100,000
1.6.10	VOR 7694 Rio Grande No 2	No	1	$ 20,000.00	$ 20,000
1.6.11	VOR 7699 Astra No 3	No	1	$ 10,000.00	$ 10,000
1.6.12	VOR 8084 Foaming Geyser No 2	No	46	$ 2,000.00	$ 92,000
1.6.13	VOR 8610 Pine tree	No	6	$ 25,000.00	$ 150,000
1.7	**Shared Slide Tower & Flume-Style Waterslides**				
1.7.01	No requirement for a Shared Slide Tower & Flume-Style Waterslides to this Site	Note			

Site 1 - Dampier Foreshore							
Item		**Unit**	**Quantity**	**Rate**		**Cost**	
1.8	**Water Treatment Plantroom**						
1.8.01	Allowance for pump room	m2	100	$	2,500.00	$	250,000
1.8.02	Allowance to filtration system to Junior Splashpad	Item				$	300,000
1.8.03	Allowance to filtration system to Family Splashpad	Item				$	300,000
1.8.04	Allowance to filtration system to Slide Runout area	Item				$	-
1.8.05	Allowance for all balance tanks, backwash tanks	Item				$	150,000
1.8.06	Allowance for Waste Water Treatment Unit (WWTU)	Item				$	50,000
1.9	**Operations and Storage Facility**						
1.9.01	Allowance for Operations and Storage Facility	m2	20	$	2,500.00	$	50,000
1.9.02	Allowance for shelving etc	Item				$	20,000
1.10	**Public Amenities**						
1.10.01	No requirement for additional public amenities as these are located in the existing sporting pavilion	Note					
1.11	**Administration & Kiosk**						
1.11.01	No requirement for Administration & Kiosk at this site	Note					
1.12	**Dedicated Visitor Parking**						
1.12.01	No requirement for additional Dedicated Visitor Parkng as this is located next to the existing sporting pavilion						
1.13	**Services Infrastructure - Internal**						
	The following amounts have been included for potential services to the splashpads and buildings and are subject to further investigation prior to final documentation	Note					
1.13.01	Allowance for water services	Item				$	25,000
1.13.02	Allowance for sewer services - On site disposal	Item				$	100,000
1.13.03	Allowance for stormwater services	Item				$	25,000
1.13.04	Allowance for electrical services	Item				$	50,000
1.13.05	Allowance for communications services	Item				$	10,000
1.14	**Services Infrastructure - External**						
	This section of works includes for a potential upgrade of major infrastructure services serving the site	Note					
1.14.01	Allowance for water services	Item		$	-	$	25,000
1.14.02	Allowance for sewer services - Refer to Item 1.13.02	Item		$	-	$	-
1.14.03	Allowance for stormwater services	Item		$	-	$	25,000
1.14.04	Allowance for electrical services	Item		$	-	$	50,000
1.14.05	Allowance for communications services	Item		$	-	$	5,000
	Sub-total for Building Works					***$***	***3,634,645***

Site 1 - Dampier Foreshore						
Item		**Unit**	**Quantity**	**Rate**		**Cost**
2.0	**Builder's Preliminaries**					
2.01	Allowance for Builder's Preliminaries including supervision, temporary facilities, insurances , small plant and equipment, , etc	Item			$	726,929
2.01	Building Permit	Item			$	3,926
2.01	Building Services Levy	Item			$	5,889
2.01	BCITF	Item			$	8,724
2.01	Allowance for Sundry Fees	Item			$	10,000
	Sub-total for Builders Preliminaries				***$***	***755,467***
	Total for Construction Works				***$***	***4,390,112***
3.0	**CONTINGENCIES**					
3.01	Allowance for design contingencies (Final design, final selection of materials, final selection of water features etc)	Item	15.0%		$	658,517
3.02	Allowance for contract contingencies	Item	10.0%		$	504,863
	Sub-total for Contingencies				***$***	***1,163,380***
4.0	**PUBLIC ART**					
4.01	Allowance for Public Art (1% of Construction Costs)	Item			$	55,535
	Sub-total for Public Art				***$***	***55,535***
5.0	**PROFESSIONAL FEES**					
5.10	Allowance for professional fees	Item		12%	$	666,419
5.02	Allowance for project manager - City of Karratha - Internal Recovery Costs - Provided inhouse	Item		0%	$	-
	Sub-total for Professional Fees				***$***	***666,419***
	TOTAL ESTIMATED COMMITMENT - Perth				**$**	**6,275,446**
6.0	**DISTRICT LOADING - KARRATHA (175)**					
6.0	District Loading Allowance - Excludes Professional Fees	Item		*75%*	*$*	-
			Sub-total District Loading		*$*	*4,206,770*
	TOTAL CURRENT ESTIMATED COMMITMENT - Karratha				**$**	**10,482,216**

Site 1 - Dampier Foreshore					
Item		**Unit**	**Quantity**	**Rate**	**Cost**
7.0	**ESCALATION**				
7.01	AIQS (WA Chapter) CCIF is currently forecasting building cost increases for the following years: > 2026 - 5.3% > 2027 - 5.4% > 2028 - 5.0% > 2029 - 4.5% > 2030 - 4.5%				
7.02	Allowance for cost escalation is based on the works being carried out as a single project.	Note			
7.03	Allowance for escalation has been included until December 2029 (Assumes construction June 28 to December 2029)	Item			$ 1,481,253
	Sub-total for Escalation				***$ 1,481,253***
	TOTAL ESTIMATED COMMITMENT				**$ 11,963,469**
	Goods & Services Tax	Item		10%	$ 1,196,347
	TOTAL ESTIMATED COMMITMENT (Including GST)				**$ 13,159,816**

Site 2 - Karratha Splash					
Item		**Unit**	**Quantity**	**Rate**	**Cost**
	Site Area	m2	1140		
1.0	**Site Works**				
1.1	**Site Preparation**				
	It has been assumed that the site will only require minor cut/fill to form the platform form for splashpools and associated building works	Note			
1.1.01	Site clearance of grass etc area of new splashpools	m2	1140	$ 25.00	$ 28,500
1.1.02	Allowance for preliminary siteworks to reduce levels for construction of splash pools etc	Item			$ 50,000
1.1.03	Modifications to existing pathway from Northen sports field carpark to suit new slide tower	Item			$ 10,000
1.2	**Fencing and Gates**				
1.2.01	1200 high metal pool fencing to perimeter of splash pads	m	24	$ 520.00	$ 12,480
1.2.02	Gate to match pool fencing	No	1	$ 2,000.00	$ 2,000
1.3	**Landscaping and Paving**				
1.3.01	Allowance for modifications to existing landscaped area and BBQ cabana	Item			$ 20,000
1.3.02	Allowance for pathways	m2	462	$ 125.00	$ 57,750
1.3.03	Allowance for soft landscaping	m2	0	$ 75.00	$ -
1.3.04	Allowance for site furniture (Seats, waste bins, etc)	Item	.		$ 15,000
1.3.05	Allowance for area lighting	Item			$ 50,000
1.3.06	Allowance for interpretive signage	Item			$ 15,000
1.4	**Shade Structures**				
1.4.1	Structural steel framing with perforated metal screening panels designed to provide solar protection including all footings	m2	225	$ 1,566.00	$ 352,350
1.5	**Splashpads**				
1.5.01	Splashpad	m2	300	$ 375.00	$ 112,500
1.5.02	Splashpad - Spray Park/Marshalling area	m2	170	$ -	$ -
1.5.03	Area lighting to splashpad	Item			$ 80,000
1.6	**Water Features**				
1.6.01	EPN - 03P - TBC	No	1	$ 25,000.00	$ 25,000
1.6.02	VOR 0130 Supersplash No 2	No	1	$ 25,000.00	$ 25,000
1.6.03	VOR 0509 Palm tree	No	5	$ 25,000.00	$ 125,000
1.6.04	VOR 0510 Coreo Play Volcano	No	4	$ 25,000.00	$ 100,000
1.6.05	VOR3058 Spraylink Cylinder	No	2	$ 5,000.00	$ 10,000
1.6.06	VOR 7213.0001 Snake No 1- Project configuration variant	No	3	$ 25,000.00	$ 75,000
1.6.07	VOR 7553 Loop No 3	No	6	$ 15,000.00	$ 90,000
1.7	**Shared Slide Tower & Flume-Style Waterslides**				
1.7.01	Shared Slide Tower - 60m2 plan area	No	1	$ 375,000.00	$ 375,000
1.7.02	Flume style water slide -2 x 40m long slides	No	2	$ 300,000.00	$ 600,000
1.7.03	Run-out area	Item			$ 375,000
1.7.04	Area lighting to pools to Run-out area	Item			$ 50,000
1.8	**Water Treatment Plantroom**				
1.8.01	Allowance for pump room	m2	120	$ 2,500.00	$ 300,000
1.8.02	Allowance to filtration system to Splashpad	Item			$ 300,000
1.8.03	Allowance to filtration system to Slide Runout area	Item			$ 300,000
1.8.04	Allowance for all balance tanks, backwash tanks	Item			$ 200,000
1.9	**Operations and Storage Facility**				
1.9.01	Allowance for Operations and Storage Facility	m2	30	$ 2,500.00	$ 75,000
1.9.02	Allowance for shelving etc	Item			$ 20,000

Site 2 - Karratha Splash							
Item		**Unit**	**Quantity**	**Rate**		**Cost**	
1.10	**Public Amenities**						
1.10.01.	No requirement for public amenities are located in the existing Leisureplex Building	Note					
1.11	**Administration & Kiosk**						
1.11.01	No requirement for Administration & Kiosk as these are located in the existing Leisureplex Building	Note					
1.12	**Dedicated Visitor Parking**						
1.12.01	No requirement for additional Dedicated Visitor Parking	Note					
1.13	**Services Infrastructure - Internal**						
	The following amounts have been included for potential services to the splashpads and buildings and are subject to further investigation prior to final documentation	Note					
	This section of works does not include for any upgrade of major infrastructure services serving the site	Note					
1.13.01	Allowance for water services	Item		$	-	$	25,000
1.13.02	Allowance for sewer services	Item		$	-	$	25,000
1.13.03	Allowance for stormwater services	Item		$	-	$	-
1.13.04	Allowance for electrical services	Item		$	-	$	50,000
1.13.05	Allowance for communications services	Item		$	-	$	10,000
1.14	**Services Infrastructure - External**						
	This section of work includes for a potential upgrade of major infrastructure services serving the site	Note					
1.14.01	Allowance for water services	Item		$	-	$	30,000
1.14.02	Allowance for sewer services	Item		$	-	$	50,000
1.14.03	Allowance for stormwater services	Item		$	-	$	50,000
1.14.04	Allowance for electrical services	Item		$	-	$	25,000
1.14.05	Allowance for communications services	Item		$	-	$	5,000
1.15	**20m x 8 Lane Learn to Swim Programme Pool**						
1.15.01	Allowance for 30m x 8 Lane LTS Programme pool including balance tanks , backwash and filtration systems, lane ropes, pool blanket, additional paving etc	Item				$	3,650,000
Sub-total for Building Works						***$***	***7,770,580***

Site 2 - Karratha Splash					
Item		**Unit**	**Quantity**	**Rate**	**Cost**
2.0	**Builder's Preliminaries**				
2.01	Allowance for Builder's Preliminaries including supervision, temporary facilities, insurances , small plant and equipment, , etc	Item			$ 1,554,116
2.01	Building Permit	Item			$ 8,392
2.01	Building Services Levy	Item			$ 12,588
2.01	BCITF	Item			$ 18,649
2.01	Allowance for Sundry Fees	Item			$ 10,000
	Sub-total for Builders Preliminaries				***$ 1,603,746***
	Total for Construction Works				***$ 9,374,326***
3.0	**CONTINGENCIES**				
3.01	Allowance for design contingencies (Final design, final selection of materials, final selection of water features etc)	Item	15.0%		$ 1,406,149
3.02	Allowance for contract contingencies	Item	10.0%		$ 1,078,047
	Sub-total for Contingencies				***$ 2,484,196***
4.0	**PUBLIC ART**				
4.01	Allowance for Public Art (1% of Construction Costs)	Item			$ 118,585
	Sub-total for Public Art				***$ 118,585***
5.0	**PROFESSIONAL FEES**				
5.10	Allowance for professional fees	Item		12%	$ 1,423,023
5.02	Allowance for project manager - City of Karratha - Internal Recovery Costs - Provided inhouse	Item		0%	$ -
	Sub-total for Professional Fees				***$ 1,423,023***
	TOTAL ESTIMATED COMMITMENT - Perth				**$ 13,400,130**
6.0	**DISTRICT LOADING - KARRATHA (175)**				
6.0	District Loading Allowance - Excludes Professional Fees	Item		*75%*	*$ -*
			Sub-total District Loading		*$ 8,982,831*
	TOTAL CURRENT ESTIMATED COMMITMENT - Karratha				**$ 22,382,961**

Site 2 - Karratha Splash					
Item		**Unit**	**Quantity**	**Rate**	**Cost**
7.0	**ESCALATION**				
7.01	AIQS (WA Chapter) CCIF is currently forecasting building cost increases for the following years: > 2026 - 5.3% > 2027 - 5.4% > 2028 - 5.0% > 2029 - 4.5% > 2030 - 4.5%				
7.02	Allowance for cost escalation is based on the works being carried out as a single project.	Note			
7.03	Allowance for escalation has been included until December 2029 (Assumes construction June 28 to December 2029)	Item			$ 3,162,959
	Sub-total for Escalation				***$ 3,162,959***
	TOTAL ESTIMATED COMMITMENT				**$ 25,545,920**
	Goods & Services Tax	Item		10%	$ 2,554,592
	TOTAL ESTIMATED COMMITMENT (Including GST)				**$ 28,100,512**

Site 3 - Richardson Way/Country Club							
Item		**Unit**	**Quantity**	**Rate**		**Cost**	
	Site Area	m2	3570	Excluding carpark			
1.0	**Site Works**						
1.1	**Site Preparation** **It has been assumed that the site will require approx 500mm fill to form the platform for splashpools, associated building works and carpark.**	**Note**					
1.1.01	Site clearance of grass, etc area of new splashpools and carpark	m2	5610	$	10.00	$	56,100
1.1.02	Mass filling compacted to form platform for splashpools, associated building works	Item				$	96,000
1.1.03	Mass filling compacted to form platform for carpark	Item				$	69,000
1.2	**Fencing and Gates**						
1.2.01	1800 high metal fencing to perimeter of site	m	170	$	550.00	$	93,500
1.2.02	Single gate to match pool fencing	No	2	$	2,000.00	$	4,000
1.3	**Landscaping and Paving**						
1.3.01	Allowance for lawns and reticulation	m2	400	$	59.00	$	23,600
1.3.02	Allowance for pathways	m2	1710	$	125.00	$	213,750
1.3.03	Allowance for soft landscaping	m2	420	$	75.00	$	31,500
1.3.04	Allowance for site furniture (Bike racks, waste bins, etc	Item				$	25,000
1.3.05	Cabana seating/table	No	7	$	5,000.00	$	35,000
1.3.06	Seat	No	5	$	3,500.00	$	17,500
1.3.07	Allowance for area lighting	Item				$	50,000
1.3.08	Allowance for interpretive signage	Item				$	50,000
1.4	**Shade Structures**						
1.4.1	Structural steel framing with perforated metal screening panels designed to provide solar protection including all footings	m2	815	$	1,566.00	$	1,276,290
1.5	**Splashpads**						
1.5.01	Splashpad - Junior	m2	100	$	375.00	$	37,500
1.5.02	Splashpad - Family	m2	450	$	375.00	$	168,750
1.5.03	Area lighting to splashpads	Item				$	80,000
1.6	**Water Features**						
1.6.01	VOR 0509 Palm tree	No	7	$	25,000.00	$	175,000
1.6.02	VOR 0510 Coreo Play Volcano	No	2	$	25,000.00	$	50,000
1.6.03	VOR 7216 - Turtle No 2	No	4	$	25,000.00	$	100,000
1.6.04	VOR 7249 Cascade River	No	1	$	20,000.00	$	20,000
1.6.05	VOR 7249 Cascade Loop	No	1	$	10,000.00	$	10,000
1.6.06	VOR 87699 Astra No 3	No	1	$	20,000.00	$	20,000
1.6.07	CO 15 Zen Shower	No	1	$	20,000.00	$	20,000
1.6.08	CO 19 Snoot Shooter, 20' throw	No	2	$	25,000.00	$	50,000
1.6.09	MS14-2A Massive splash single bucket	No	1	$	15,000.00	$	15,000
1.6.10	MLPS-L2 Multi-level plat structure	No	1	$	20,000.00	$	20,000
1.6.11	W003 Curvy Cool	No	1	$	20,000.00	$	20,000
1.6.12	W071 Water Flower 1' high, 2' spread	No	2	$	15,000.00	$	30,000
1.6.13	WO85 Splash-O-lator 4' high	No	3	$	15,000.00	$	45,000
1.6.14	WO91 Bubbler 1' high	No	3	$	10,000.00	$	30,000
1.6.15	W132 Shimmer sheet	No	1	$	20,000.00	$	20,000
1.6.16	W138 Crystal dome	No	1	$	15,000.00	$	15,000
1.6.17	W139 Water Maypole	No	1	$	15,000.00	$	15,000
1.6.18	W155 Triple drop	No	1	$	15,000.00	$	15,000
1.6.19	W158 Push-me-pull-you 6' high	No	1	$	10,000.00	$	10,000
1.6.20	W238 Water rings, Qty 4 rings1	No	1	$	10,000.00	$	10,000
1.6.21	W326-2 Mission Mill shower	No	1	$	10,000.00	$	10,000
1.6.22	W373 Super Loop	No	1	$	25,000.00	$	25,000

Site 3 - Richardson Way/Country Club					
Item		**Unit**	**Quantity**	**Rate**	**Cost**
1.7	**Shared Slide Tower & Flume-Style Waterslides**				
1.7.01	Shared Slide Tower - Plan area 80m2	No	1	$ 500,000.00	$ 500,000
1.7.02	Flume style water slide - 4 x 40m long slides	No	1	$ 1,200,000.00	$ 1,200,000
1.7.03	Run-out area	Item			$ 500,000
1.7.04	Area lighting to Run-out area	Item			$ 50,000
1.8	**Water Treatment Plantroom**				
1.8.01	Allowance for pump room	m2	180	$ 2,500.00	$ 450,000
1.8.02	Allowance to filtration system to Junior Splashpad	Item			$ 300,000
1.8.03	Allowance to filtration system to Family Splashpad	Item			$ 300,000
1.8.04	Allowance to filtration system to Slide Runout area	Item			$ 300,000
1.8.05	Allowance for all balance tanks, backwash tanks	Item			$ 200,000
1.9	**Operations and Storage Facility**				
1.9.01	Allowance for Operations and Storage Facility	m2	50	$ 2,500.00	$ 125,000
1.9.02	Allowance for shelving etc	Item			$ 20,000
1.10	**Public Amenities**				
1.10.01	Male toilets	m2	30	$ 4,000.00	$ 120,000
1.10.02	Female toilets	m2	30	$ 4,000.00	$ 120,000
1.11	**Administration & Kiosk**				
1.11.01	Administration	m2	100	$ 3,000.00	$ 300,000
1.11.02	Kiosk	m2	20	$ 3,500.00	$ 70,000
1.11.03	Kiosk fit-out	Item			$ 50,000
1.11.04	Kiosk - Coolroom	Item			$ 30,000
1.12	**Dedicated Visitor Parking**				
1.12.01	Vehicle parking bays	No	76	$ 2,850.00	$ 216,600
1.12.02	Accessible Parking Bays	No	4	$ 2,700.00	$ 10,800
1.12.03	Bicycle Parking Bays	No	3	$ 1,200.00	$ 3,600
1.12.04	Service Access Road	m	10	$ 1,500.00	$ 15,000
1.13	**Services Infrastructure - Internal** The following amounts have been included for potential services to the splashpads and buildings and are subject to further investigation prior to final documentation	Note			
	This section of works does not include for any upgrade of major infrastructure services serving the site	Note			
1.13.01	Allowance for water services	Item		$ -	$ 25,000
1.13.02	Allowance for sewer services	Item		$ -	$ 50,000
1.13.03	Allowance for stormwater services	Item		$ -	$ 75,000
1.13.04	Allowance for electrical services	Item		$ -	$ 50,000
1.13.05	Allowance for communications services	Item		$ -	$ 10,000
1.14	**Services Infrastructure - External**				
	This section of works includes for a potential upgrade of major infrastructure services serving the site	Note			
1.14.01	Allowance for water services	Item		$ -	$ 30,000
1.14.02	Allowance for sewer services	Item		$ -	$ 100,000
1.14.03	Allowance for stormwater services	Item		$ -	$ 50,000
1.14.04	Allowance for electrical services	Item		$ -	$ 50,000
1.14.05	Allowance for communications services	Item		$ -	$ 5,000
	Sub-total for Building Works				***$ 8,378,490***

Site 3 - Richardson Way/Country Club						
Item		**Unit**	**Quantity**	**Rate**		**Cost**
2.0	**Builder's Preliminaries**					
2.01	Allowance for Builder's Preliminaries including supervision, temporary facilities, insurances , small plant and equipment, , etc	Item			$	1,675,698
2.01	Building Permit	Item			$	9,049
2.01	Building Services Levy	Item			$	13,573
2.01	BCITF	Item			$	20,108
2.01	Allowance for Sundry Fees	Item			$	10,000
	Sub-total for Builders Preliminaries				***$***	***1,728,428***
	Total for Construction Works				***$***	***10,106,918***
3.0	**CONTINGENCIES**					
3.01	Allowance for design contingencies (Final design, final selection of materials, final selection of water features etc)	Item	15.0%		$	1,516,038
3.02	Allowance for contract contingencies	Item	10.0%		$	1,162,296
	Sub-total for Contingencies				***$***	***2,678,333***
4.0	**PUBLIC ART**					
4.01	Allowance for Public Art (1% of Construction Costs)	Item			$	127,853
	Sub-total for Public Art				***$***	***127,853***
5.0	**PROFESSIONAL FEES**					
5.10	Allowance for professional fees	Item		12%	$	1,534,230
5.02	Allowance for project manager - City of Karratha - Internal Recovery Costs- Provided inhouse	Item		0%	$	-
	Sub-total for Professional Fees				***$***	***1,534,230***
	TOTAL ESTIMATED COMMITMENT - Perth				**$**	**14,447,334**
6.0	**DISTRICT LOADING - KARRATHA (175)**					
6.0	District Loading Allowance - Excludes Professional Fees	Item		*75%*	*$*	-
				Sub-total District Loading	*$*	*9,684,828*
	TOTAL CURRENT ESTIMATED COMMITMENT - Karratha				**$**	**24,132,162**

Site 3 - Richardson Way/Country Club					
Item		**Unit**	**Quantity**	**Rate**	**Cost**
7.0	**ESCALATION**				
7.01	AIQS (WA Chapter) CCIF is currently forecasting building cost increases for the following years: > 2026 - 5.3% > 2027 - 5.4% > 2028 - 5.0% > 2029 - 4.5% > 2030 - 4.5%				
7.02	Allowance for cost escalation is based on the works being carried out as a single project.	Note			
7.03	Allowance for escalation has been included until December 2029 (Assumes construction June 28 to December 2029)	Item			$ 3,410,141
	Sub-total for Escalation				***$ 3,410,141***
	TOTAL ESTIMATED COMMITMENT				**$ 27,542,303**
	Goods & Services Tax	Item		10%	$ 2,754,230
	TOTAL ESTIMATED COMMITMENT (Including GST)				**$ 30,296,534**

Site 4- Bulgarra Oval					
Item		**Unit**	**Quantity**	**Rate**	**Cost**
	Site Area	m2	2440		
1.0	**Site Works**				
1.1	**Site Preparation** **It has been assumed that the site will only require minor cut/fill to form the platform form for splashpools and associated building works**	Note			
1.1.01	Site clearance of grass, etc area of new splashpools	m2	2440	$ 25.00	$ 61,000
1.1.02	Allowance for preliminary siteworks to reduce levels for construction of splash pools etc	Item			$ 100,000
1.2	**Fencing and Gates**				
1.2.01	1800 high metal fencing to perimeter of splash pads	m	75	$ 550.00	$ 41,250
1.2.02	Gate to match pool fencing	No	2	$ 2,000.00	$ 4,000
1.3	**Landscaping and Paving**				
1.3.01	Allowance for lawns and reticulation	m2	250	$ 59.00	$ 14,750
1.3.02	Allowance for pathways	m2	250	$ 125.00	$ 31,250
1.3.03	Allowance for soft landscaping	m2	750	$ 75.00	$ 56,250
1.3.04	Allowance for site furniture (Bike racks, waste bins, etc)	Item			$ 25,000
	Cabana seating/table	No	5	$ 4,500.00	$ 22,500
1.3.05	Allowance for area lighting	Item			$ 50,000
1.3.06	Allowance for interpretive signage	Item			$ 50,000
1.4	**Shade Structures**				
1.4.1	Structural steel framing with perforated metal screening panels designed to provide solar protection including all footings	m2	450	$ 1,566.00	$ 704,700
1.5	**Splashpads**				
1.5.01	Splashpad	m2	600	$ 375.00	$ 225,000
1.5.03	Area lighting to splashpad	Item			$ 80,000
1.6	**Water Features**				
1.6.01	VOR 0130 Supersplash No 2	No	1	$ 25,000.00	$ 25,000
1.6.02	VOR 0519 Spray Loop	No	5	$ 10,000.00	$ 50,000
1.6.03	VOR 0522 Water tunnel/Classic tunnel feature	No	1	$ 25,000.00	$ 25,000
1.6.04	VOR 3053 Spraylink box	No	4	$ 5,000.00	$ 20,000
1.6.05	VOR 7063 Coreo Play Volcano	No	1	$ 20,000.00	$ 20,000
1.6.06	VOR 7213.0001 Snake No 1- Project configuration variant	No	4	$ 25,000.00	$ 100,000
1.6.07	VOR 7218 Fish No 1	No	1	$ 15,000.00	$ 15,000
1.6.08	VOR 7249 Cascade River	No	1	$ 20,000.00	$ 20,000
1.6.09	VOR 7249 Cascade Loop	No	1	$ 10,000.00	$ 10,000
1.6.10	VOR 7553 Loop No 2	No	3	$ 15,000.00	$ 45,000
1.6.11	VOR 7694 Rio Grande No 2	No	1	$ 20,000.00	$ 20,000
1.6.12	VOR 7699 Astra No 3	No	1	$ 10,000.00	$ 10,000
1.6.13	VOR 7746 - TBC	No	1	$ 10,000.00	$ 10,000
1.6.14	VOR 8084 Foaming Geyser No 3	No	18	$ 2,000.00	$ 36,000
1.7	**Shared Slide Tower & Flume-Style Waterslides**				
1.7.01	No requirement for a Shared Slide Tower & Flume-Style Waterslides to this Site				

Site 4- Bulgarra Oval					
Item		**Unit**	**Quantity**	**Rate**	**Cost**
1.8	**Water Treatment Plantroom**				
1.8.01	Allowance for pump room	m2	85	$ 2,500.00	$ 212,500
1.8.02	Allowance to filtration system to Splashpad	Item			$ 500,000
1.8.05	Allowance for all balance tanks, backwash tanks	Item			$ 150,000
1.8.06	Service yard - Pad including entry	m2	150	$ 155.00	$ 23,250
1.8.07	Service yard -Fencing	m	44	$ 525.00	$ 23,100
1.8.08	Service yard - Gates	No	1	$ 2,500.00	$ 2,500
1.9	**Operations and Storage Facility**				
1.9.01	Allowance for Operations and Storage Facility	m2	20	$ 2,500.00	$ 50,000
1.9.02	Allowance for shelving etc	Item			$ 20,000
1.10	**Public Amenities**				
1.10.01	Male toilets	m2	14	$ 4,000.00	$ 56,000
1.10.02	Female toilets	m2	14	$ 4,000.00	$ 56,000
1.10.03	Cleaners Store	m2	7	$ 2,500.00	$ 17,500
1.11	**Administration & Kiosk**				
1.11.01	No requirement for Administration & Kiosk at this site				
1.12	**Dedicated Visitor Parking**				
1.12.01	No requirement for additional Dedicated Visitor Parkng as this is located next to the existing sporting pavilion				
1.13	**Services Infrastructure - Internal**				
	The following amounts have been included for potential services to the splashpads and buildings and are subject to further investigation prior to final documentation	Note			
1.13.01	Allowance for water services	Item		$ -	$ 25,000
1.13.02	Allowance for sewer services	Item		$ -	$ 100,000
1.13.03	Allowance for stormwater services	Item		$ -	$ 50,000
1.13.04	Allowance for electrical services	Item		$ -	$ 50,000
1.13.05	Allowance for communications services	Item		$ -	$ 5,000
1.14	**Services Infrastructure - External**				
	This section of works includes for a potential upgrade of major infrastructure services serving the site	Note			
	It has been assumed that the existing complex is already served by sufficient service with the exception of electrical supply.	Note			
1.14.01	Allowance for water services	Item			$ -
1.14.02	Allowance for sewer services	Item			$ -
1.14.03	Allowance for stormwater services	Item			$ -
1.14.04	Allowance for electrical services	Item			$ 50,000
1.14.05	Allowance for communications services	Item			$ -
	Sub-total for Building Works				***$ 3,262,550***

Site 4- Bulgarra Oval					
Item		**Unit**	**Quantity**	**Rate**	**Cost**
2.0	**Builder's Preliminaries**				
2.01	Allowance for Builder's Preliminaries including supervision, temporary facilities, insurances , small plant and equipment, , etc	Item		$	652,510
2.01	Building Permit	Item		$	3,524
2.01	Building Services Levy	Item		$	5,285
2.01	BCITF	Item		$	7,830
2.01	Allowance for Sundry Fees	Item		$	10,000
	Sub-total for Builders Preliminaries			***$***	***679,149***
	Total for Construction Works			***$***	***3,941,699***
3.0	**CONTINGENCIES**				
3.01	Allowance for design contingencies (Final design, final selection of materials, final selection of water features etc)	Item	15.0%	$	591,255
3.02	Allowance for contract contingencies	Item	10.0%	$	453,295
	Sub-total for Contingencies			***$***	***1,044,550***
4.0	**PUBLIC ART**				
4.01	Allowance for Public Art (1% of Construction Costs)	Item		$	49,862
	Sub-total for Public Art			***$***	***49,862***
5.0	**PROFESSIONAL FEES**				
5.10	Allowance for professional fees	Item		12% $	598,350
5.02	Allowance for project manager - City of Karratha - Internal Recovery Costs - Provided inhouse	Item		0% $	-
	Sub-total for Professional Fees			***$***	***598,350***
	TOTAL ESTIMATED COMMITMENT - Perth			**$**	**5,634,462**
6.0	**DISTRICT LOADING - KARRATHA (175)**				
6.0	District Loading Allowance - Excludes Professional Fees	Item		*75%* *$*	*3,777,084*
			Sub-total District Loading	*$*	*3,777,084*
	TOTAL CURRENT ESTIMATED COMMITMENT - Karratha			**$**	**9,411,545**

Site 4- Bulgarra Oval					
Item		**Unit**	**Quantity**	**Rate**	**Cost**
7.0	**ESCALATION**				
7.01	AIQS (WA Chapter) CCIF is currently forecasting building cost increases for the following years: > 2026 - 5.3% > 2027 - 5.4% > 2028 - 5.0% > 2029 - 4.5% > 2030 - 4.5%				
7.02	Allowance for cost escalation is based on the works being carried out as a single project.	Note			
7.03	Allowance for escalation has been included until December 2029 (Assumes construction June 28 to December 2029)	Item			$ 1,329,955
	Sub-total for Escalation				***$ 1,329,955***
	TOTAL ESTIMATED COMMITMENT				**$ 10,741,501**
	Goods & Services Tax	Item		10%	$ 1,074,150
	TOTAL ESTIMATED COMMITMENT (Including GST)				**$ 11,815,651**

Outlook

Karratha Water Park - 75% Locality Allowance

From Neil Butler <nbqss@optusnet.com.au>
Date Thu 2026-07-02 10:36 AM
To Neil Tredwell <neil@tredwell.com.au>; Aidan Power <aidan@tredwell.co.nz>; 'Scott Oswald' <scott.oswald@donovanpayne.com.au>

Hi Neil T,

The base rate indicated in Rawlinson's is 155.0.

This was an indicative figure at the beginning of the year.

Since the outbreak of the conflict in the Middle East there have been increases in the cost of all materials and fuel that exceed the general allowance for inflation.

Most suppliers are also advising of further cost increases during the coming year in advance.

Also the cost of importing materials have dramatically increased due to fuel etc.

Most suppliers have also put a fuel levy on all deliveries.

The locality allowance also depends on the volume of work and the nature of work.

As these estimates are very high level and given that a fair proportion of the works will be imported and most of the materials will be transported from Peth I took the view that these factors could potentially increase the Locality Factor to around 175.0.

Once the factors mentioned above settle down then it maybe the time to reassess the Locality Allowance.

It would be simple enough to run the allowance at 155.0 and see the effect it has on the figures.

It must be remembered that the locality allowance is a guide only and that the uptake will depend on when the work is tendered and the volume of work being carried out at the time.

In my terms it is a risk Item.

Regards

Neil
Neil Butler Dip QS (WAIT) AAIQS
Neil Butler Quantity Surveying Services
Mobile: 0457 977 407

Caution: This email was sent from outside the company, please take care when clicking links or opening attachments unless you are certain that this email is safe.

Appendix C - Detailed 10-Year Operational and Lifecycle Models

Detailed cost modelling, assumptions and supporting calculations are provided in the accompanying Excel spreadsheets.

Appendix D - Additional Site Analysis Considerations

Appendix
Additional Site Analysis Considerations - Dampier Foreshore

Dampier Foreshore - Coastal Seawater Inundation Map



Native Title - Dampier Foreshore



7/8/2026, 2:45:56 PM

Determinations

In effect - Finalised

1:3,399

0 0.03 0.06 0.11 mi

0 0.04 0.09 0.17 km

Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, National Native Title Tribunal, © Commonwealth of Australia, NNTT, © Commonwealth of Australia, Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community

National Native Title Tribunal

© Commonwealth of Australia



LEGEND

LOCAL SCHEME RESERVES

- Conservation, recreation and nature landscape
- District roads
- Infrastructure
- Local roads
- Parks, recreation and drainage
- Public purposes - Airport (A)
- Public purposes - Cemetery (C)
- Public purposes - Community (CM)
- Public purposes - Education (ED)
- Public purposes - Energy (E)
- Public purposes - Health (H)
- Public purposes - Telecommunications (T)
- Public purposes - Waste disposal and treatment (WDT)
- Public purposes - Water and drainage (WD)
- State and regional roads

LOCAL SCHEME ZONES

- City centre
- Commercial
- Industrial development
- Industry
- Mixed business
- Residential
- Rural
- Rural residential
- Special use
- Strategic industry
- Tourism
- Town centre
- Urban development

OTHER CATEGORIES

(see scheme text for additional information)

- Scheme Boundary
- Local Government Boundary
- Additional uses (AI)
- Restricted uses (RI)
- Special use area (SU1)
- R Codes (R20)
- Airport noise restriction SCA
- Airport obstacle height limitation area SCA
- City centre precinct - retail (P1)
- City centre precinct - commercial (P2)
- City centre precinct - entertainment (P3)
- City centre precinct - accommodation (P4)
- Cossack and Jarman Island low-impact tourism precinct SCA
- Cossack historic town SCA
- Dampier Salt SCA
- Industry buffer SCA
- Roebourne flood management SCA
- Structure plan areas (DA1)
- Withnell Bay SCA

- No zone
- Oceans/Waterways

Department of Planning, Lands and Heritage
GOVERNMENT OF WESTERN AUSTRALIA

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Produced by Data Analytics,
Department of Planning, Lands and Heritage.

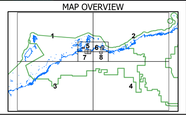
City of Karratha

Local Planning Scheme No. 8
(District Scheme)

N

0 200 400 600 800
Meters

MAP OVERVIEW



Authorised: T.Servaas

Plot Date: 13 April 2026

G.Gazette: Tuesday, 22 August 2000

Local Planning Scheme Map No. 9 of 16
MAP: Dampier Townsite

City of Karratha

Local Planning Scheme No. 8
(District Scheme)

Rio Tinto

Rio Tinto Iron Ore

TO REPORT **EQUIPMENT FAILURE**
TELEPHONE (08) **9143 5333**
LIFE-THREATENING EMERGENCIES : 000

NETWORKS SERVICES
DAMPIER TOWN & ESPLANADE

51

SEE MAP 41

469100mE 469200mE 469300mE

7715100mN 7715000mN 7714900mN 7714800mN

50MM HD PVC POTABLE WATER LINE

100mm DIA. HD PVC EFFLUENT LINE FROM SEWERAGE TREATMENT PLANT TO HAMPTON OVAL RETICULATION SYSTEM

HOTEL STAFF QUARTERS

PLANT NURSERY

HOTEL

MOTEL

DIST.BD

Cu SUPPLY

COPPER SUPPLY TO HOTEL STAFF QUARTERS

(386)

(362) (361) (383) (382) (1) (2) (3) (4)

FV41 FV40 5B 150NB U/G FH

50PVC WATER SUPPLY

THE ABOURING

CIRCUIT No.5

PIT

5A

CIRCUIT No.5 FED FROM SEWERAGE TREATMENT PLANT DIST PILLAR

THE ESPLANADE

NURSERY ISOLATION

VALVE

DURAT PARK LIGHTING CIRCUIT

50NB

50MM HD PVC POTABLE WATER LINE

415V SUPPLY

VALVE PIT

RETIC SUPPLY

415V SUPPLY

100mm DIA. HD PVC EFFLUENT LINE FROM SEWERAGE TREATMENT PLANT TO HAMPTON OVAL RETICULATION SYSTEM

DURAT PARK 415V LIGHTING CIRCUIT

TOILET BLOCK SUPPLY

DB

TOILET BLOCK

SEPTIC TANK & LEACH DRAIN SYSTEM

415V U/G CABLE ALONG FENCE LINE

LIMIT OF MAPS

SEAMANS MISSION COMPLEX

(381)

FV37

HAIG CLOSE

FV38 FV185

80NB

WM

FH

50NB

(379)

SQUASH COURTS

20mm SUPPLY FROM METER

RETIC SUPPLY

WM VALVE

Cu SUPPLY

23

4F

CIRCUIT No.4

100mm DIA. AC EFFLUENT LINE FROM SEWERAGE TREATMENT PLANT TO HAMPTON OVAL RETICULATION SYSTEM

SEE MAP 52

TENNIS COURTS

FOR LIGHTING LAYOUT REFER DRG 246-653-903

(378)

TENNIS COURTS

COPPER SUPPLY TO SQUASH COURTS

RETIC SUPPLY

4E

CHURCH

4D

(REDUNDANT)

ROAD

CROSSING

(166)

PARKING AREA

SPORTS PAVILION SUBSTATION

(359)

(358)

Cu SUPPLY

FV33 FV34 FV32

80NB

METER

DB

BLUE BRUTE WATER LINE

BOWLING GREEN

SPORTS PAVILION

469100mE EV35 IN PIT

415V U/G SUPPLY

469200mE

SEE MAP 61

469300mE

Map 51 rev B 12/5/09

Rio Tinto
NETWORKS SERVICES
MAP DIRECTORY: DAMPIER

Grid: MGA Zone 50 Coordinates metres
Datum GDA94 Scale 1:1000

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Map may contains data copyright the state of Western Australia - see legend page for details.

0 10 20 30 40 50
Meters

Map prepared by Geoproject Solutions 2008 P/155

N

Rio Tinto
Rio Tinto Iron Ore

TO REPORT **EQUIPMENT FAILURE**
TELEPHONE (08) **9143 5333**
LIFE-THREATENING EMERGENCIES : 000

NETWORKS SERVICES
DAMPIER TOWN & ESPLANADE

61

CHANGEROOMS (SHIRE)
469100mE
50MM HD PVC POTABLE WATER LINE
100mm DIA. HD PVC EFFLUENT LINE FROM SEWERAGE TREATMENT PLANT TO HAMPTON OVAL RETICULATION SYSTEM
469200mE
SEE MAP 51
469300mE
HAMPTON PARK DB
WM
FH RPZD
RETIC PIT
BBQ AREA LIGHTING
SEPTIC TANK & LEACH DRAIN SYSTEM
DB
SPORTS PAVILION
(359)
(358)
BOWLING GREEN
PARKING AREA
REDUNDANT 415V CABLE
APPROXIMATE LOCATION OF 415V SUPPLY TO
20°40'0"S
7714700mN
HAMPTON PARK OVAL
25NB SUPPLY TO HORSE STABLE AREA
REDUNDANT 415V CABLE
(166)
HAMPTON PARK
PARKING AREA
7714600mN
LIMIT OF MAPS
PONY CLUB AREA
B
APPROX. LOCATION OF 415V SUPPLY TO COMMUNICATIONS ANTENNA. FED FROM SPORTS PAVILION SUBSTATION
25NB SUPPLY TO HORSE STABLE AREA FED FROM HAMPTON OVAL VALVE PIT
SEE MAP 62
7714500mN
APPROX. LOCATION OF WATER PIPE
STABLES
469100mE
LIMIT OF MAPS
469200mE
469300mE
Map 61 rev B 7/07/09

RioTinto
NETWORKS SERVICES
MAP DIRECTORY: DAMPIER
Grid: MGA Zone 50 Coordinates metres
Datum GDA94 Scale 1:1000
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0 10 20 30 40 50
Meters
Map prepared by Geoproject Solutions 2008 P/155

SYMBOLS
For complete list see Legend page

Pipelines
Gas pipeline

Background
Road, sealed
Driveway
160B House number
(160) Lot number

Water
100 NB U/G Water main underground

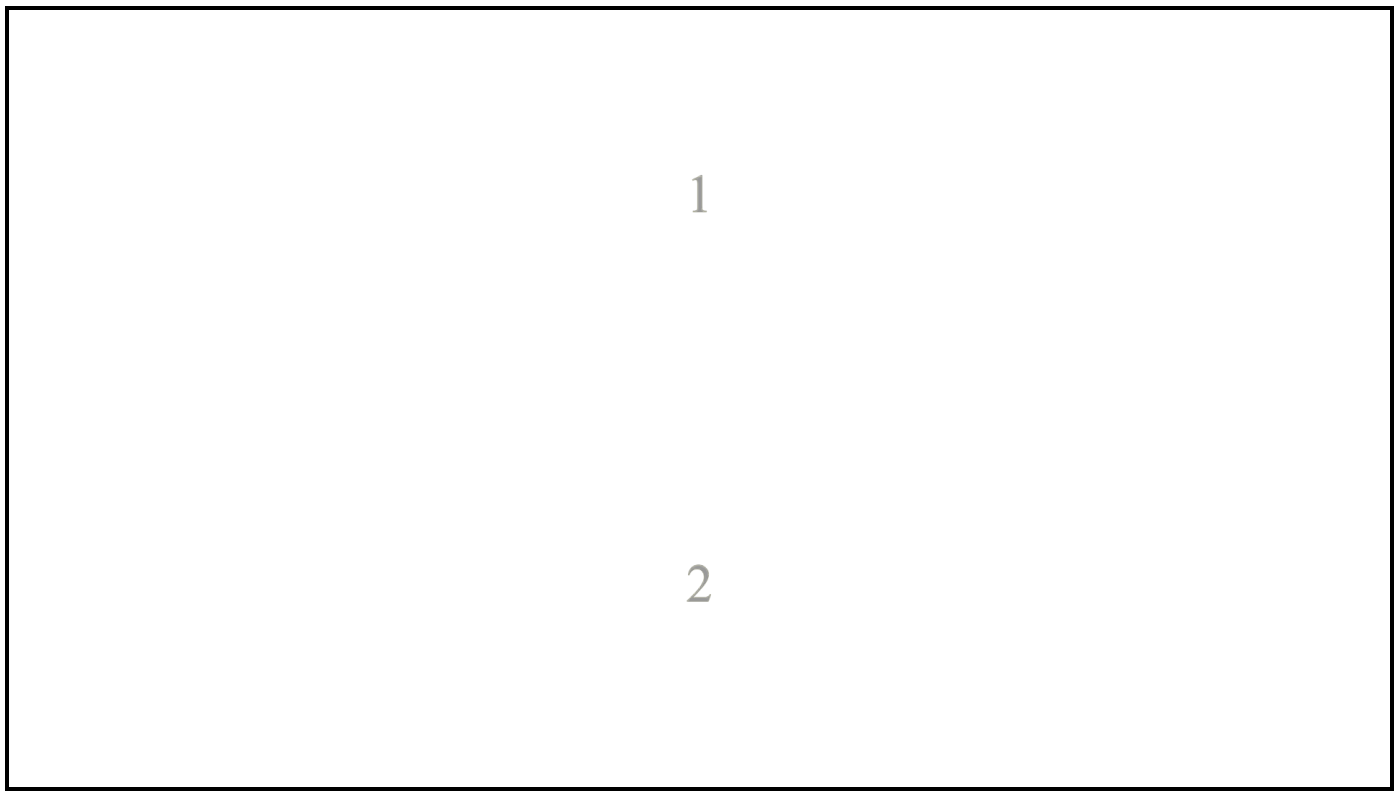
Sewerage
SEWER MAIN Sewer main with flow direction
MH28 Sewer manhole
IS Inspection shaft

Electric
18B Street light pole
CIRCUIT No.8 Street lighting cable
415V U/G SUPPLY Underground mains
PILLAR Domestic cable & pillar

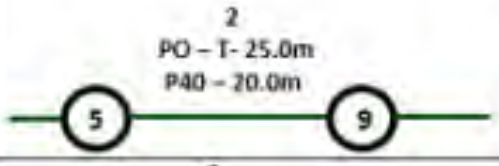
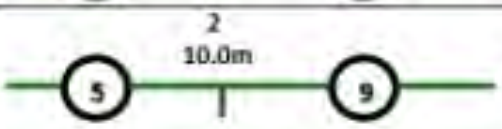
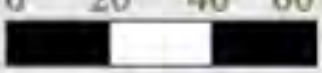
To:	Aidan Power
Phone:	Not Supplied
Fax:	Not Supplied
Email:	Aidan@tredwell.co.nz

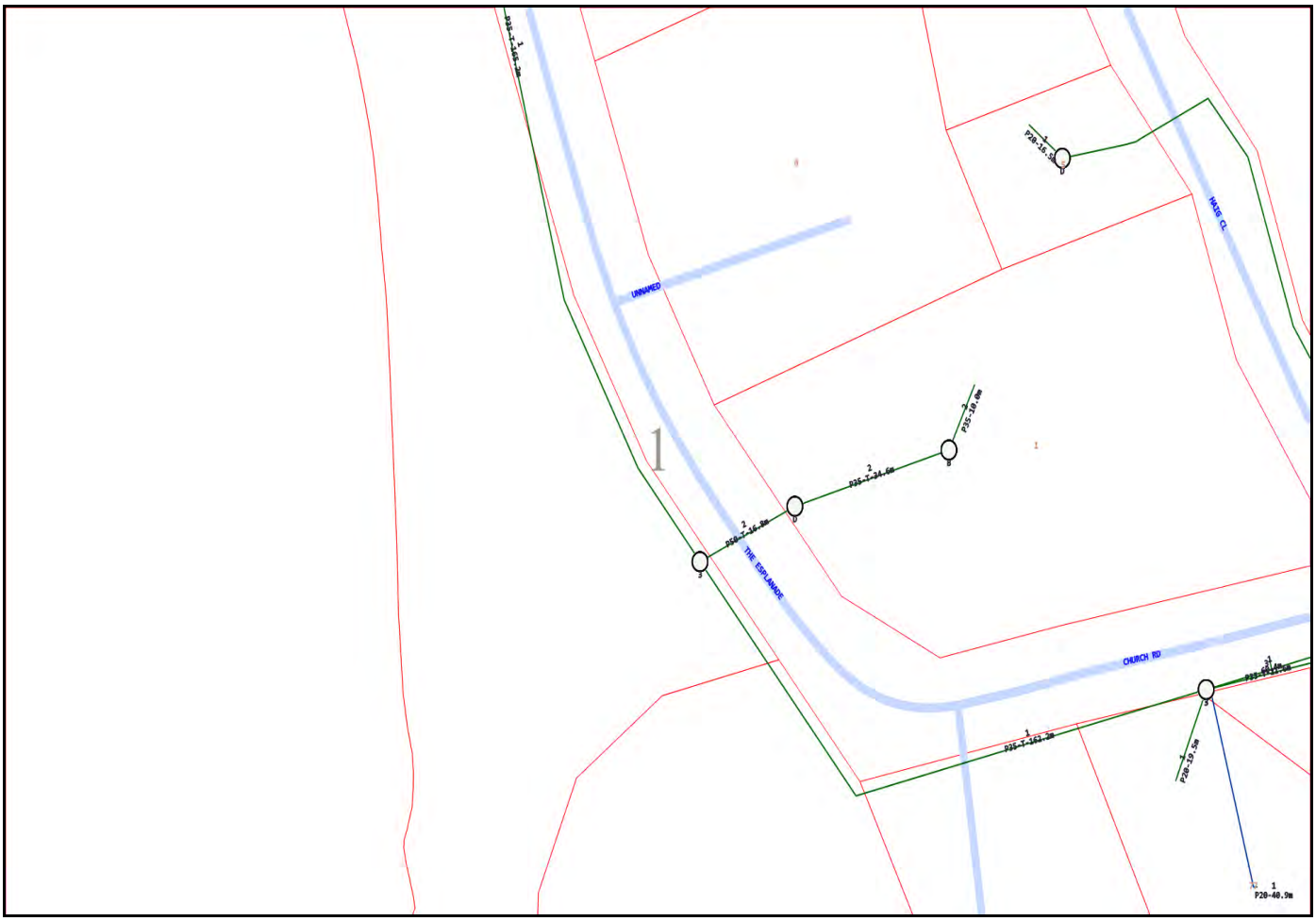
Dial before you dig Job #:	53399523
Sequence #	274375964
Issue Date:	11/06/2026
Location:	1 The Esplanade , Dampier , WA , 6713

Indicative Plans are tiled below to demonstrate how to layout and read nbn asset plans



LEGEND

	Parcel and the location
	Pit with size "5"
	Power Pit with size "2E". Valid PIT Size: e.g. 2E, 5E, 6E, 8E, 9E, E, null.
	Manhole
	Pillar
	Cable count of trench is 2. One "Other size" PVC conduit (PO) owned by Telstra (-T-), between pits of sizes, "5" and "9" are 25.0m apart. One 40mm PVC conduit (P40) owned by NBN, between pits of sizes, "5" and "9" are 20.0m apart.
	2 Direct buried cables between pits of sizes ,"5" and "9" are 10.0m apart.
	Trench containing any INSERVICE/CONSTRUCTED (Copper/RF/Fibre) cables.
	Trench containing only DESIGNED/PLANNED (Copper/RF/Fibre/Power) cables.
	Trench containing any INSERVICE/CONSTRUCTED (Power) cables.
	Road and the street name "Broadway ST"
Scale	 1:2000 1 cm equals 20 m


UNNAMED
THE ESPLANADE
CHURCH RD
MAIN CL
1
P35-T-24.4m
P35-T-163.2m
P20-40.9m



Emergency Contacts

You must immediately report any damage to the **nbn™** network that you are/become aware of. Notification may be by telephone - 1800 626 329.

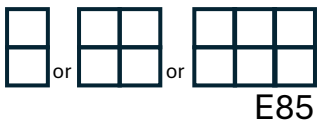
LEGEND

	Leadin terminates at a Customer Address	6 D	Cable Jointing Pit Number / Letter indicating Pit type/size
	Exchange Major Cable Present	EJ	Elevated Joint (above ground joint on buried cable)
	Pillar / Cabinet Above ground Free Standing		Telstra Plant in shared Utility trench
	Above ground Complex Equipment Please note: Powered by 240v electricity		Aerial cable / or cable on wall
OC	Other Carrier Telecommunication Cable/ Asset. Not Telstra Owned		Aerial cable (attached to joint use Pole e.g., Power Pole)
DIST	Distribution cables in Main Cable Ducts	M	Marker Post Installed
MC	Main Cable ducts on a Distribution Plan	T or TR	Buried Transponder
	Blocked or Damaged Duct	MT	Marker Post & Transponder
	Footway Access Chamber (can vary between 1-lid to 12-lid	SMOF	Optical Fibre Cable Direct Buried
	NBN Pillar		Direct Buried Cable
	Third Party Owned Network Non-Telstra		nbn owned network



Single to Multiple Round Conduit Configurations 1,2,4,9 respectively

(attached text denotes conduit type and size)



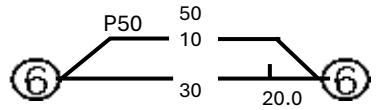
Multiple Square Conduit configurations 2,4,6 respectively

(attached text denotes conduit type and size)

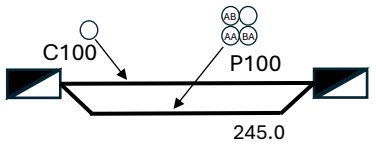
Some examples of conduit type and size:

A - Asbestos cement, P - PVC / Plastic, C - Concrete,
GI - Galvanised Iron, E - Earthenware
Conduit sizes nominally range from 20mm to 100mm
P50 50mm PVC conduit
P100 100mm PVC conduit
A100 100mm asbestos cement conduit

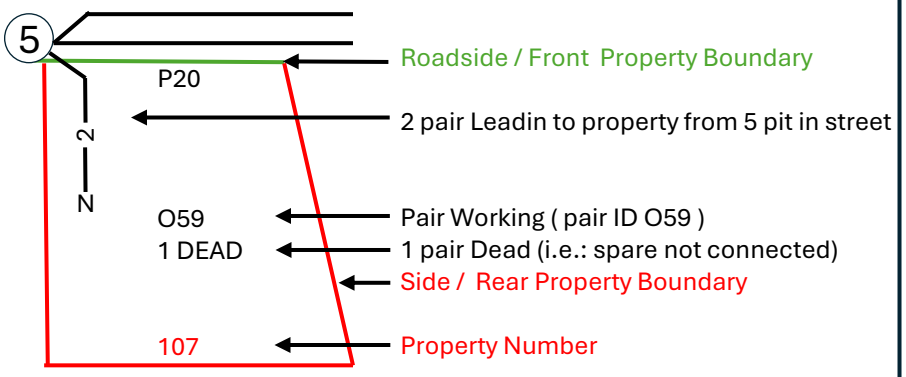
Some Examples of how to read Telstra Plans



One 50mm PVC conduit (P50) containing a 50-pair and a 10-pair cable between two 6 pits. approximately 20.0m apart, with a direct buried 30-pair cable along the same route.



Two separate conduit runs between two footway access chambers (manholes) approximately 245m apart A nest of four 100mm PVC conduits (P100) containing assorted cables in three ducts (one being empty) and one empty 100mm concrete duct (C100) along the same route.



The 5 Ps of Safe Excavation

https://www.byda.com.au/before-you-dig/best-practice-guides/

Plan

Plan your job. Use the BYDA service at least one day before your job is due to begin, and ensure you have the correct plans and information required to carry out a safe project.

Prepare

Prepare by communicating with asset owners if you need assistance. Look for clues onsite. Engage a Certified Locator.

Pothole

Potholing is physically sighting the asset by hand digging or hydro vacuum extraction.

Protect

Protecting and supporting the exposed infrastructure is the responsibility of the excavator. Always erect safety barriers in areas of risk and enforce exclusion zones.

Proceed

Only proceed with your excavation work after planning, preparing, potholing (unless prohibited), and having protective measures in place.

General Information

Telstra highly recommends using Certified Locators.

For more info contact a CERTLOC Certified Locating Organisation (CLO) or Telstra Location Intelligence Team 1800 653 935

Before you Dig Australia – BEST PRACTISE GUIDES
https://www.byda.com.au/before-you-dig/best-practice-guides/

OPENING ELECTRONIC MAP ATTACHMENTS –

Telstra Cable Plans are generated automatically in either PDF or DWF file types.
Dependent on the site address and the size of area selected.
You may need to download and install free viewing software from the internet e.g.

DWF Map Files (all sizes over A3)
Autodesk Viewer (Internet Browser) https://viewer.autodesk.com/ or
Autodesk Design Review http://usa.autodesk.com/design-review/ for DWF files.
(Windows PC)

PDF Map Files (max size A3)
Adobe Acrobat Reader http://get.adobe.com/reader/

Telstra New Connections / Disconnections
13 22 00

Telstra Protection & Relocation: 1800 810 443 (AEST business hours only).
Email
Telstra Protection & Relocation Fact Sheet: Link
Telstra Protection & Relocation Home Page Link

Telstra Aerial Assets Group (overhead network)
1800 047 909

Protect our Network:

by maintaining the following distances from our assets:

- **1.0m Mechanical Excavators, Farm Ploughing, Tree Removal**
- **500mmVibrating Plate or Wacker Packer Compactor**
- **600mm Heavy Vehicle Traffic (over 3 tonnes) not to be driven across Telstra ducts or plant.**
- **1.0mJackhammers/Pneumatic Breakers**
- **2.0m Boring Equipment (in-line, horizontal and vertical**

Cable Plan



Report Damage:https://service.telstra.com.au/customer/general/forms/report-damage-to-telstra-
Ph - 13 22 03
Email - Telstra.Plans@team.telstra.com
Planned Services - ph 1800 653 935 (AEST bus hrs only) General Enquiries

TELSTRA LIMITED A.C.N. 086 174 781

Generated On 11/06/2026 14:29:05

Sequence Number: 274375965

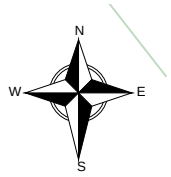
Please read Duty of Care prior to any excavating

The above plan must be viewed in conjunction with the Mains Cable Plan on the following page

WARNING
Telstra plans and location information conform to Quality Level "D" of the Australian Standard AS 5488-Classification of Subsurface Utility Information.
As such,Telstra supplied location information is indicative only.Spatial accuracy is not applicable to Quality Level D.
Refer to AS 5488 for further details. The exact position of Telstra assets can only be validated by physically exposing it.
Telstra does not warrant or hold out that its plans are accurate and accepts no responsibility for any inaccuracy.
Further on site investigation is required to validate the exact location of Telstra plant prior to commencing construction work.
A Certified Locating Organisation is an essential part of the process to validate the exact location of Telstra assets and to ensure the asset is protected during construction works.

See the Steps- Telstra Duty of Care that was provided in the email response.

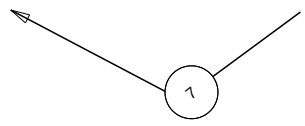
Mains Cable Plan



CHURCH

DIST(AA)

CA1:B601-700
1m
CAC 6



Report Damage:https://service.telstra.com.au/customer/general/forms/report-damage-to-telstra-
Ph - 13 22 03
Email - Telstra.Plans@team.telstra.com
Planned Services - ph 1800 653 935 (AEST bus hrs only) General Enquiries

TELSTRA LIMITED A.C.N. 086 174 781

Generated On 11/06/2026 14:29:06

Sequence Number: 274375965

Please read Duty of Care prior to any excavating

The above plan must be viewed in conjunction with the Mains Cable Plan on the following page

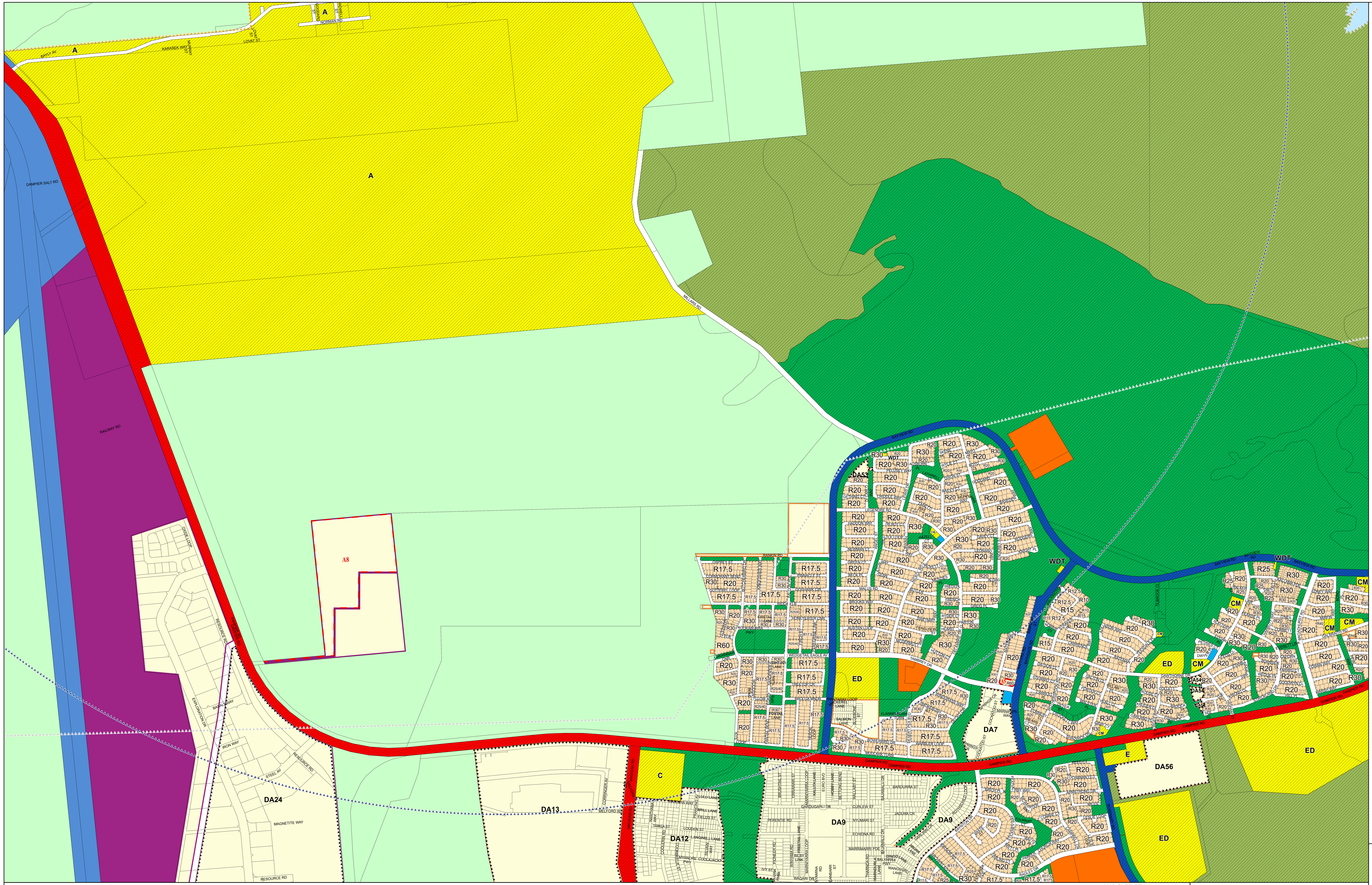
WARNING
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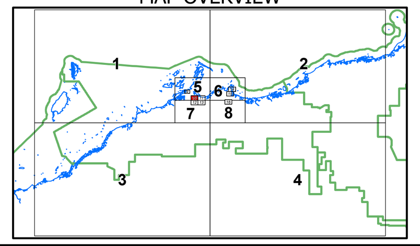
See the Steps- Telstra Duty of Care that was provided in the email response.

Appendix
Additional Site Analysis Considerations - Karratha Leisureplex

Karratha Leisureplex - Coastal Seawater Inundation Map







LEGEND

LOCAL SCHEME RESERVES

- Conservation, recreation and nature landscape
- District roads
- Infrastructure
- Local roads
- Parks, recreation and drainage
- A Public purposes - Airport
- C Public purposes - Cemetery
- CM Public purposes - Community
- ED Public purposes - Education
- E Public purposes - Energy
- H Public purposes - Health
- T Public purposes - Telecommunications
- WDT Public purposes - Waste disposal and treatment
- WD Public purposes - Water and drainage
- State and regional roads

LOCAL SCHEME ZONES

- City centre
- Commercial
- Industrial development
- Industry
- Mixed business
- Residential
- Rural
- Rural residential
- Special use
- Strategic industry
- Tourism
- Town centre
- Urban development

OTHER CATEGORIES

(see scheme text for additional information)

- Scheme Boundary
- Local Government Boundary
- A1 Additional uses
- R1 Restricted uses
- SU1 Special use area
- R20 R Codes
- Airport noise restriction SCA
- Airport obstacle height limitation area SCA
- P1 City centre precinct - retail
- P2 City centre precinct - commercial
- P3 City centre precinct - entertainment
- P4 City centre precinct - accommodation
- Cossack and Jarman Island low-impact tourism precinct SCA
- Cossack historic town SCA
- Dampier Salt SCA
- Industry buffer SCA
- Roebourne flood management SCA
- DA1 Structure plan areas
- Withnell Bay SCA
- No zone
- Oceans/Waterways

Department of **Planning, Lands and Heritage**

GOVERNMENT OF WESTERN AUSTRALIA

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Produced by Data Analytics,
Department of Planning, Lands and Heritage.

City of Karratha

Local Planning Scheme No. 8

(District Scheme)

N

0 200 400 600 800

Meters

Authorised: T.Servaas

Plot Date: 13 April 2026

G.Gazette: Tuesday, 22 August 2000

Local Planning Scheme Map No. 10 of 16
MAP: Karratha Townsite North West

City of Karratha

Local Planning Scheme No. 8

(District Scheme)



LEGEND

LOCAL SCHEME RESERVES

- Conservation, recreation and nature landscape
- District roads
- Infrastructure
- Local roads
- Parks, recreation and drainage
- Public purposes - Airport (A)
- Public purposes - Cemetery (C)
- Public purposes - Community (CM)
- Public purposes - Education (ED)
- Public purposes - Energy (E)
- Public purposes - Health (H)
- Public purposes - Telecommunications (T)
- Public purposes - Waste disposal and treatment (WDT)
- Public purposes - Water and drainage (WD)
- State and regional roads

LOCAL SCHEME ZONES

- City centre
- Commercial
- Industrial development
- Industry
- Mixed business
- Residential
- Rural
- Rural residential
- Special use
- Strategic industry
- Tourism
- Town centre
- Urban development

OTHER CATEGORIES

(see scheme text for additional information)

- Scheme Boundary
- Local Government Boundary
- Additional uses (AI)
- Restricted uses (RI)
- Special use area (SU1)
- R Codes (R20)
- Airport noise restriction SCA
- Airport obstacle height limitation area SCA
- City centre precinct - retail (P1)
- City centre precinct - commercial (P2)
- City centre precinct - entertainment (P3)
- City centre precinct - accommodation (P4)
- Cossack and Jarman Island low-impact tourism precinct SCA
- Cossack historic town SCA
- Dampier Salt SCA
- Industry buffer SCA
- Roebourne flood management SCA
- Structure plan areas (DA1)
- Withnell Bay SCA

- No zone
- Oceans/Waterways

Department of Planning, Lands and Heritage
GOVERNMENT OF WESTERN AUSTRALIA

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City of Karratha

Local Planning Scheme No. 8

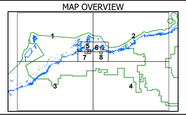
(District Scheme)

N

0 200 400 600 800

Meters

MAP OVERVIEW



Authorised: T.Servaas

Plot Date: 13 April 2026

G.Gazette: Tuesday, 22 August 2000

Local Planning Scheme Map No. 11 of 16
MAP: Karratha Townsite Centre

City of Karratha

Local Planning Scheme No. 8

(District Scheme)

Native Title - Karratha Leisureplex



7/8/2026, 4:01:43 PM

Determinations

In effect - Finalised

Indigenous Land Use Agreements

ILUA registered

1:3,027

0 0.02 0.04 0.09 mi

0 0.04 0.07 0.15 km

Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, National Native Title Tribunal, © Commonwealth of Australia, NNTT, © Commonwealth of Australia, Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community

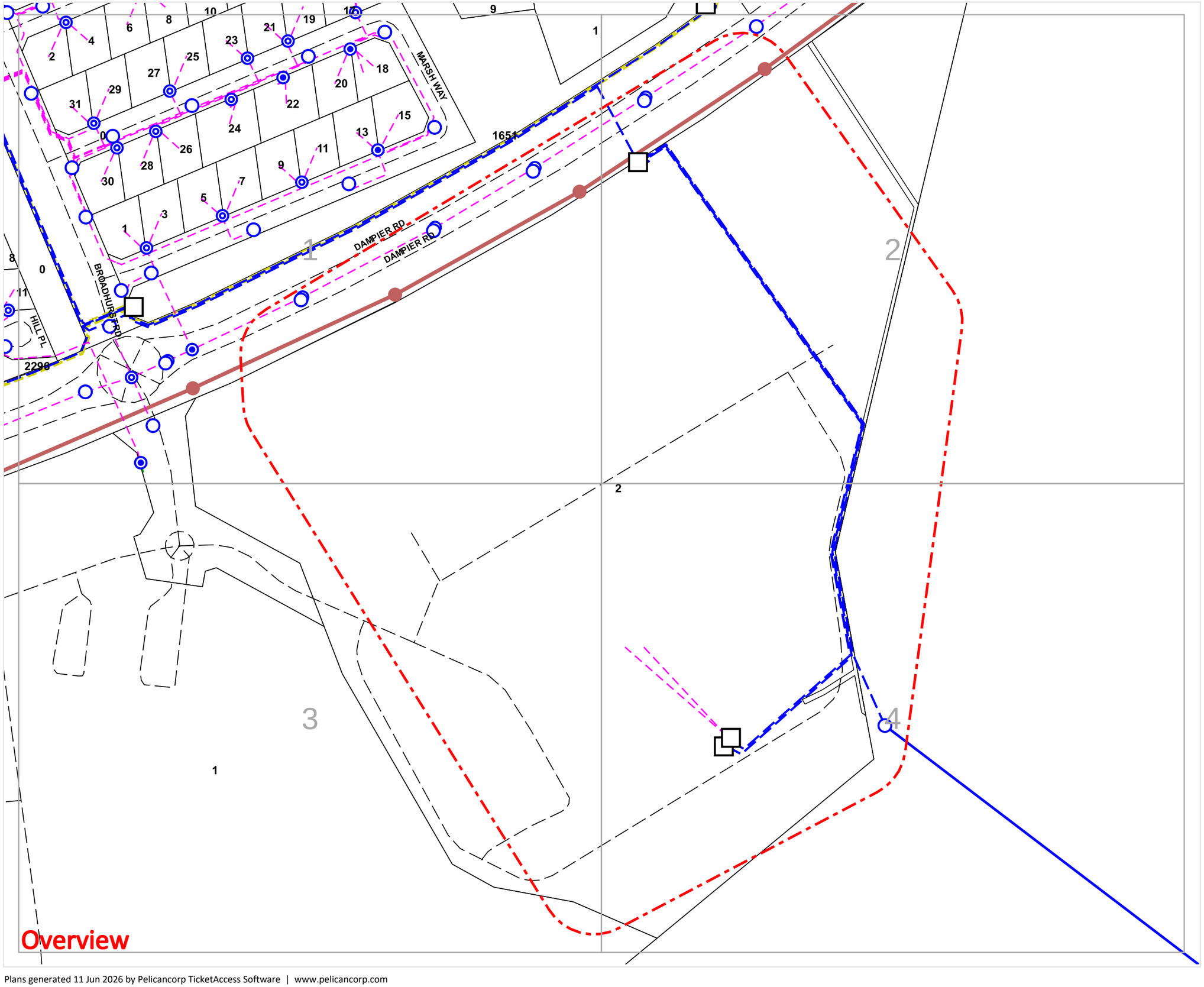
National Native Title Tribunal

© Commonwealth of Australia

HORIZON POWER *energy for life*

Sequence No: 274376478
Job No: 53399609
Location: 2 Broadhurst Road, Stove Hill, WA 6714

DIAL BEFORE YOU DIG www.1100.com.au *The Essential First Step.*



Legend

Existing	Proposed	
SUB	SUB	Distribution Substation
○	○	Distribution Pole
◎	◎	LV Mini Pillar
◉	◉	LV Universal Pillar
LVF	LVF	LV Cabinet
UMS	UMS	LV Unmetered Supply Pit
PIT	PIT	LV Service Pit
FB	FB	LV Wall Mounted Box
LV	LV	LV Unknown Structure
		LV Distribution Cable - Underground
		LV Distribution Wire - Overhead
		HV Distribution Cable - Underground
		HV Distribution Wire - Overhead
Ø	Ø	Stay Anchor
		Stay Wire
		Transmission Cable - Underground
		Transmission Wire - Overhead
●	●	Transmission Pole
a	a	Transmission Tower
		Communications Cable
		Fibre Optic Cable
		Zone Substation

N

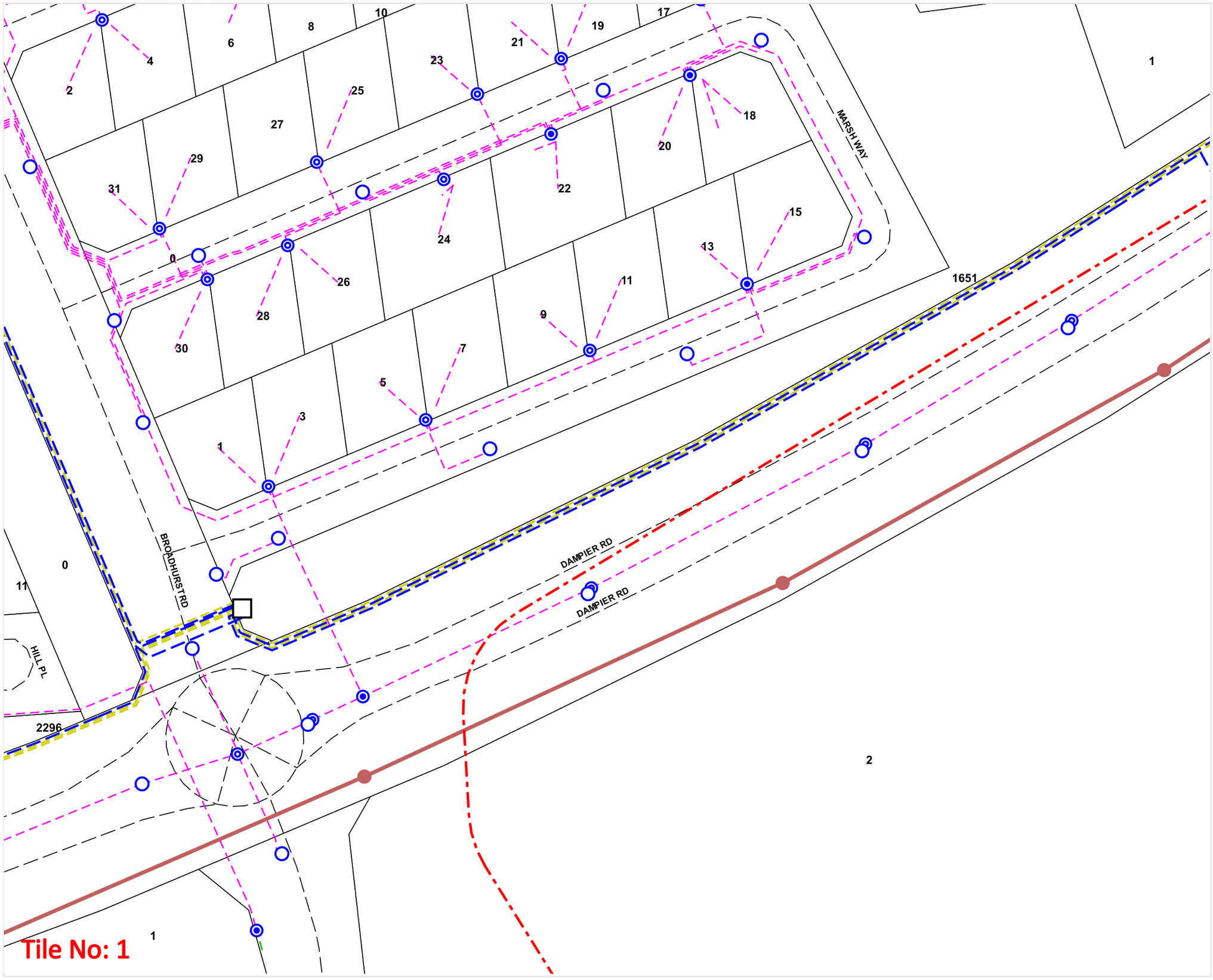
Scale: 1:2050
Expires: 09 Jul 2026

DISCLAIMER: While reasonable measures have been taken to ensure the accuracy of the information contained in this plan response, neither Horizon Power nor PelicanCorp shall have any liability whatsoever in relation to any loss, damage, cost or expense arising from the use of this plan response or the information contained in it or the completeness or accuracy of such information. Use of such information is subject to and constitutes acceptance of these terms.

HORIZON POWER *energy for life*

Sequence No: 274376478
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Location: 2 Broadhurst Road, Stove Hill, WA 6714

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Legend

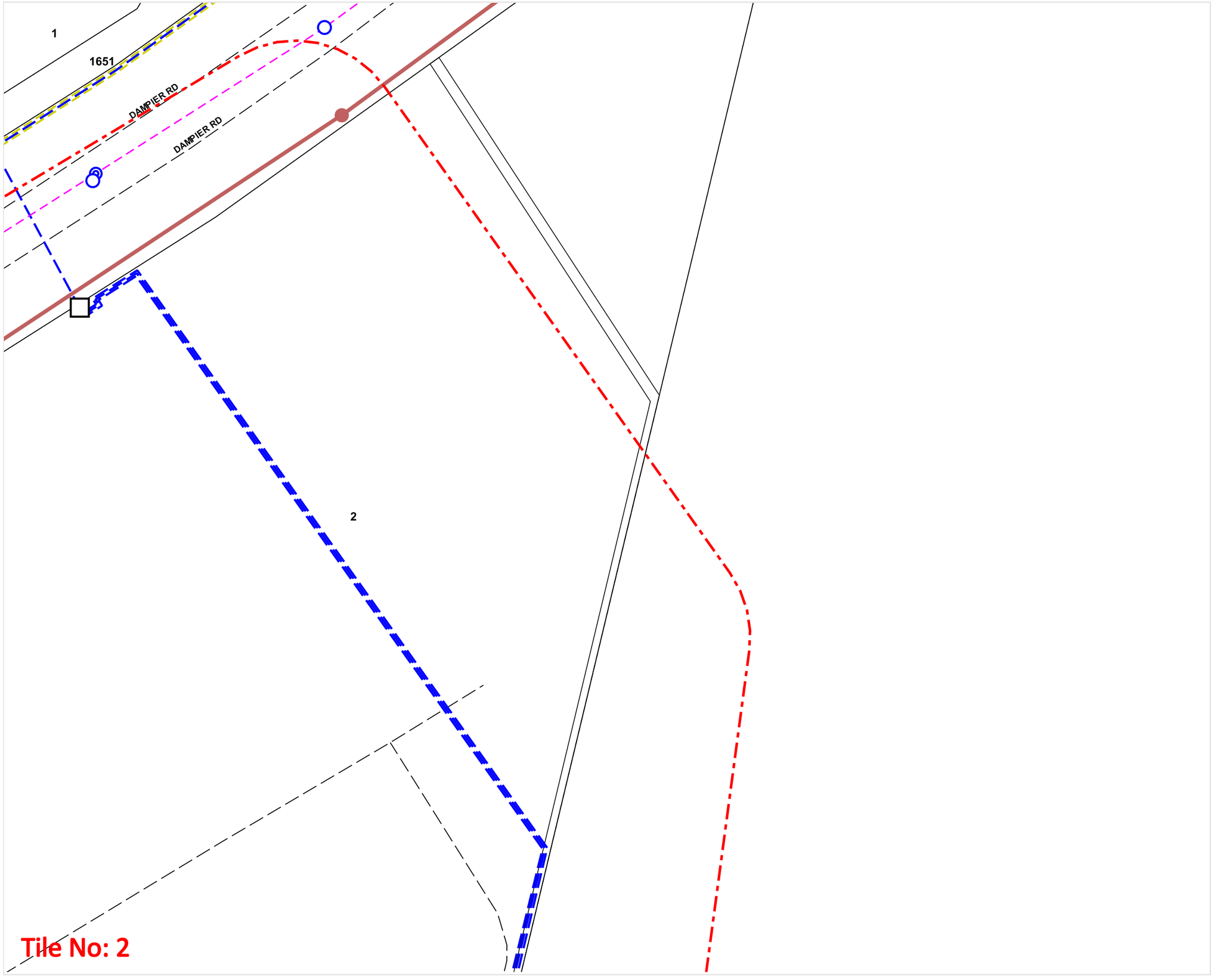
Existing	Proposed	
SUB	SUB	Distribution Substation
○	○	Distribution Pole
◎	◎	LV Mini Pillar
●	●	LV Universal Pillar
LVF	LVF	LV Cabinet
UMS	UMS	LV Unmetered Supply Pit
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LV	LV	LV Unknown Structure
		LV Distribution Cable - Underground
		LV Distribution Wire - Overhead
		HV Distribution Cable - Underground
		HV Distribution Wire - Overhead
Ø	Ø	Stay Anchor
		Stay Wire
		Transmission Cable - Underground
		Transmission Wire - Overhead
●	●	Transmission Pole
a	a	Transmission Tower
		Communications Cable
		Fibre Optic Cable
		Zone Substation

N

Scale: 1:1000
Expires: 09 Jul 2026

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Job No: 53399609
Location: 2 Broadhurst Road, Stove Hill, WA 6714



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		Communications Cable
		Fibre Optic Cable
		Zone Substation

N

Scale: 1:1000
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		Transmission Pole
a	a	Transmission Tower
		Communications Cable
		Fibre Optic Cable
		Zone Substation

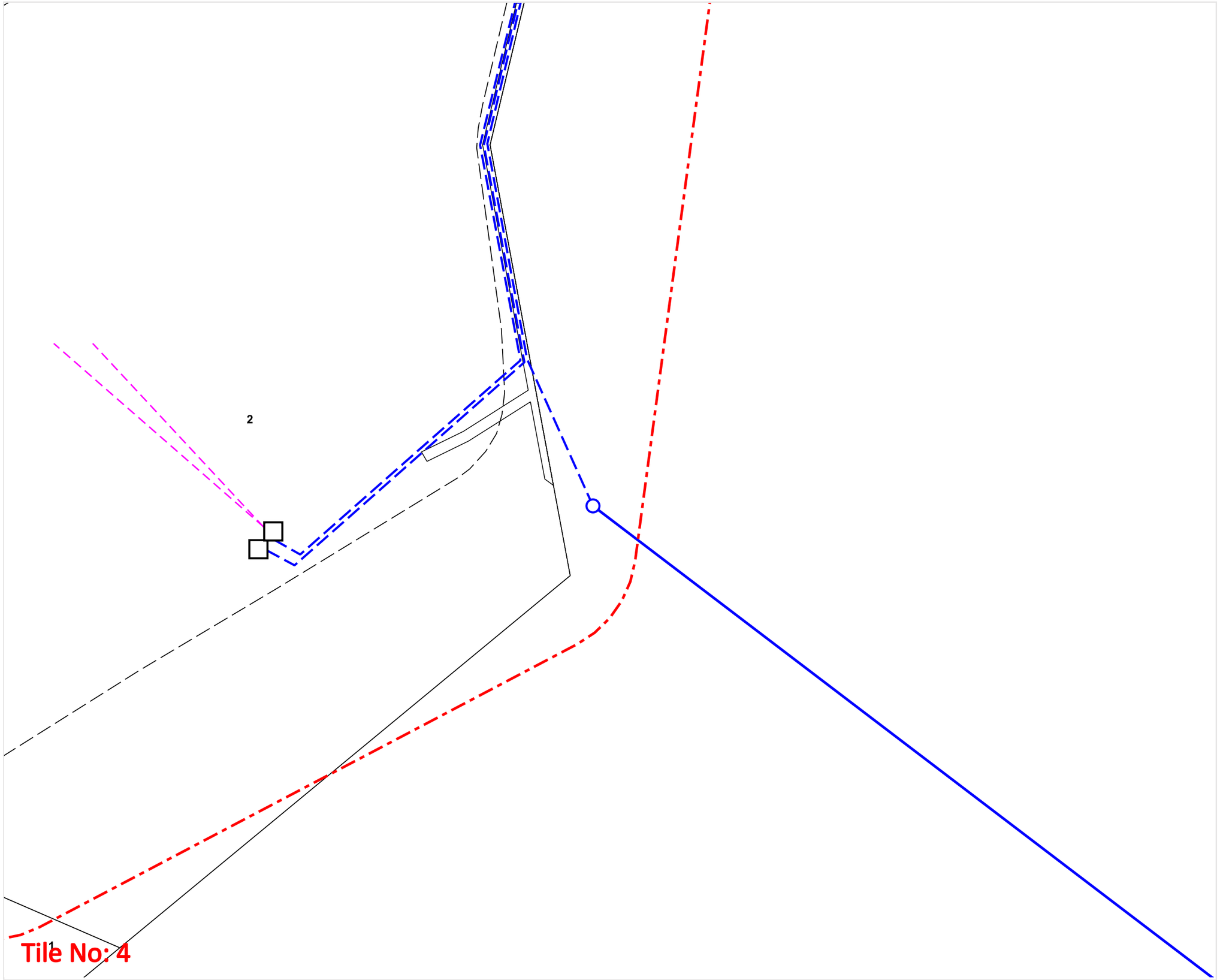
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Scale: 1:1000
Expires: 09 Jul 2026

Tile No: 3

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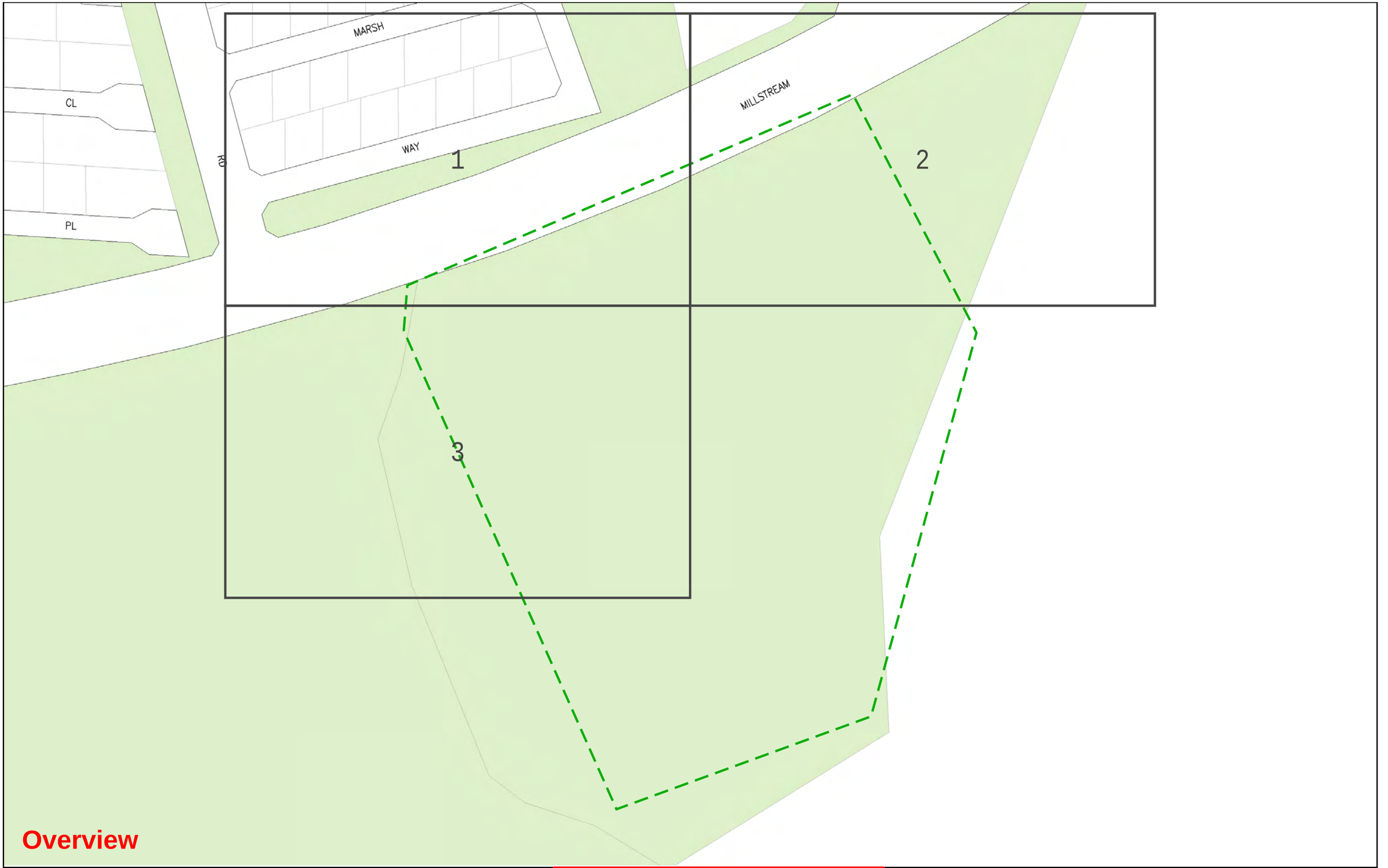
Legend

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Scale: 1:1000
Expires: 09 Jul 2026

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Overview

WATER CORPORATION

Scale: 1:2214
Job No.: 53399609
Sequence No.: 274376480
Print Date: 11 Jun 2026

N

Sewer

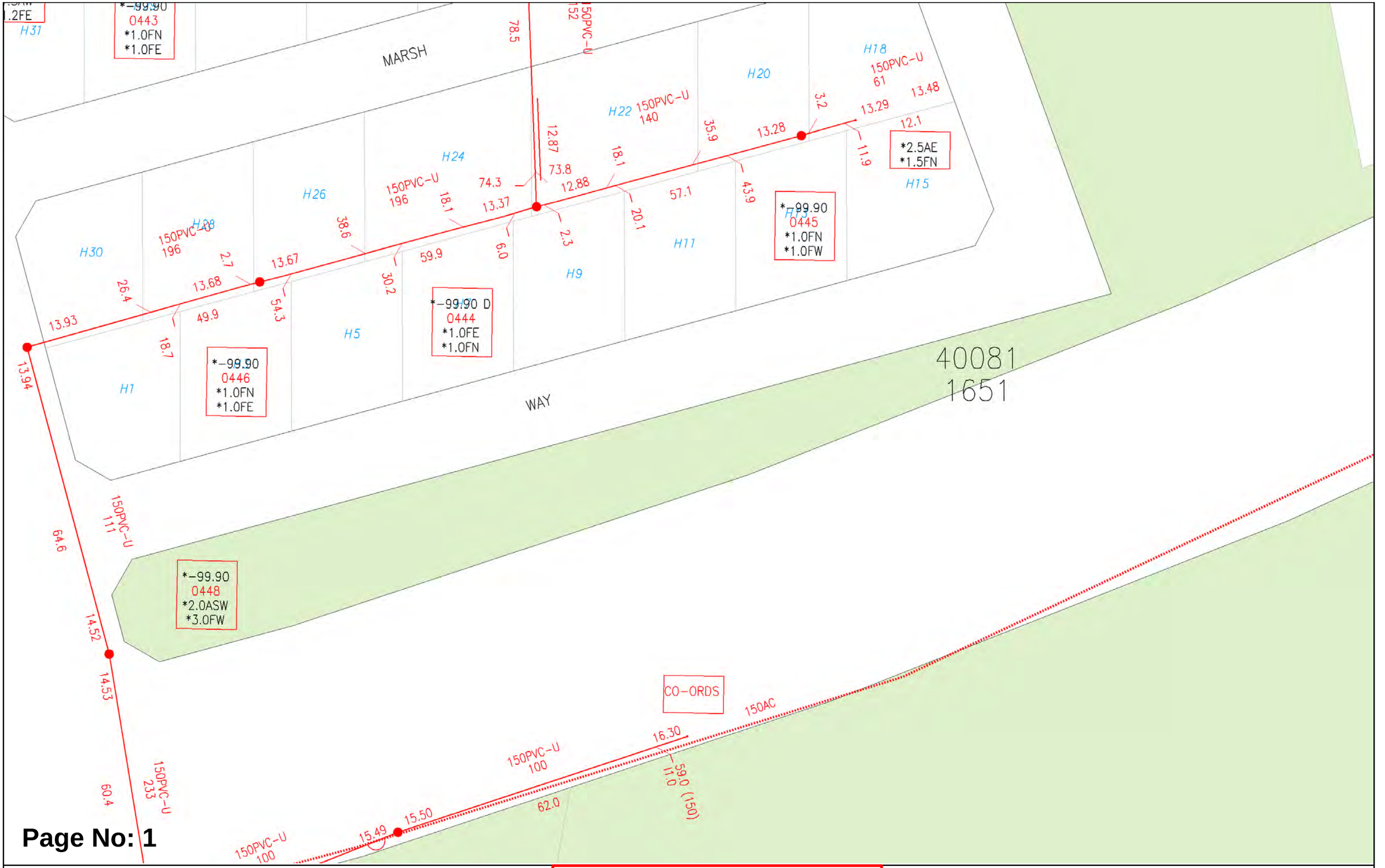
WARNING ASSET PROTECTION APPROVAL MAY BE REQUIRED

Apply for approval to work near our assets at:

Working near assets (watercorporation.com.au)

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Page No: 1

WATER CORPORATION

Scale:	1:750
Job No.:	53399609
Sequence No.:	274376480
Print Date:	11 Jun 2026

N

Sewer

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Page No: 2

WATER CORPORATION

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Job No.:	53399609
Sequence No.:	274376480
Print Date:	11 Jun 2026

N

Sewer

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CO-ORDS

14.78

55.2

17.84
AD3735
CO-ORDS

14.94

150PVC-U
233

14.79

14.84

12.0

150PVC-U
14.87

*-99.90
0449
*42.0AS
*15.0FS

50903
556

Page No: 3

WATER CORPORATION

Scale:	1:750
Job No.:	53399609
Sequence No.:	274376480
Print Date:	11 Jun 2026

N

Sewer

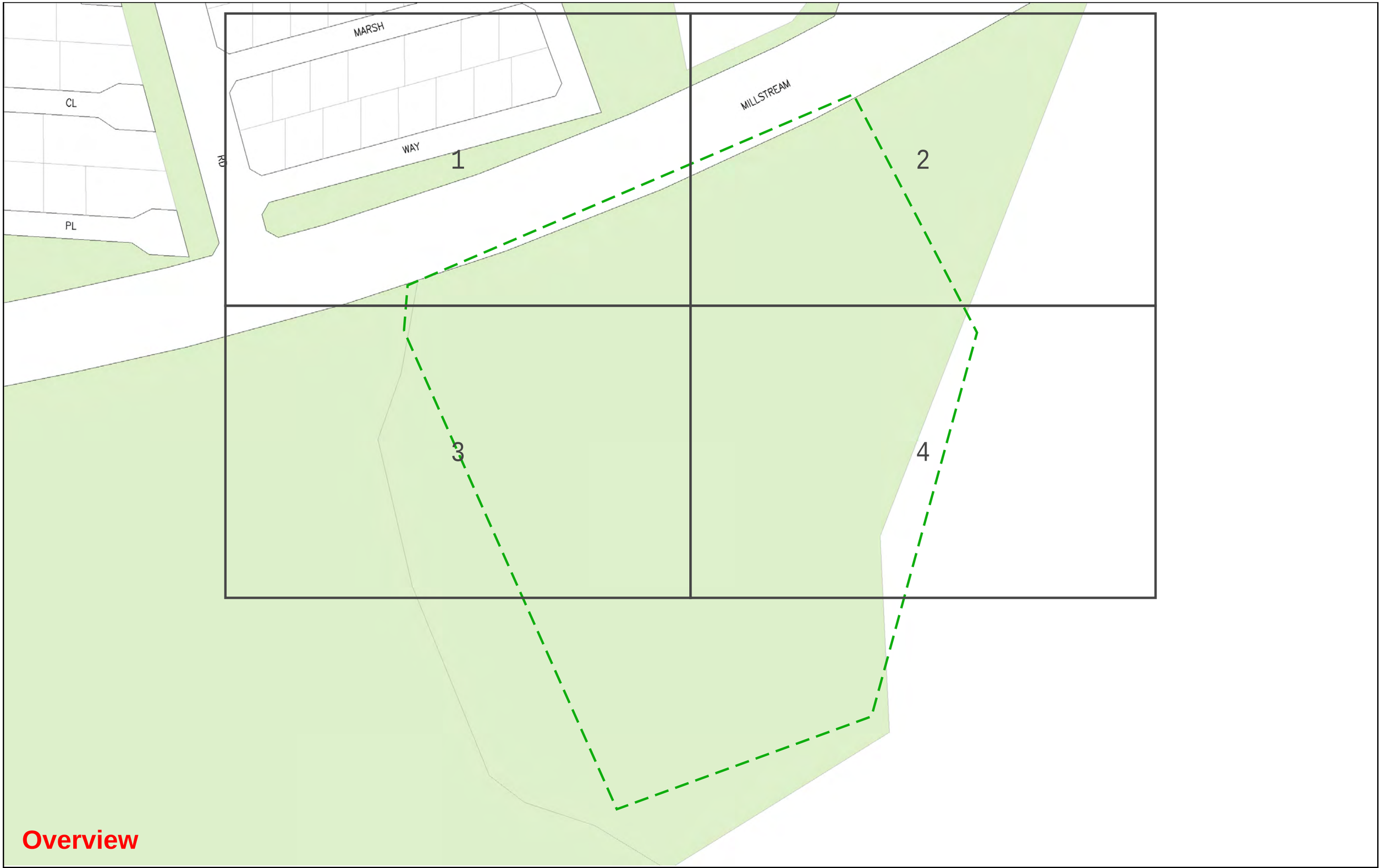
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Overview

WATER CORPORATION

Scale: 1:2214
Job No.: 53399609
Sequence No.: 274376480
Print Date: 11 Jun 2026

N

Water

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Water

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MILLSTREAM

Page No: 2

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Water

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KY02

50903
556

Page No: 3

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N

Water

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H2

Page No: 4

WATER CORPORATION

Scale:	1:750
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Sequence No.:	274376480
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N

Water

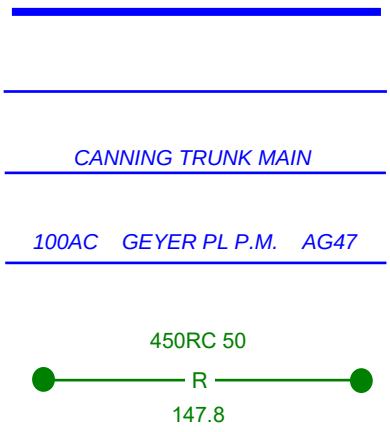
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Plan Legend (summary)
INFORMATION BROCHURE



This legend is provided to Dial Before You Dig users to assist with interpreting Water Corporation plans. A more detailed colour version can be downloaded from www.watercorporation.com.au. (Your business > Working near pipelines > Downloads)

WARNING - Plans may not show all pipes or associated equipment at a site, or their accurate location. Pothole by hand to verify asset location before using powered machinery.



WATER, SEWERAGE AND DRAINAGE PIPELINES

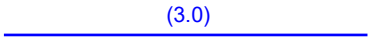
CRITICAL PIPELINE (thick line) EXTRA CAUTION REQUIRED
A risk assessment may be required if working near this pipe. Refer to your Dial Before You Dig information or call 131375.

Pipes are not always labelled on plans as shown here – assume all pipes are significant and pothole to prove location and depth.

P.M.	pressure main
M.S.	main sewer
R	rising main (i.e. drainage pressure main)

Common material abbreviations:

AC	asbestos cement e.g. 100AC NOTE: AC is brittle and is easily damaged.
CI	cast iron
GRP	glass reinforced plastic
P	PVC - class follows pipe material (e.g.100P-12)
RC	reinforced concrete
S	steel
VC	vitrified clay



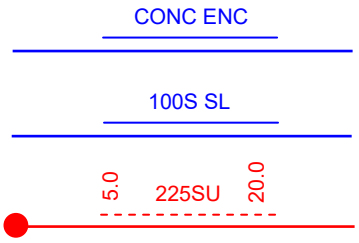
NON-STANDARD ALIGNMENT

Pipes are not always located on standard alignments due to local conditions. (i.e. Other than 2.1 m for reticulation mains and 4.5 m for distribution mains.)



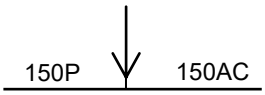
OTHER PIPE SYMBOLS

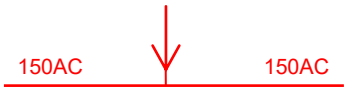
Other numbers or codes shown on pipes are not physical attributes. These are Water Corporation use only.



CONCRETE ENCASEMENT, SLEEVING AND TUNNELS

May be in different forms: steel, poured concrete, box sections, slabs.





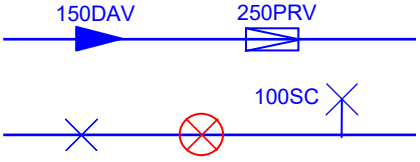
CHANGE INDICATOR ARROW

Indicates a change in pipe type or size. e.g. 150mm diameter PVC to 150mm diameter asbestos cement (AC).



PIPE OVERPASS

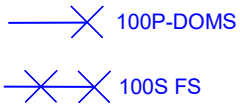
The overpass symbol indicates the shallower of the two pipes.



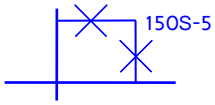
VALVES

Many different valve types are in use. Valve may be in a pit or have a visible valve cover. There may be no surface indication.

Valves may be shallower than the main or offset from it. e.g. A scour valve (SC) may have a pipe coming away from main pipeline on the opposite side to that indicated on the plan.



FIRE SERVICES
100 mm polythene domestic (DOMS) service
FS Fire service
FHS Fire hydrant service
Hydrant may be visible external to the building. Even if not visible a substantial fire service may still be present.



PIPE BYPASS
Bypass will not be on the same alignment as the main pipeline.



CATHODIC PROTECTION (CP)
Buried CP equipment may be located some distance from the pipeline being protected interconnected by buried cable. All CP fittings may not be visible.
A buried anode – various sizes and configurations
TP test point - may be visible on a post or in-ground
TR transformer rectifier



ACCESS TEE OR MANHOLE OR SERVICE ACCESS PIT
NOTE: Opening any manhole or pit is dangerous and is prohibited.
Below ground. May not be any visible signs at ground level or may be located in a pit.



WASTEWATER ACCESS CHAMBERS (MANHOLES)
-- Manhole (shown not labelled)
-- Tee or maintenance shaft (shown not labelled)
MS maintenance shaft (labelled)
WARNING: Opening any manhole or pit is dangerous and is prohibited.



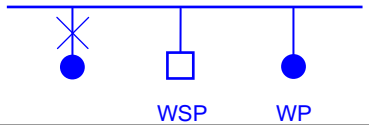
WASTEWATER MANHOLE INFORMATION BOXES
Square non-trafficable Do not drive vehicles over or place loads.
Round trafficable
In general if not located in the road treat as if non-trafficable.



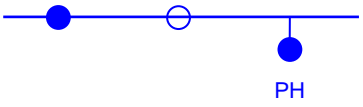
HAZARDOUS MANHOLE
Indicates a potential health hazard from risk of exposure to toxic waste.
WARNING: Opening any manhole is dangerous and is prohibited.



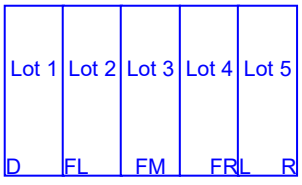
FLOWMETER
Various types of flow meters located in a pit. May be labelled with identifier. (e.g. 50 MFM, 50MM)



STANDPIPE, WATER SAMPLING POINT (WSP), WATER SUPPLY POINT (WP)
May be located adjacent to mains. Usually there will be some visible indication.



Hydrant May not be visible.
Hydrant Tee May not be visible.
Pillar hydrant Visible



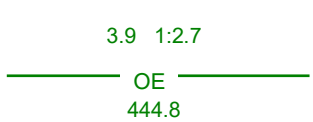
PRE-LAID SERVICES
D Deferred
FL Fully Prelaid Left
FM Fully Prelaid Front Middle
FR Fully Prelaid Right
L Left
R Right

Code indicates on which side of a lot the water service is located:

May be no visible indication at site.



SEWER OR DRAINAGE PUMP STATION
Several pipes and a pressurised main will be in the vicinity.



OPEN CHANNEL
OA Landscaped
OE Normal Open Earth
OF Open channel with flood levee
OH Half Pipe
OL Lined Channel
OS Swale-Shallow Depression
OW Natural Water Course

Drainage structures, even if dry, must be kept clear of any obstruction such as sand stockpiles.

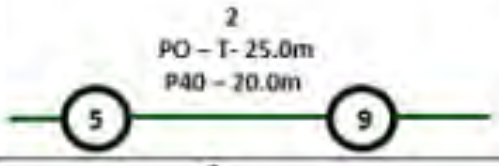
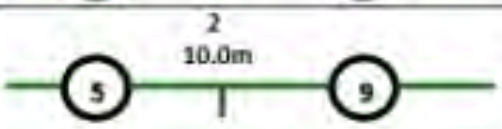
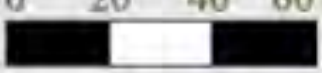
To:	Aidan Power
Phone:	Not Supplied
Fax:	Not Supplied
Email:	Aidan@tredwell.co.nz

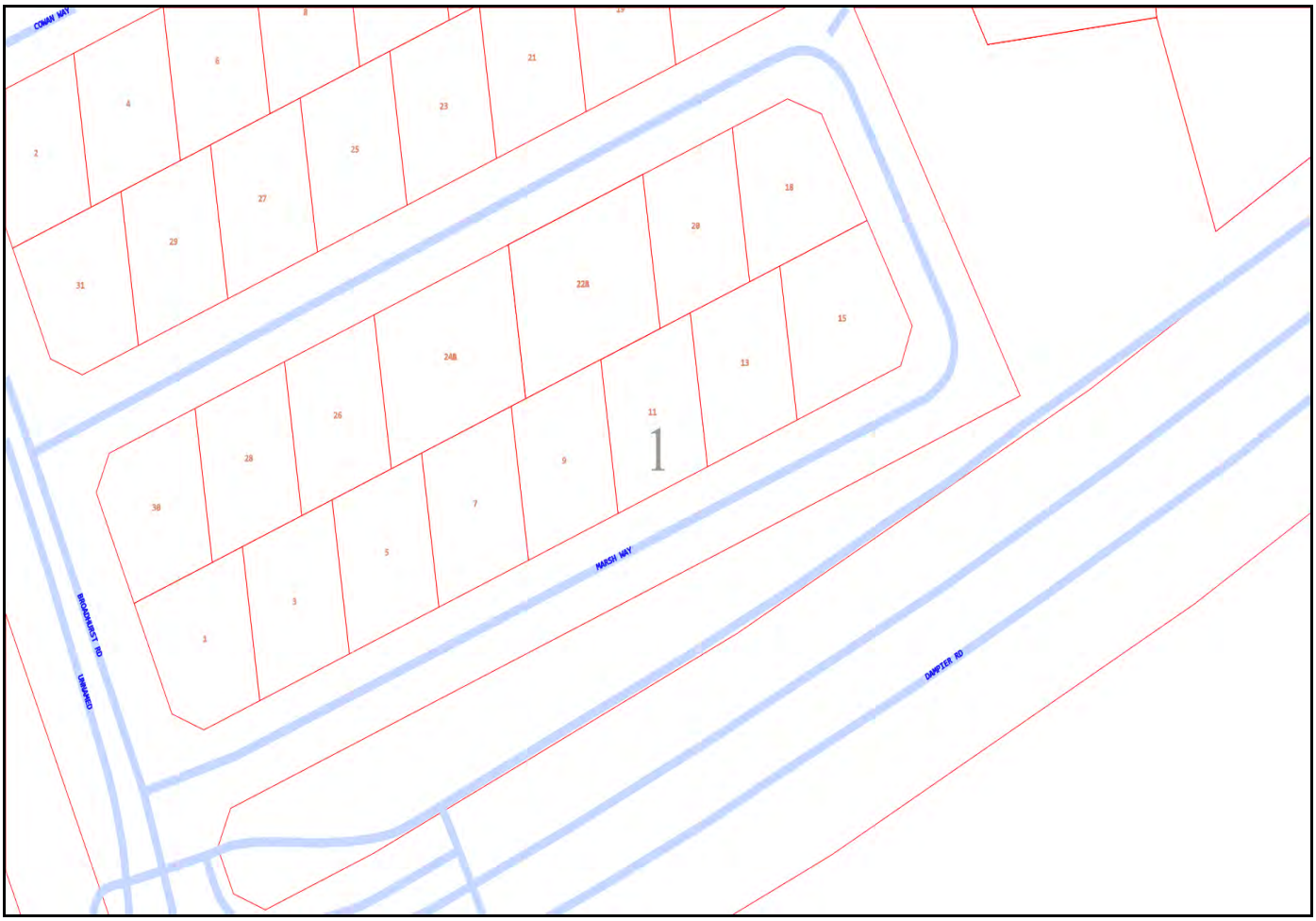
Dial before you dig Job #:	53399609	
Sequence #	274376476	
Issue Date:	11/06/2026	
Location:	2 Broadhurst Road , Stove Hill , WA , 6714	

Indicative Plans are tiled below to demonstrate how to layout and read nbn asset plans

1	4
2	5
3	6

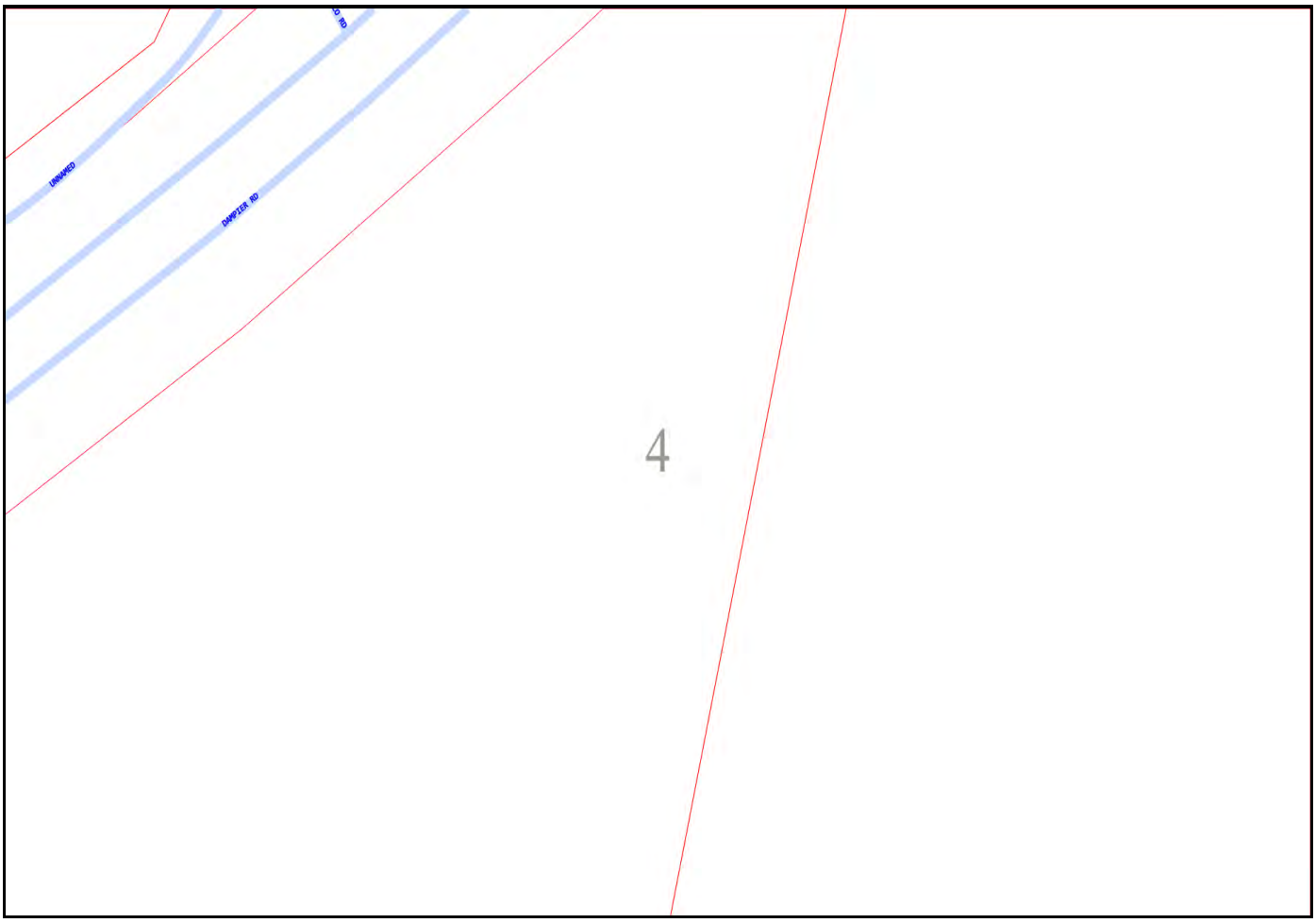
LEGEND

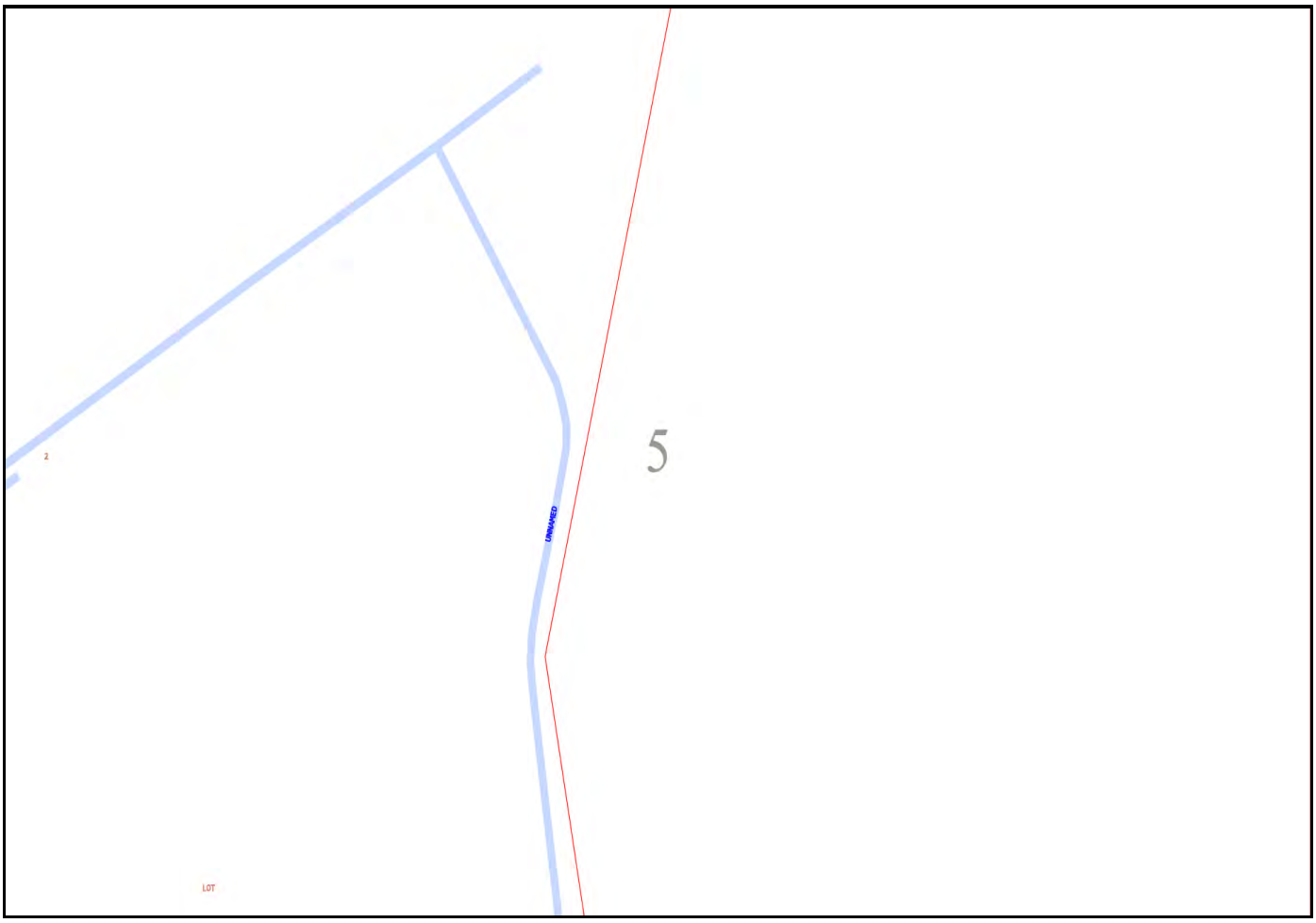
	Parcel and the location
	Pit with size "5"
	Power Pit with size "2E". Valid PIT Size: e.g. 2E, 5E, 6E, 8E, 9E, E, null.
	Manhole
	Pillar
	Cable count of trench is 2. One "Other size" PVC conduit (PO) owned by Telstra (-T-), between pits of sizes, "5" and "9" are 25.0m apart. One 40mm PVC conduit (P40) owned by NBN, between pits of sizes, "5" and "9" are 20.0m apart.
	2 Direct buried cables between pits of sizes ,"5" and "9" are 10.0m apart.
	Trench containing any INSERVICE/CONSTRUCTED (Copper/RF/Fibre) cables.
	Trench containing only DESIGNED/PLANNED (Copper/RF/Fibre/Power) cables.
	Trench containing any INSERVICE/CONSTRUCTED (Power) cables.
	Road and the street name "Broadway ST"
Scale	 1:2000 1 cm equals 20 m

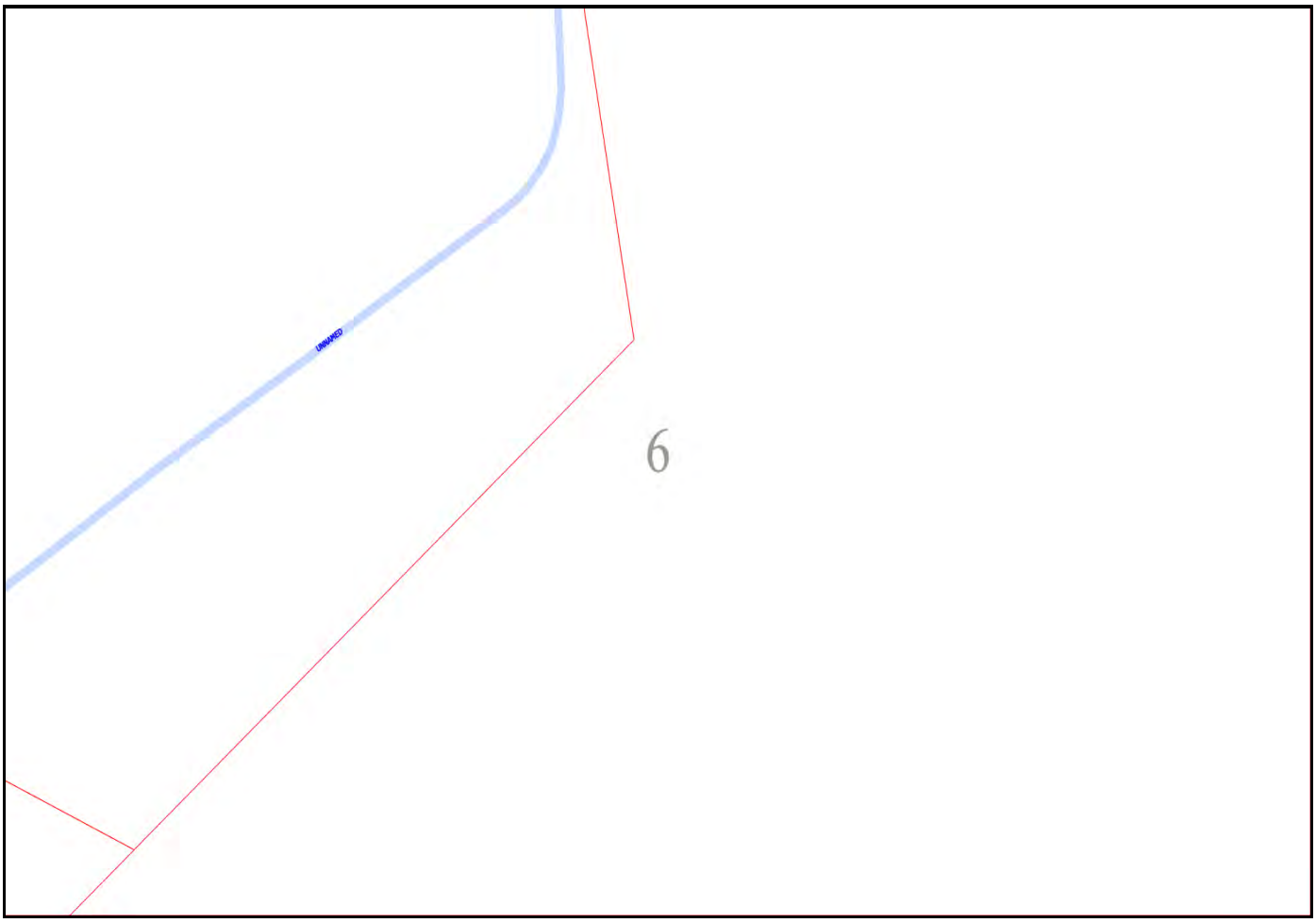

COMM WAY
2
4
6
8
21
23
25
27
29
31
18
20
22A
24A
15
13
11
9
7
5
3
1
26
28
30
1
MARSH WAY
BROADHURST RD
UNNAMED
DAWZER RD


DAMPIER RD
BROADWAY RD
LANYARD
2


3


UNNAMED
DAMPIER RD
4


5
2
UNNAMED
LOT



Emergency Contacts

You must immediately report any damage to the **nbn™** network that you are/become aware of. Notification may be by telephone - 1800 626 329.

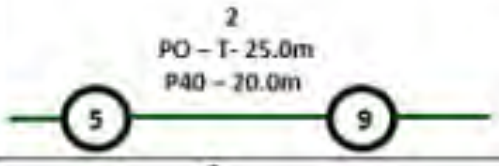
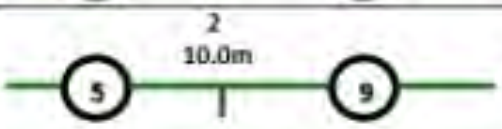
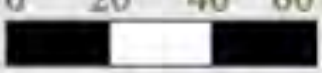
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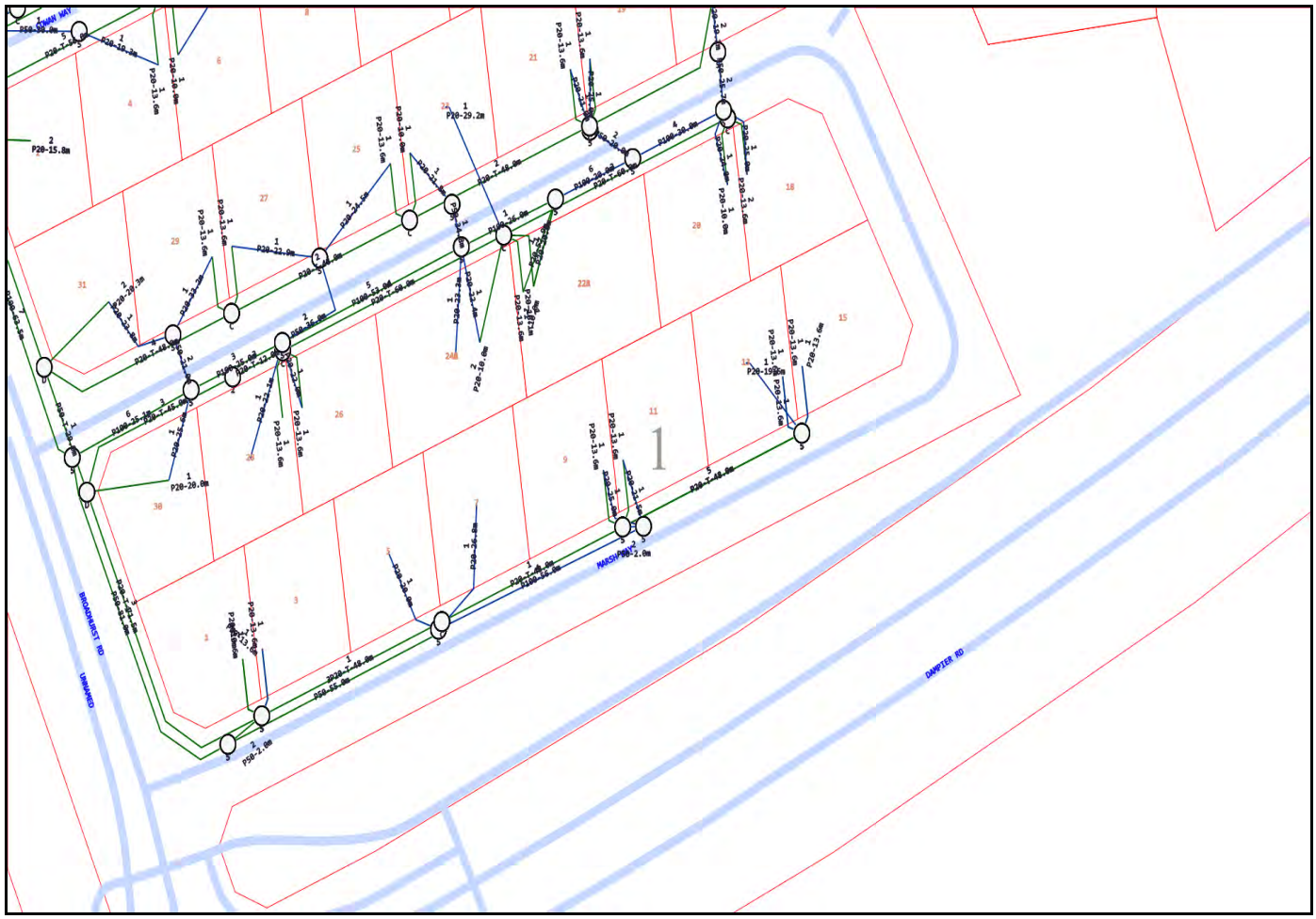
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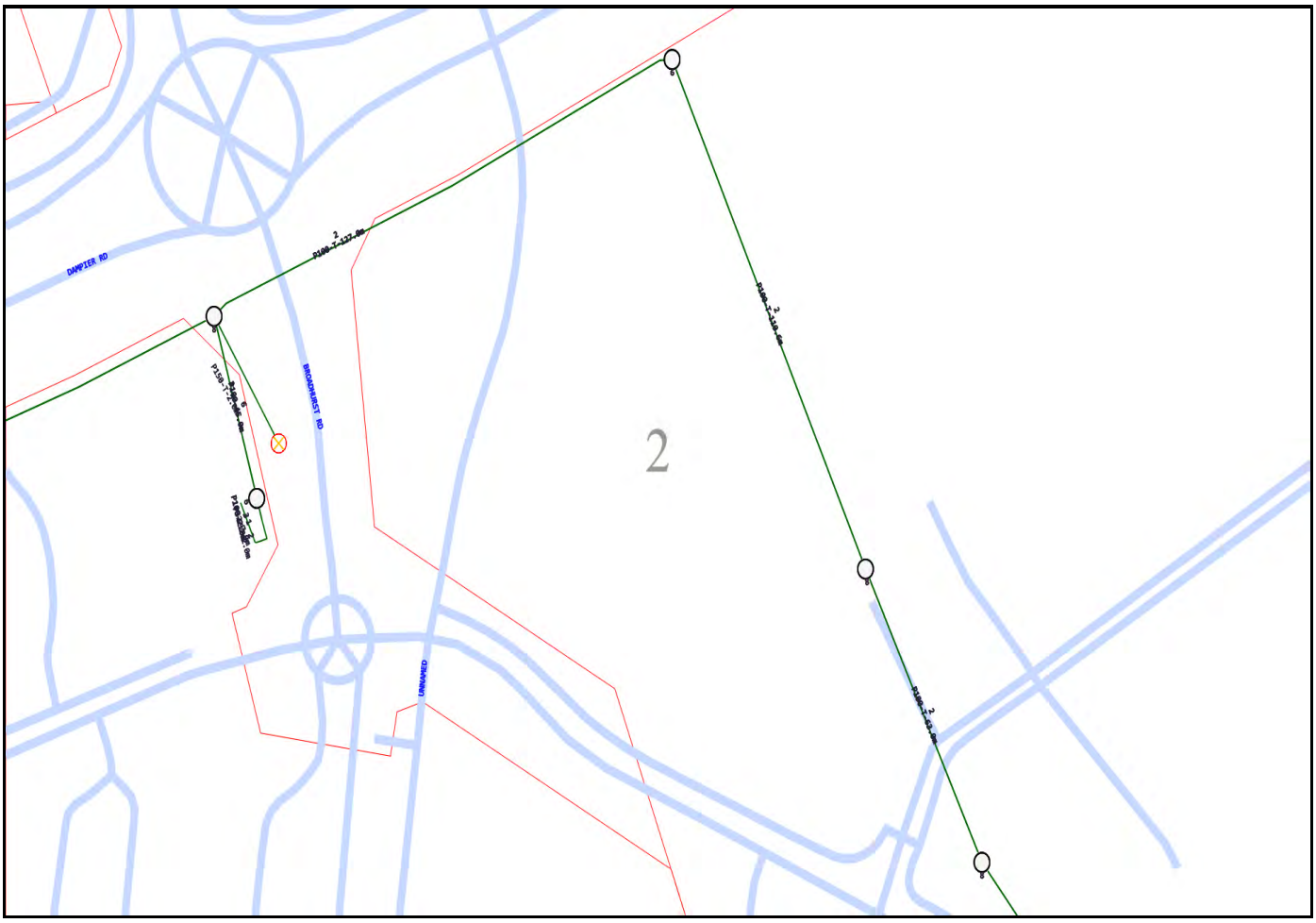
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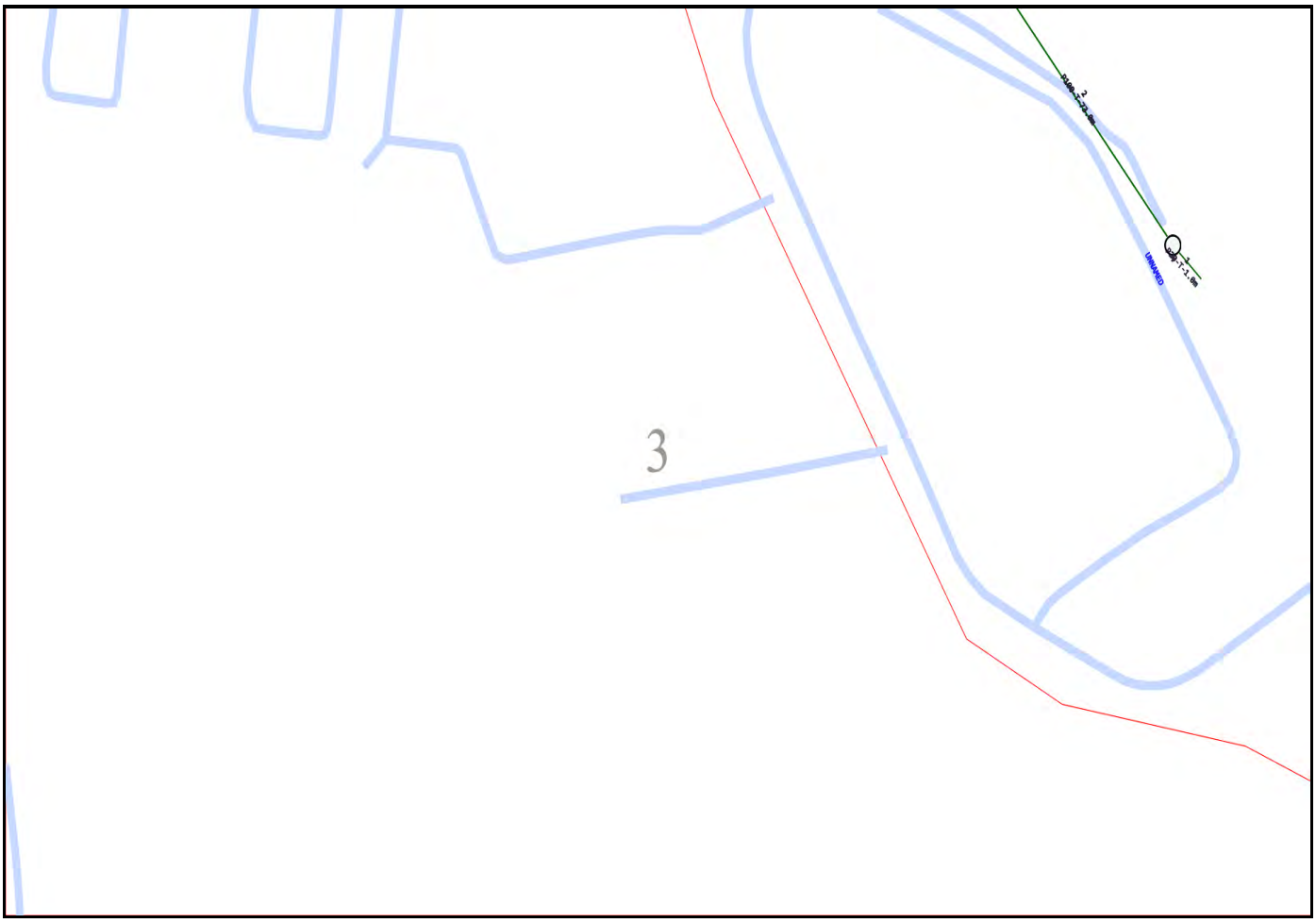
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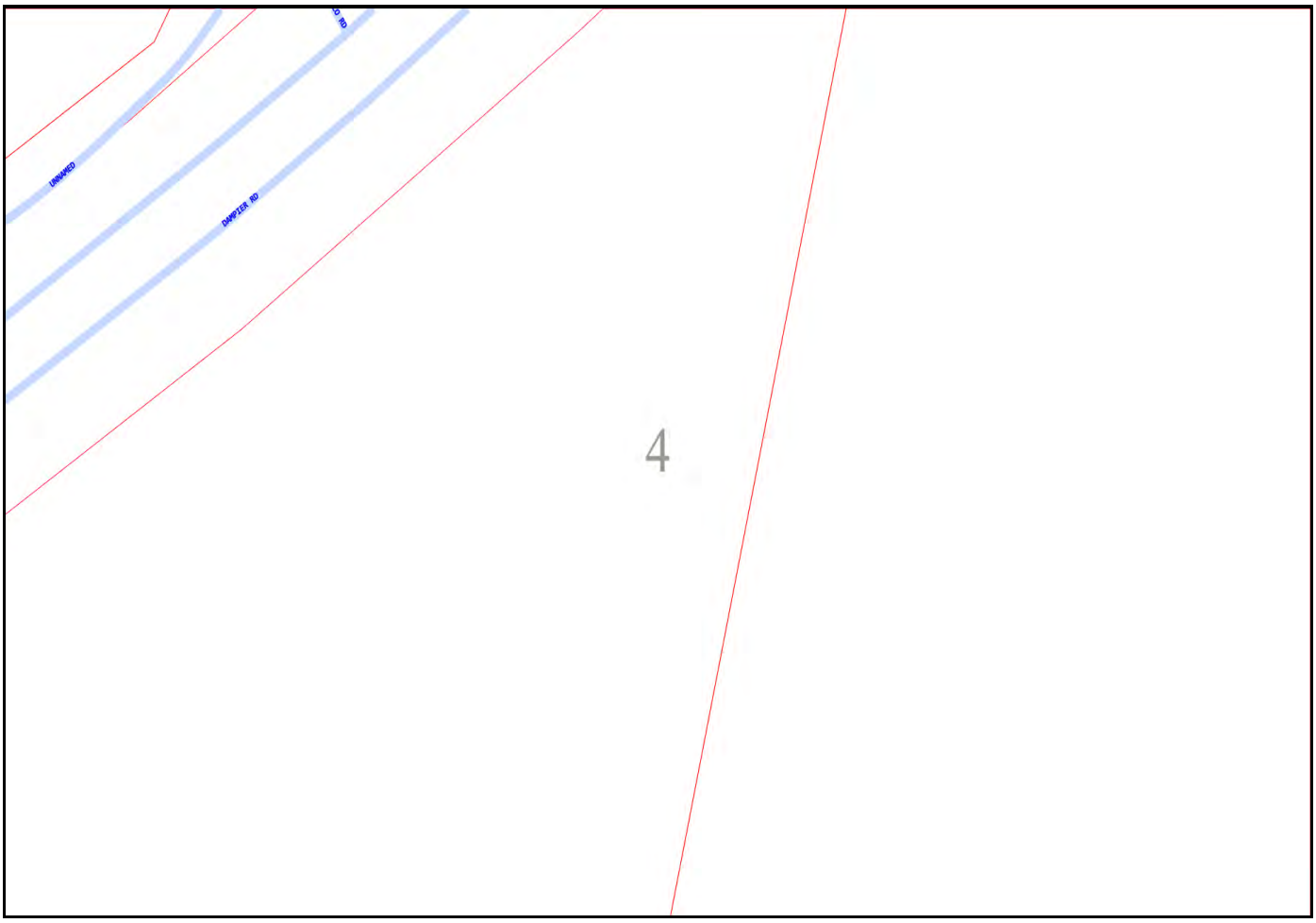
LEGEND

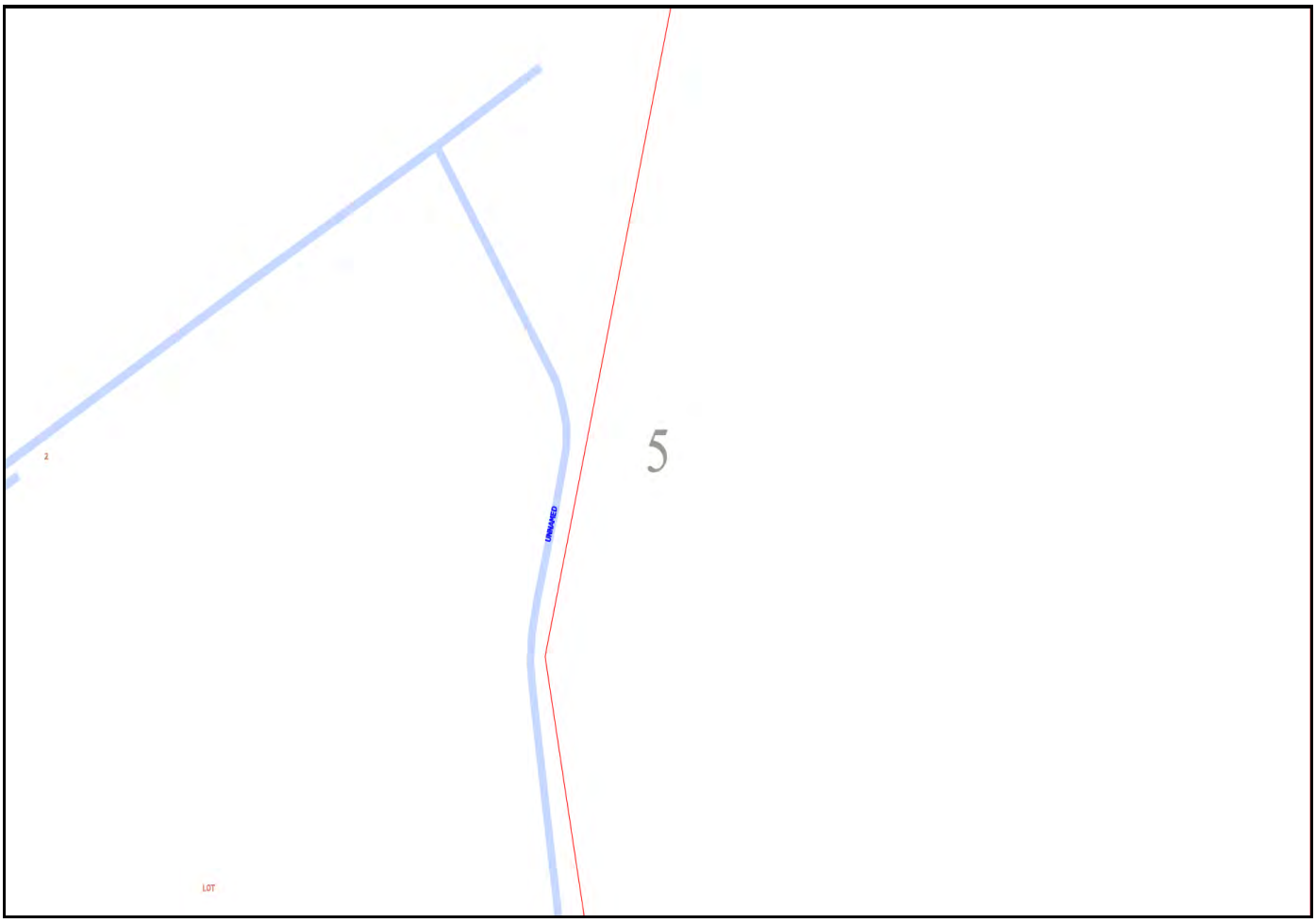
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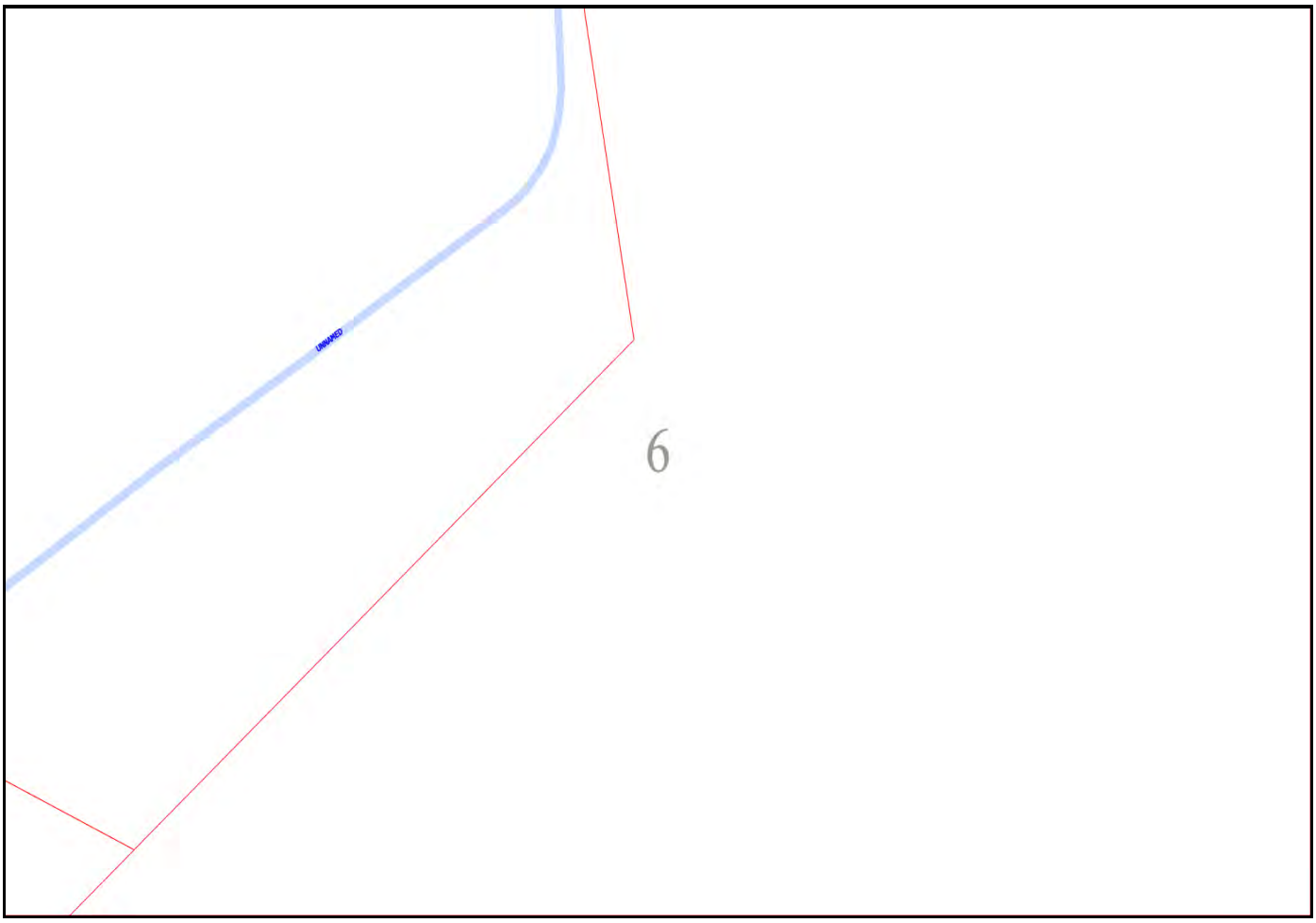

BROADHURST RD
UNNAMED
MARSH RD
DAWZER RD


DAMPIER RD
BROADWAY RD
LANYARD
2


3
UNNAMED


UNNAMED
DAMPIER RD
4


5
2
UNNAMED
LOT



Emergency Contacts

You must immediately report any damage to the **nbn™** network that you are/become aware of. Notification may be by telephone - 1800 626 329.

Excavation

Excavation can be dangerous, especially if you're digging without knowing what's below. If you're excavating, it's your responsibility to locate Water Corporation assets and prevent contact to keep you, your team and the community safe.

This information is important if you're a planner, construction worker, supervisor, or in similar roles.

Duty of care

The safety of your workers and the public remains your responsibility, as per Work Health and Safety Regulations 2022 - Reg 34, 35 & 36.

Make sure you positively locate all assets before excavating and have a safe system of work.
All work must be in accordance with the relevant acts, regulations, standards and codes of practice.

Risk of working near our assets

Water Corporation has a vast network with different risks depending on the asset and location:

- **Energy release:** sudden release of high pressure or high flowing water, which can result in collapse of excavations, buildings and impact to people. The sudden release of large volumes of water under pressure is dangerous and can lead to drowning, significant structural damage, community or supply disruption and traffic hazards.
- **Electricity:** electric shock exposure due to asset age, electrical assets located close to our pipelines, electric faults, equipment failure and lightning.
- **Falls:** pits and access chambers, which create fall and drowning risks.
- **Hazardous materials:** biohazards from the release of wastewater with infectious agents and toxic or flammable gases.
  Pipelines may contain or be coated with hazardous materials.

Secondary hazards may result from damage or disruption to Water Corporation infrastructure.

It's important to assess the risks associated with your work.

Ensure you have your Before You Dig Australia (BYDA) plans.

Lodge a free enquiry online www.byda.com.au

Before you dig – remember the 5 Ps:

1. Plan	2. Prepare	3. Pothole	4. Protect	5. Proceed
• Plan ahead by lodging your BYDA enquiry, and ensure you have the correct information to carry out work safely. • Plan ahead by applying for an APRA on our website. Search Working Near Our Assets.	• Prepare by reviewing the utility plans and contact the asset owners if you need help. • Perform a site inspection- identify any surface indicators of underground asset clues such as pit lids, marker posts and meters. • Engage a skilled locator to locate assets electronically before potholing	• Pothole, using the asset owner's stated method as specified on the plans and information pack. • Pothole methods include hand digging and hydro vacuum extraction • Backfill potholes on completion	• Protect any exposed utility assets, ensure to contact the utility providers and seek direction	• Proceed with care -once all checks have been completed and all relevant permits and authorisations are granted.

Never rely on BYDA plans on as the sole means of locating assets; follow all five steps.

Faults and Emergencies (24/7): 13 13 75
Asset Protection: **Pos_enquiries@watercorporation.com.au**

WATER CORPORATION

Never use an excavator to identify the underground asset.

Our danger zones

Water Corporation assets have a prescribed proximity. These vary due to asset size and type. It's important to know the danger zones to keep yourself safe. Locate the assets before performing work. Excavations can undermine assets, so always follow the Excavation: Code of practice.

Approval is required if your proposed work is in, on, over, under or within the prescribed proximities to our assets (as per Water Services Act 2012– Sections 88 and 90).

Type of work	Asset type	Asset size	Prescribed proximity (distance from the asset)
Ground disturbing works *Including movement of heavy vehicles, ground compaction, dewatering, earthworks, open and trenchless excavations*	Sewer pipelines	All	2m
	Main drains		
	Water supply pipelines	< 300mm diameter	4m
	Water supply pipelines	≥ 300mm diameter	6m
	Sewer pressure pipelines	All	
	Drainage pressure mains		

Prescribed proximity information taken from the Water Corporation Technical Guidelines.

Changes to site conditions

If site conditions change, stop work and reassess the risks.

Contact for support

Asset Protection: POS_enquiries@watercorporation.com.au
Technical and Building enquiries: visit our website or call 13 13 95

To get our approval visit Working near our assets

In case of emergency

Life-threatening emergency; contact Emergency Services on 000.
Water or wastewater emergencies; contact Faults and Emergencies (24/7) on 13 13 75.

Disclaimer

Any plans or other information provided by Water Corporation must be used as a guide only. Plans (including the location of pipes and other assets) are approximate only and it is your responsibility to locate the exact location of Water Corporation assets before commencing work. Water Corporation does not warrant or make any representation as to the accuracy, completeness, reliability, currency, quality or fitness for purpose of any plans or other information (including, but not limited to, the accuracy of the scale of, or the location of, anything shown on any plan or diagram).

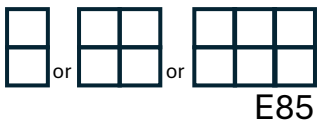
LEGEND

	Leadin terminates at a Customer Address	6 D	Cable Jointing Pit Number / Letter indicating Pit type/size
	Exchange Major Cable Present	EJ	Elevated Joint (above ground joint on buried cable)
	Pillar / Cabinet Above ground Free Standing		Telstra Plant in shared Utility trench
	Above ground Complex Equipment Please note: Powered by 240v electricity		Aerial cable / or cable on wall
OC	Other Carrier Telecommunication Cable/ Asset. Not Telstra Owned		Aerial cable (attached to joint use Pole e.g., Power Pole)
DIST	Distribution cables in Main Cable Ducts	M	Marker Post Installed
MC	Main Cable ducts on a Distribution Plan	T or TR	Buried Transponder
	Blocked or Damaged Duct	MT	Marker Post & Transponder
	Footway Access Chamber (can vary between 1-lid to 12-lid	SMOF	Optical Fibre Cable Direct Buried
	NBN Pillar		Direct Buried Cable
	Third Party Owned Network Non-Telstra		nbn owned network



Single to Multiple Round Conduit Configurations 1,2,4,9 respectively

(attached text denotes conduit type and size)



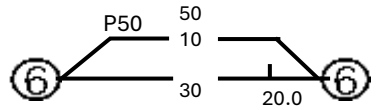
Multiple Square Conduit configurations 2,4,6 respectively

(attached text denotes conduit type and size)

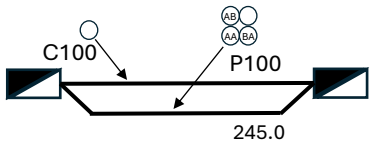
Some examples of conduit type and size:

A - Asbestos cement, P - PVC / Plastic, C - Concrete,
GI - Galvanised Iron, E - Earthenware
Conduit sizes nominally range from 20mm to 100mm
P50 50mm PVC conduit
P100 100mm PVC conduit
A100 100mm asbestos cement conduit

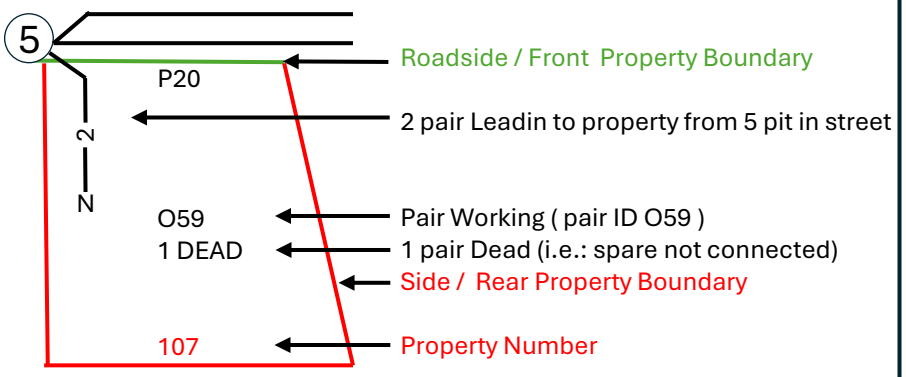
Some Examples of how to read Telstra Plans



One 50mm PVC conduit (P50) containing a 50-pair and a 10-pair cable between two 6 pits. approximately 20.0m apart, with a direct buried 30-pair cable along the same route.



Two separate conduit runs between two footway access chambers (manholes) approximately 245m apart A nest of four 100mm PVC conduits (P100) containing assorted cables in three ducts (one being empty) and one empty 100mm concrete duct (C100) along the same route.



The 5 Ps of Safe Excavation

https://www.byda.com.au/before-you-dig/best-practice-guides/

Plan

Plan your job. Use the BYDA service at least one day before your job is due to begin, and ensure you have the correct plans and information required to carry out a safe project.

Prepare

Prepare by communicating with asset owners if you need assistance. Look for clues onsite. Engage a Certified Locator.

Pothole

Potholing is physically sighting the asset by hand digging or hydro vacuum extraction.

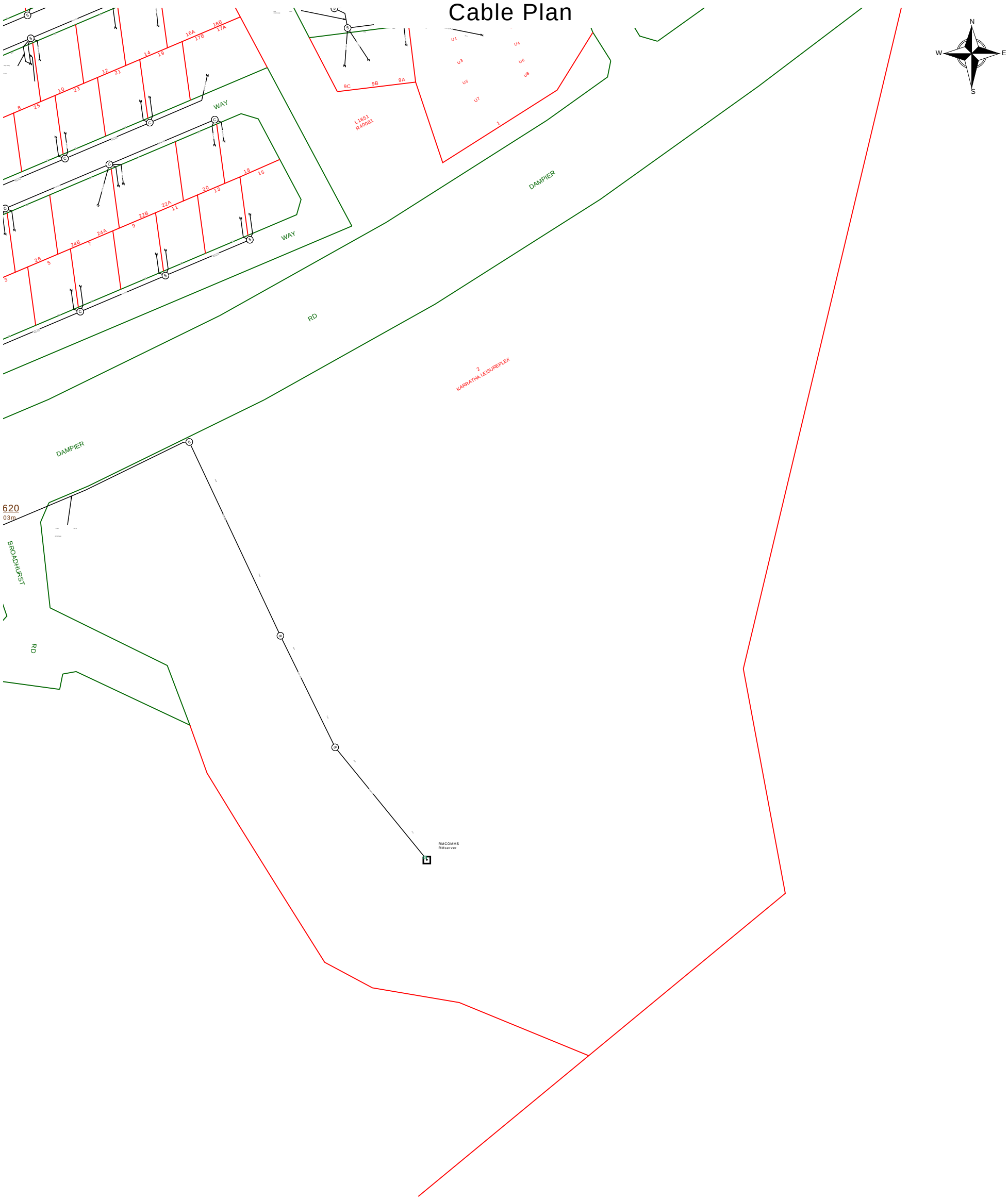
Protect

Protecting and supporting the exposed infrastructure is the responsibility of the excavator. Always erect safety barriers in areas of risk and enforce exclusion zones.

Proceed

Only proceed with your excavation work after planning, preparing, potholing (unless prohibited), and having protective measures in place.

Cable Plan



Report Damage:https://service.telstra.com.au/customer/general/forms/report-damage-to-telstra-c
Ph - 13 22 03
Email - Telstra.Plans@team.telstra.com
Planned Services - ph 1800 653 935 (AEST bus hrs only) General Enquiries

TELSTRA LIMITED A.C.N. 086 174 781

Generated On 11/06/2026 14:35:55

Sequence Number: 274376479

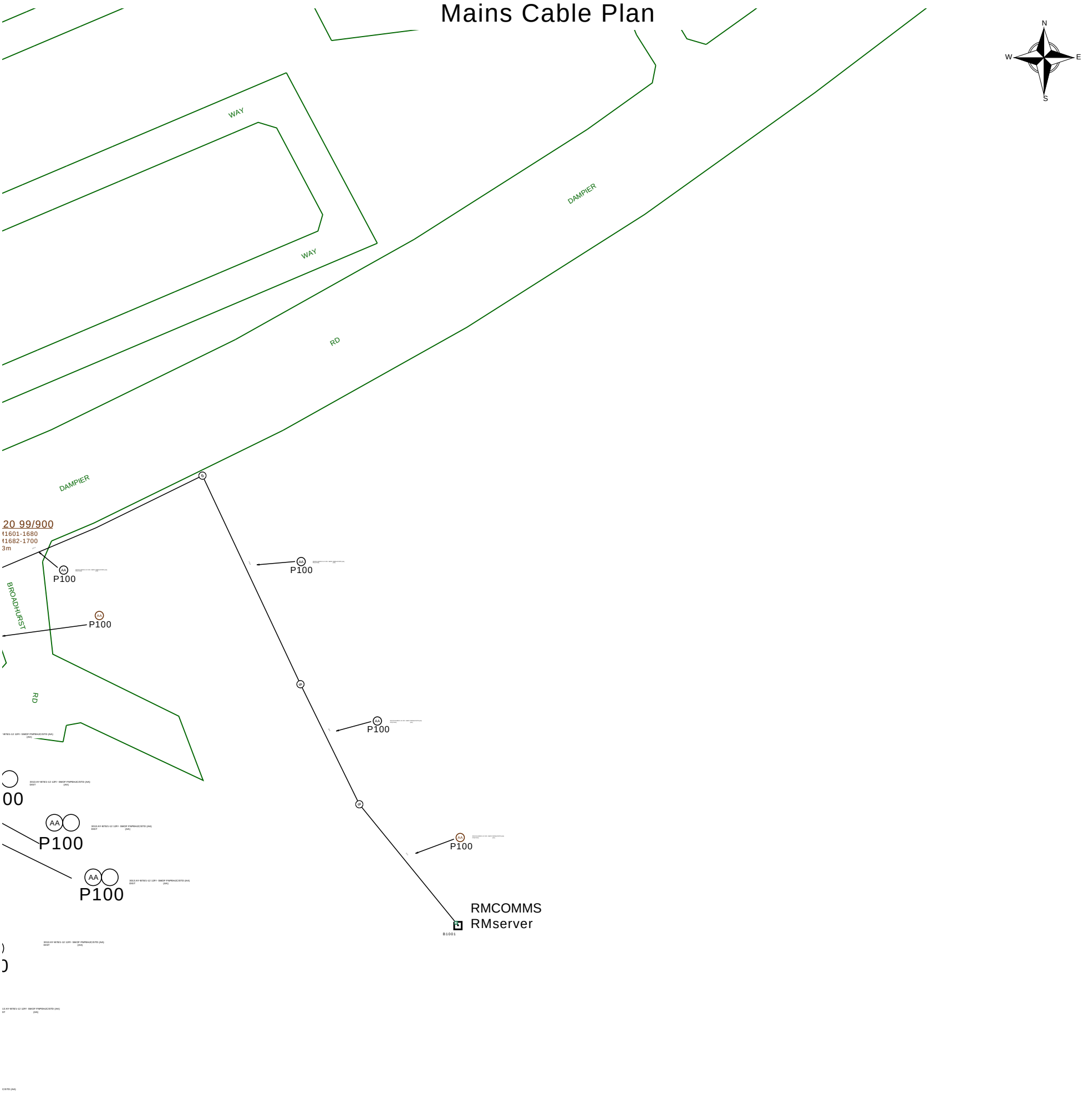
CAUTION: Fibre optic and/ or major network present in plot area. Please read the Duty of Care and contact InfraCo Plan Services should you require any assistance.

The above plan must be viewed in conjunction with the Mains Cable Plan on the following page

WARNING
Telstra plans and location information conform to Quality Level "D" of the Australian Standard AS 5488-Classification of Subsurface Utility Information.
As such,Telstra supplied location information is indicative only.Spatial accuracy is not applicable to Quality Level D.
Refer to AS 5488 for further details. The exact position of Telstra assets can only be validated by physically exposing it.
Telstra does not warrant or hold out that its plans are accurate and accepts no responsibility for any inaccuracy.
Further on site investigation is required to validate the exact location of Telstra plant prior to commencing construction work.
A Certified Locating Organisation is an essential part of the process to validate the exact location of Telstra assets and to ensure the asset is protected during construction works.

See the Steps- Telstra Duty of Care that was provided in the email response.

Mains Cable Plan



Report Damage:https://service.telstra.com.au/customer/general/forms/report-damage-to-telstra-
Ph - 13 22 03
Email - Telstra.Plans@team.telstra.com
Planned Services - ph 1800 653 935 (AEST bus hrs only) General Enquiries

Sequence Number: 274376479

TELSTRA LIMITED A.C.N. 086 174 781

Generated On 11/06/2026 14:35:58

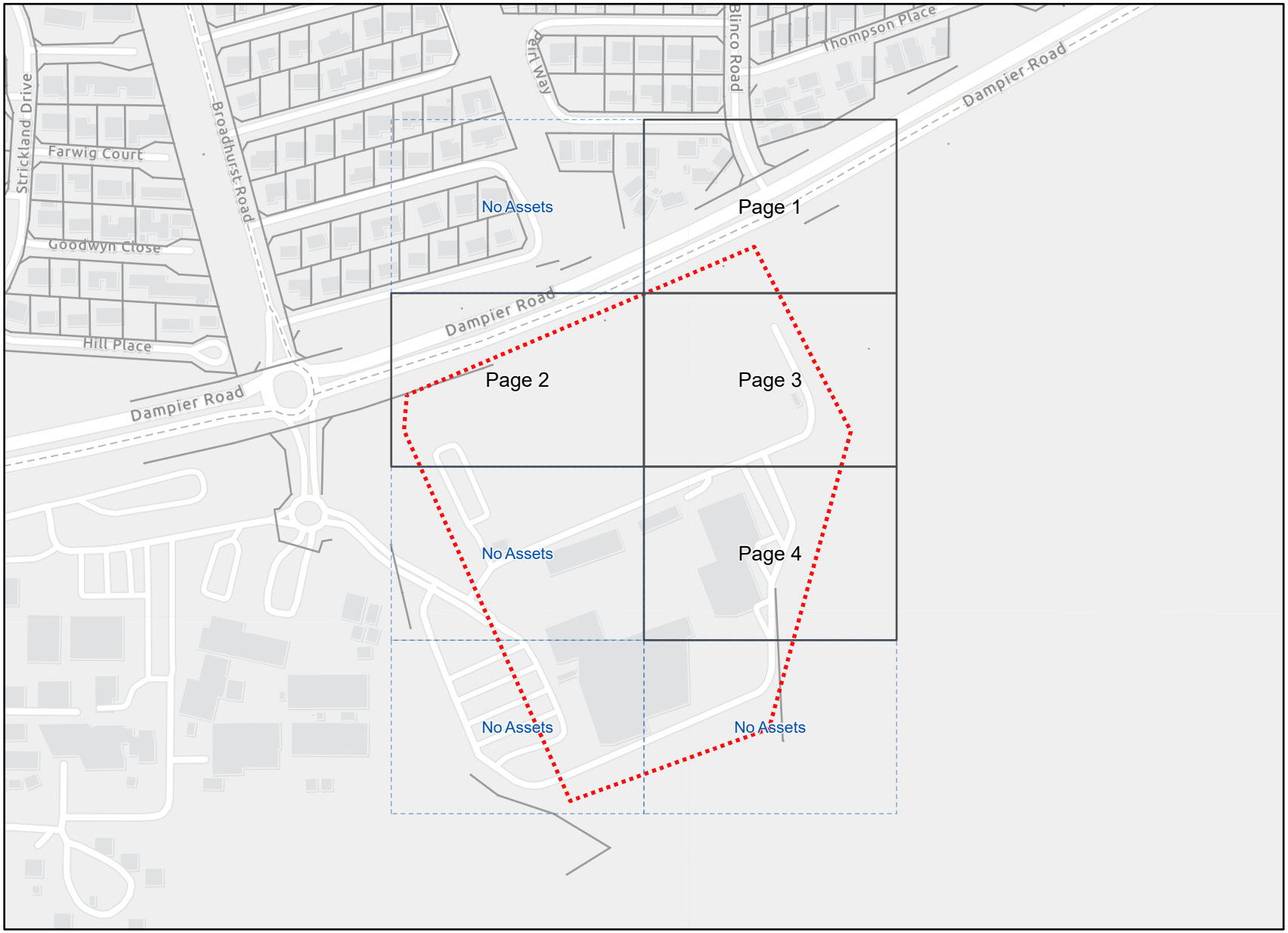
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Job # 53399609
Seq # 274376477
Job site: 2 Broadhurst Road Stove Hill WA 6714
Provided by City of Karratha



Legend

- BYDA Enquiry
- Detailed map page
- No dig site assets

Esri Community Maps Contributors, © OpenStreetMap, Microsoft, Esri, TomTom, Garmin, METI/NASA, USGS

Disclaimer: The Plan is provided in response to a Before You Dig request. While all reasonable care has been taken to ensure the accuracy of the information on this plan, its purpose is to provide a general indication of the location of City of Karratha infrastructure. The information provided may contain errors or omissions and the accuracy may not suit all users. A site inspection and investigation is recommended before commencement of any project based on this data.

In an emergency contact City of Karratha on 9186 8555

Index Sheet

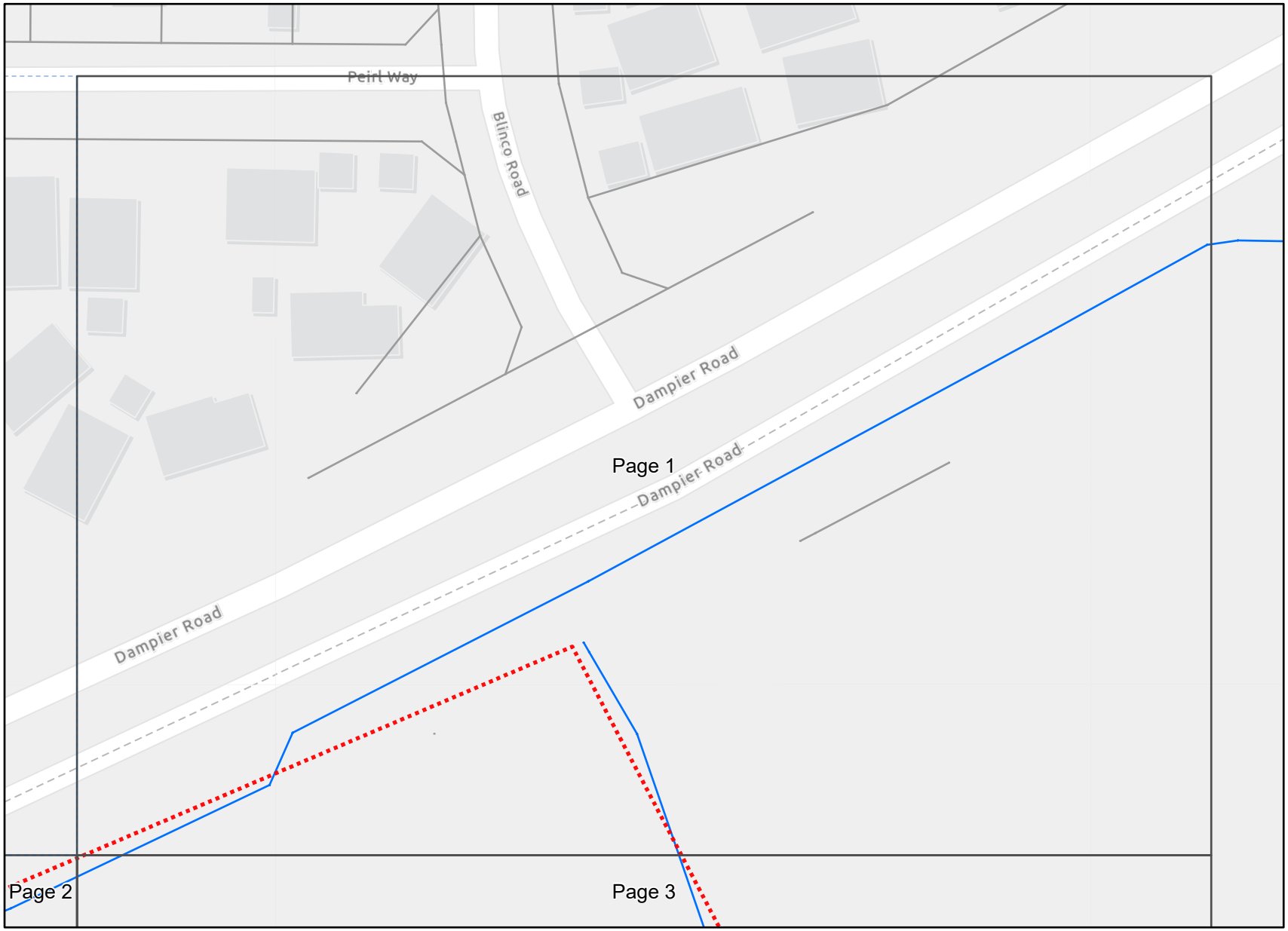
Plans generated by SmarterWX™ Automate

0 50 100 200 m

N

Scale 1:4,500

Job # 53399609
Seq # 274376477
Job site: 2 Broadhurst Road Stove Hill WA 6714
Provided by City of Karratha



Legend

- BYDA Enquiry
- Water Pipe

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In an emergency contact City of Karratha on 9186 8555

11/06/26 (valid for 30 days)

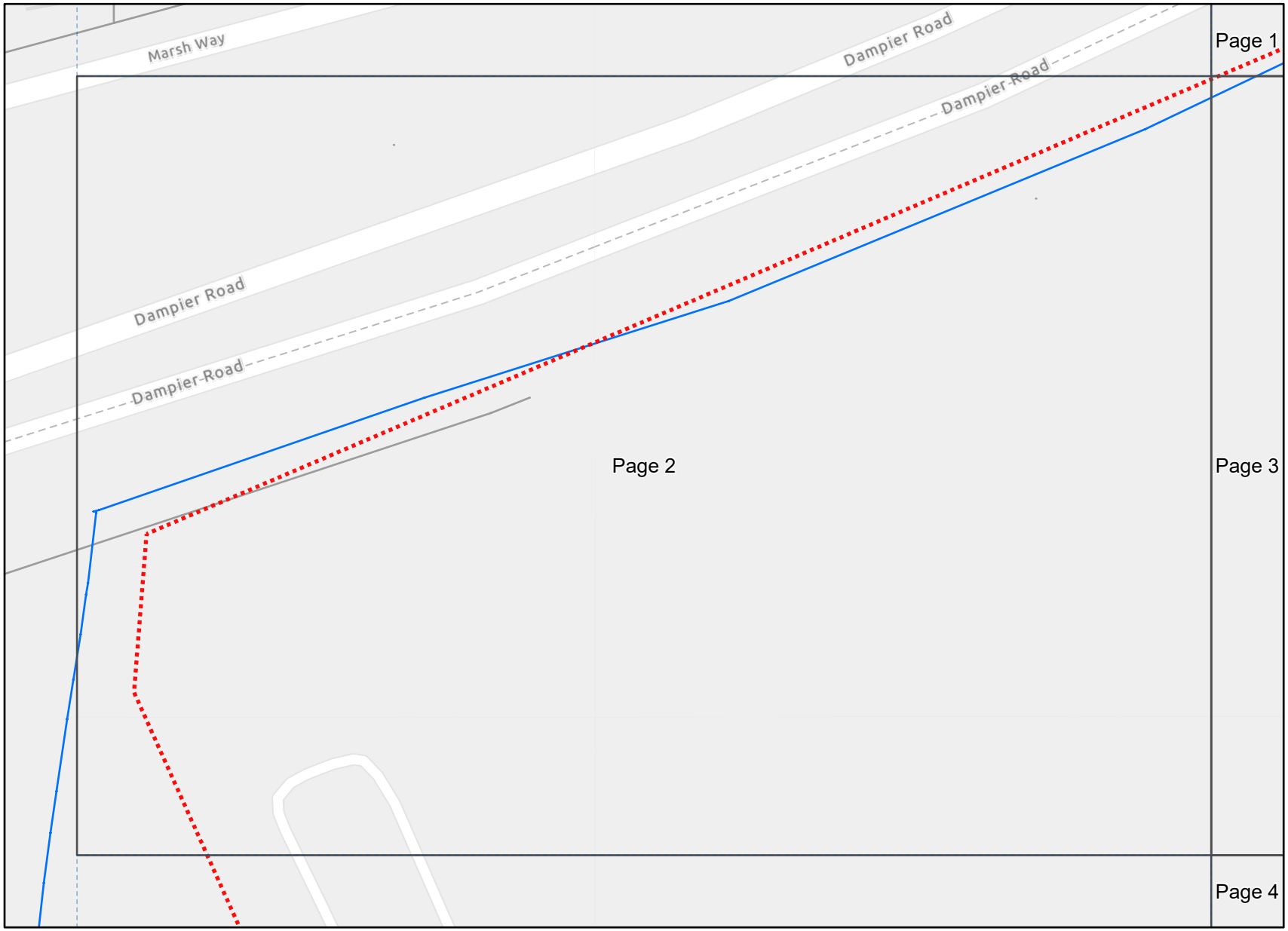
Plans generated by SmarterWX™ Automate

0 10 20 40 m

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Scale 1:1,000

Job # 53399609
Seq # 274376477
Job site: 2 Broadhurst Road Stove Hill WA 6714
Provided by City of Karratha



Legend

- BYDA Enquiry
- Water Pipe

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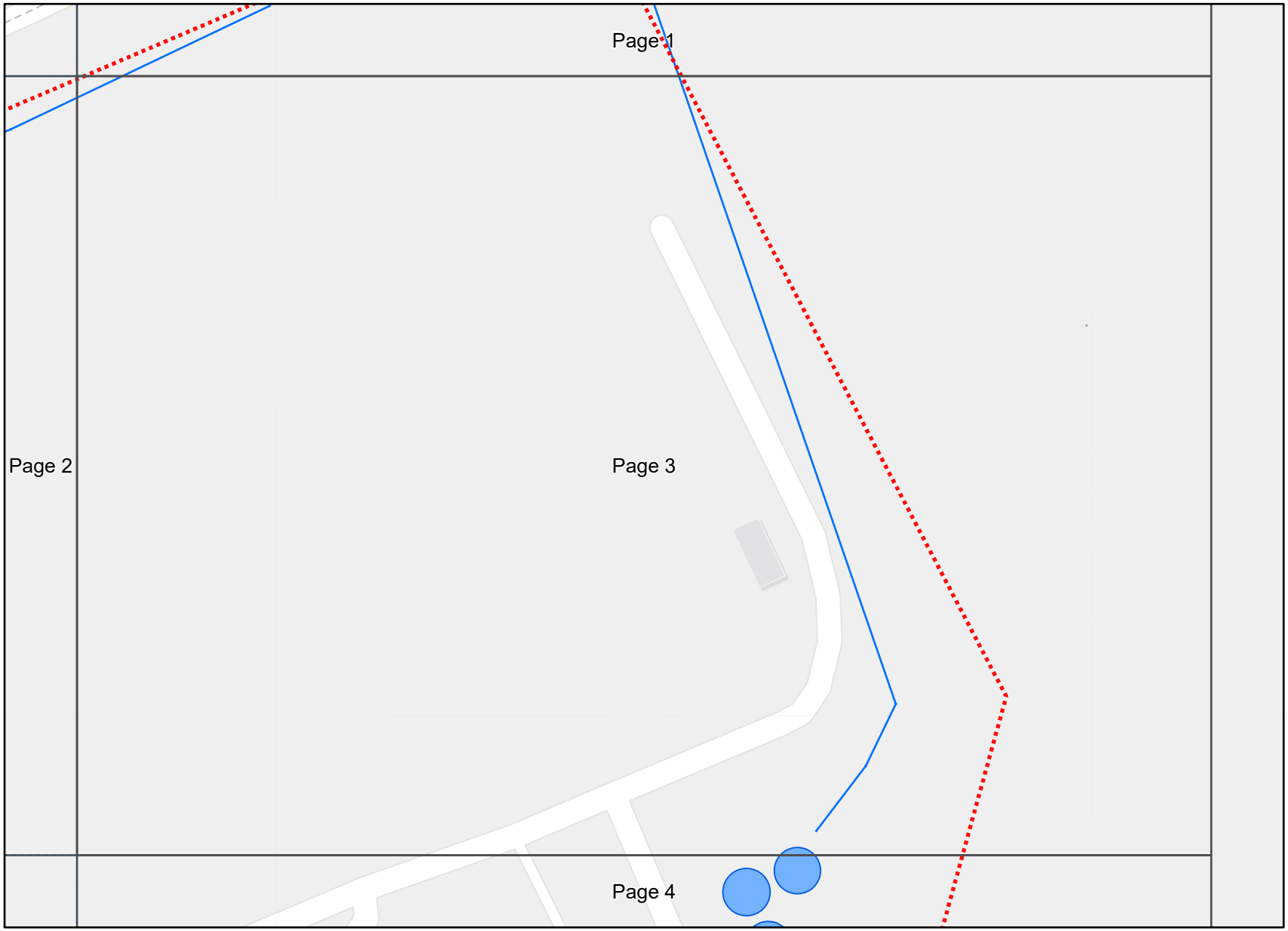
Plans generated by SmarterWX™ Automate

0 10 20 40 m

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Scale 1:1,000

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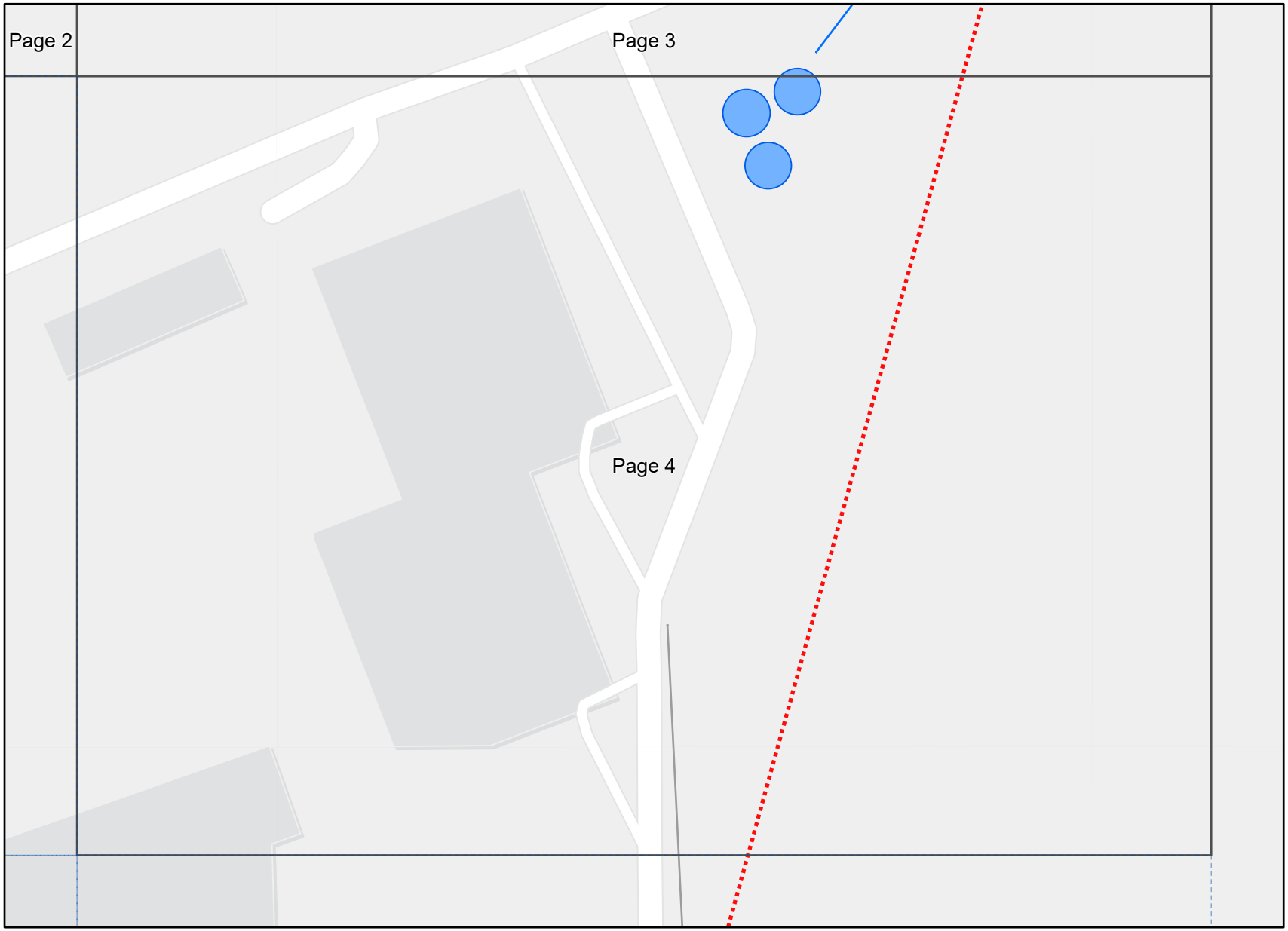
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0 10 20 40 m

N

Scale 1:1,000

Appendix
Additional Site Analysis Considerations - Richardson Way / Country Club

Native Title - Richardson Way / Country Club



7/8/2026, 2:51:11 PM

Determinations

In effect - Finalised

Indigenous Land Use Agreements

ILUA registered

1:3,027

0 0.02 0.04 0.09 mi

0 0.04 0.07 0.15 km

Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, National Native Title Tribunal, © Commonwealth of Australia, NNTT, © Commonwealth of Australia, Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community

National Native Title Tribunal

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LEGEND

LOCAL SCHEME RESERVES

- Conservation, recreation and nature landscape
- District roads
- Infrastructure
- Local roads
- Parks, recreation and drainage
- Public purposes - Airport (A)
- Public purposes - Cemetery (C)
- Public purposes - Community (CM)
- Public purposes - Education (ED)
- Public purposes - Energy (E)
- Public purposes - Health (H)
- Public purposes - Telecommunications (T)
- Public purposes - Waste disposal and treatment (WDT)
- Public purposes - Water and drainage (WD)
- State and regional roads

LOCAL SCHEME ZONES

- City centre
- Commercial
- Industrial development
- Industry
- Mixed business
- Residential
- Rural
- Rural residential
- Special use
- Strategic industry
- Tourism
- Town centre
- Urban development

OTHER CATEGORIES

(see scheme text for additional information)

- Scheme Boundary
- Local Government Boundary
- Additional uses (AI)
- Restricted uses (RI)
- Special use area (SU1)
- R Codes (R20)
- Airport noise restriction SCA
- Airport obstacle height limitation area SCA
- City centre precinct - retail (P1)
- City centre precinct - commercial (P2)
- City centre precinct - entertainment (P3)
- City centre precinct - accommodation (P4)
- Cossack and Jarman Island low-impact tourism precinct SCA
- Cossack historic town SCA
- Dampier Salt SCA
- Industry buffer SCA
- Roebourne flood management SCA
- Structure plan areas (DA1)
- Withnell Bay SCA

- No zone
- Oceans/Waterways

Department of Planning, Lands and Heritage
GOVERNMENT OF WESTERN AUSTRALIA

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Produced by Data Analytics, Department of Planning, Lands and Heritage.

City of Karratha

Local Planning Scheme No. 8

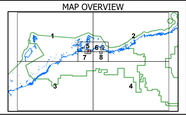
(District Scheme)

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0 200 400 600 800

Meters

MAP OVERVIEW



Authorised: T.Servaas

Plot Date: 13 April 2026

G.Gazette: Tuesday, 22 August 2000

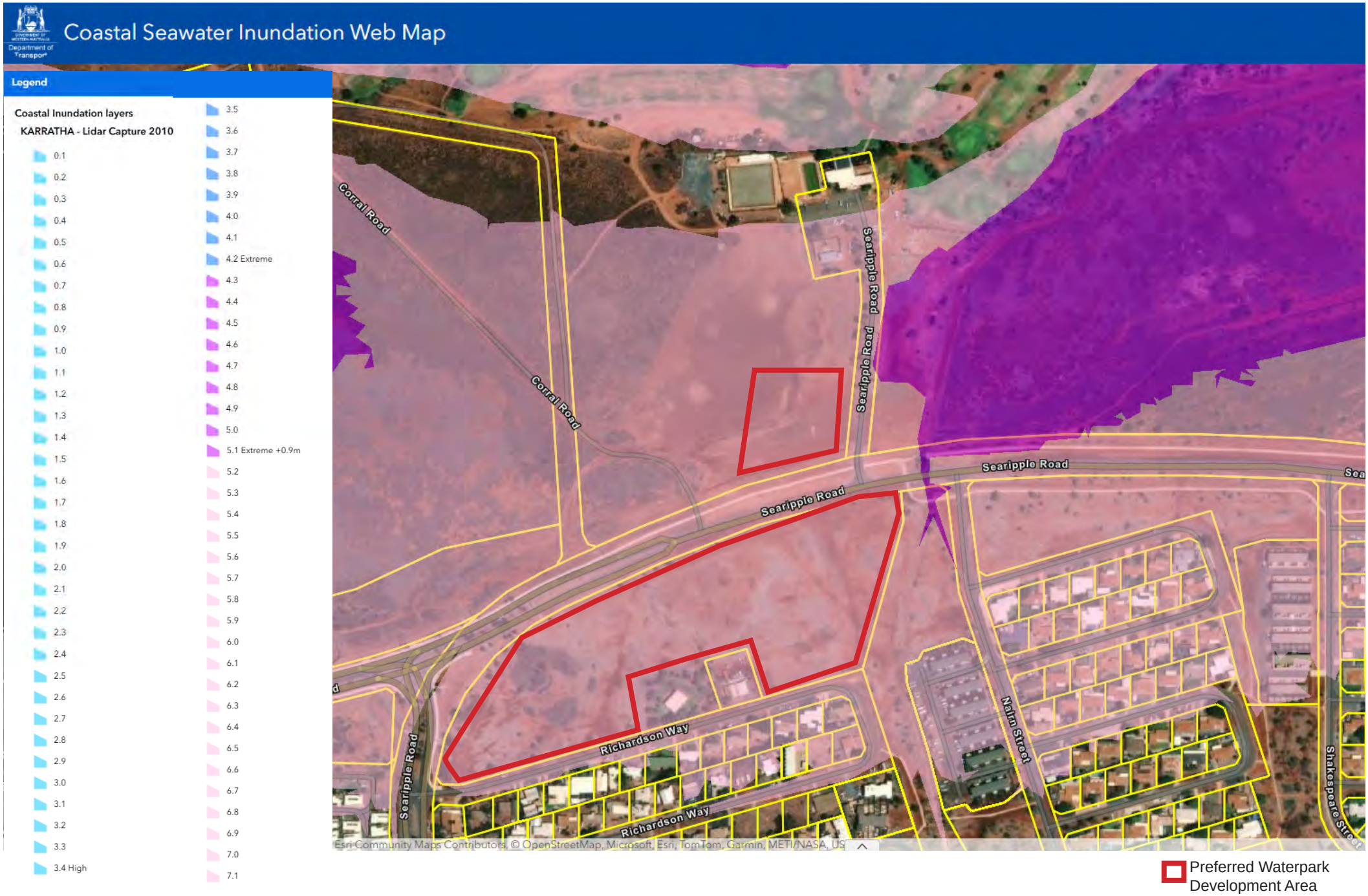
Local Planning Scheme Map No. 11 of 16
MAP: Karratha Townsite Centre

City of Karratha

Local Planning Scheme No. 8

(District Scheme)

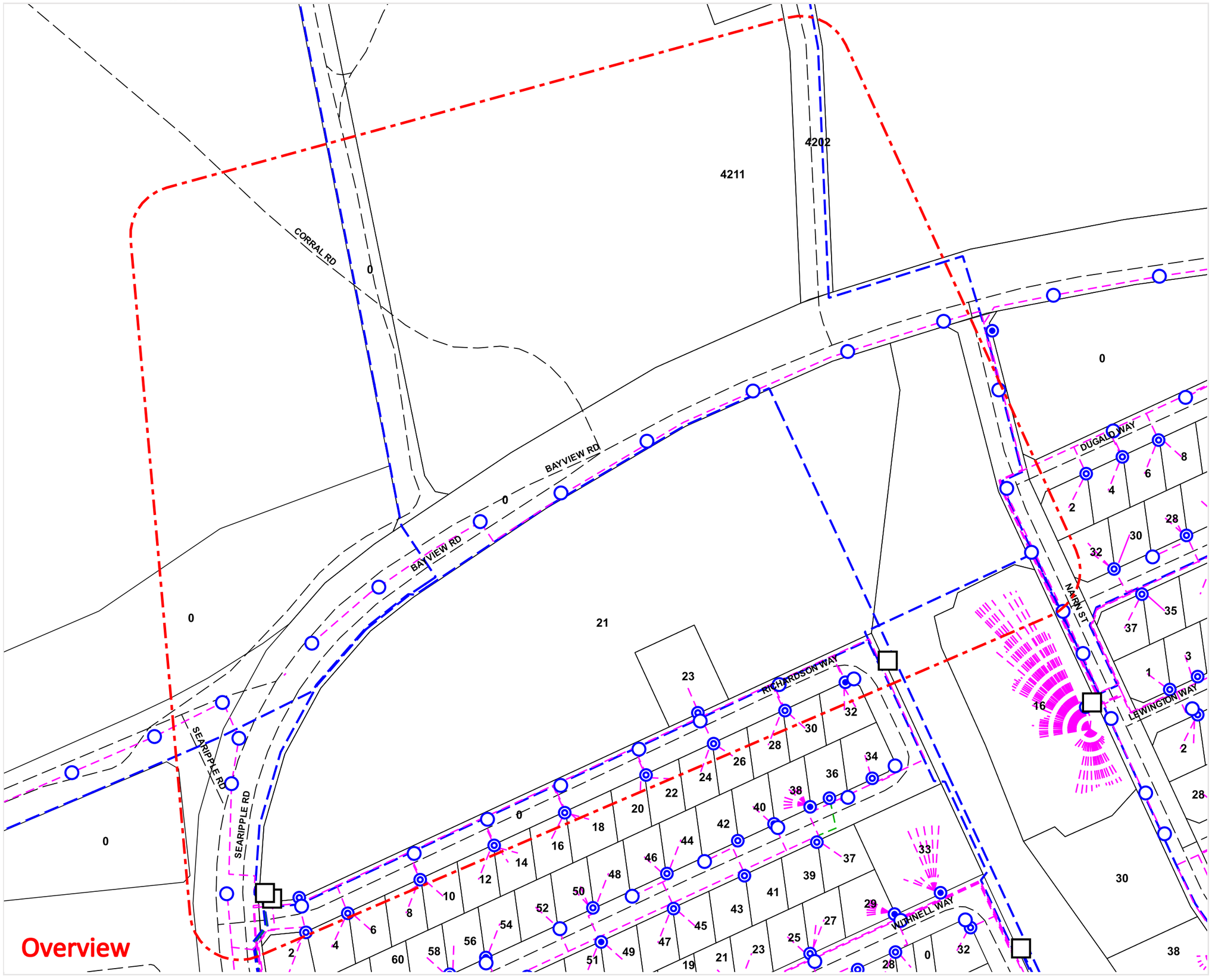
Richardson Way / Country Club - Coastal Seawater Inundation



HORIZON POWER energy for life

Sequence No: 274377261
Job No: 53399745
Location: 21 Richardson Way, Bulgarra, WA 6714

DIAL BEFORE YOU DIG www.1100.com.au The Essential First Step.



Legend

Existing	Proposed	
SUB	SUB	Distribution Substation
		Distribution Pole
		LV Mini Pillar
		LV Universal Pillar
LVF	LVF	LV Cabinet
UMS	UMS	LV Unmetered Supply Pit
PIT	PIT	LV Service Pit
FB	FB	LV Wall Mounted Box
LV	LV	LV Unknown Structure
		LV Distribution Cable - Underground
		LV Distribution Wire - Overhead
		HV Distribution Cable - Underground
		HV Distribution Wire - Overhead
Ø	Ø	Stay Anchor
		Stay Wire
		Transmission Cable - Underground
		Transmission Wire - Overhead
		Transmission Pole
a	a	Transmission Tower
		Communications Cable
		Fibre Optic Cable
		Zone Substation

N

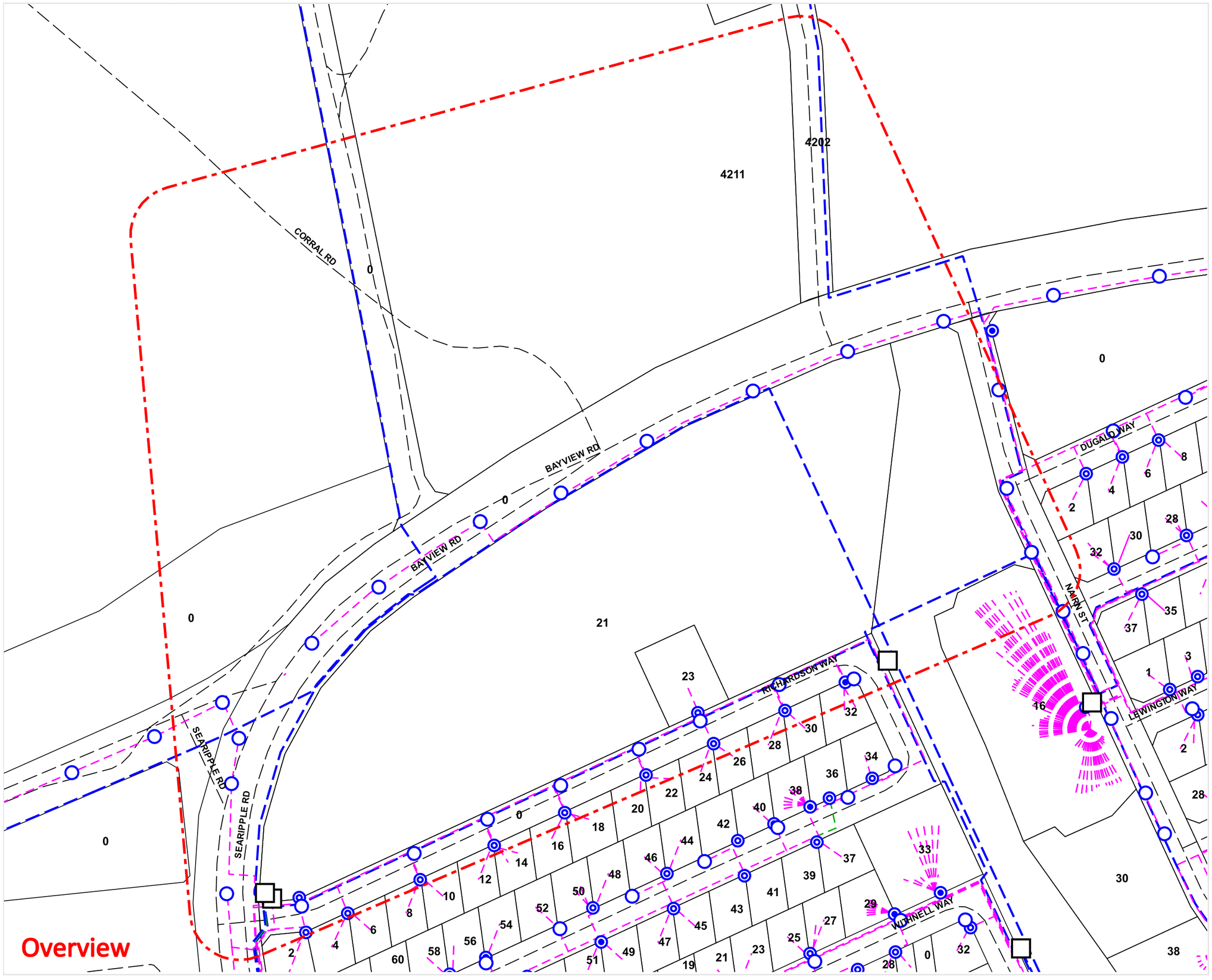
Scale: 1:2215
Expires: 09 Jul 2026

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HORIZON POWER energy for life

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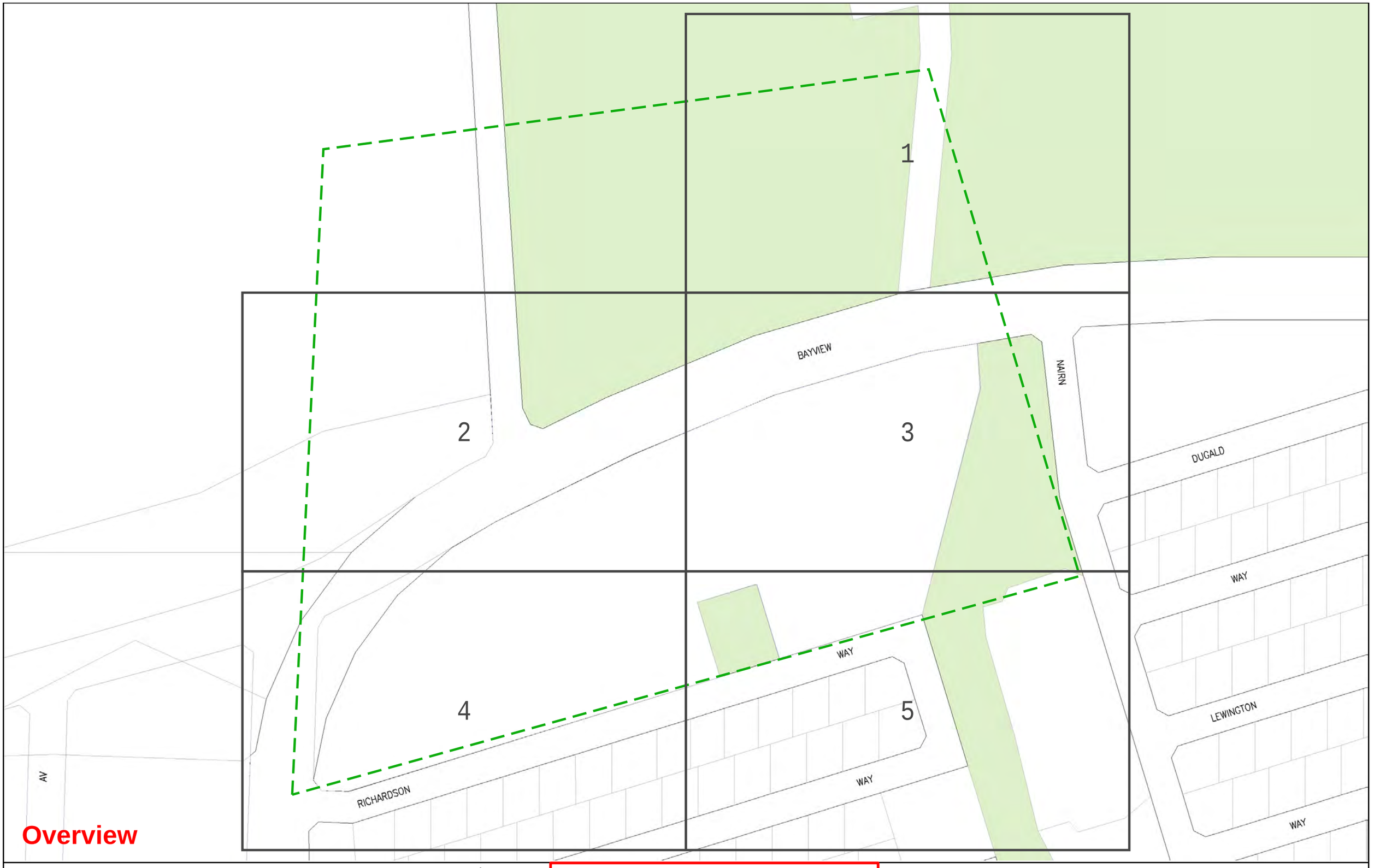
Legend

Existing	Proposed	
SUB	SUB	Distribution Substation
		Distribution Pole
		LV Mini Pillar
		LV Universal Pillar
LVF	LVF	LV Cabinet
UMS	UMS	LV Unmetered Supply Pit
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		LV Distribution Wire - Overhead
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		Stay Wire
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		Transmission Wire - Overhead
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a	a	Transmission Tower
		Communications Cable
		Fibre Optic Cable
		Zone Substation

N

Scale: 1:2215
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Overview

WATER CORPORATION

Scale: 1:2306
Job No.: 53399745
Sequence No.: 274377263
Print Date: 11 Jun 2026

N

Sewer

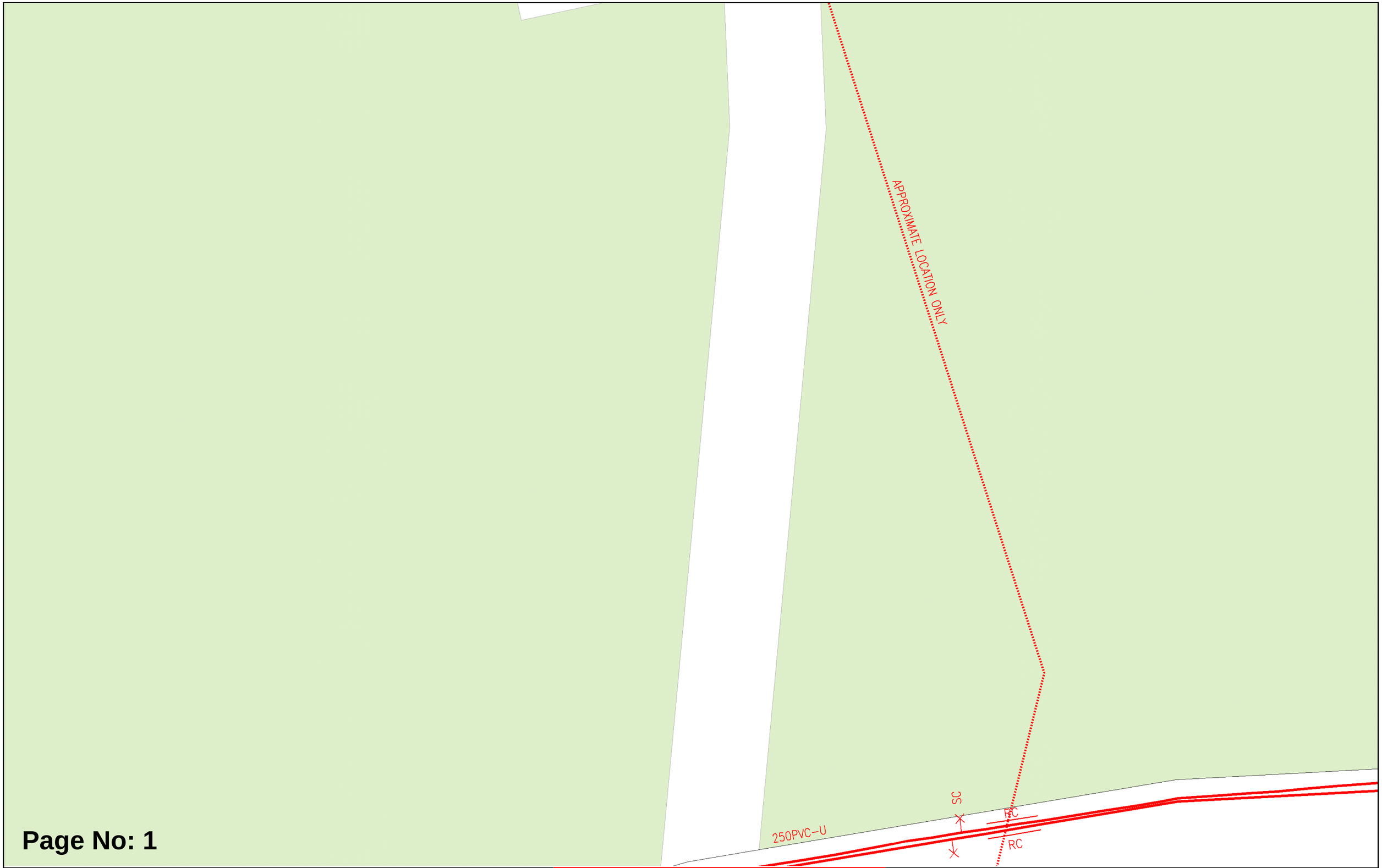
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Apply for approval to work near our assets at:

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Page No: 1

WATER CORPORATION

Scale:	1:750
Job No.:	53399745
Sequence No.:	274377263
Print Date:	11 Jun 2026

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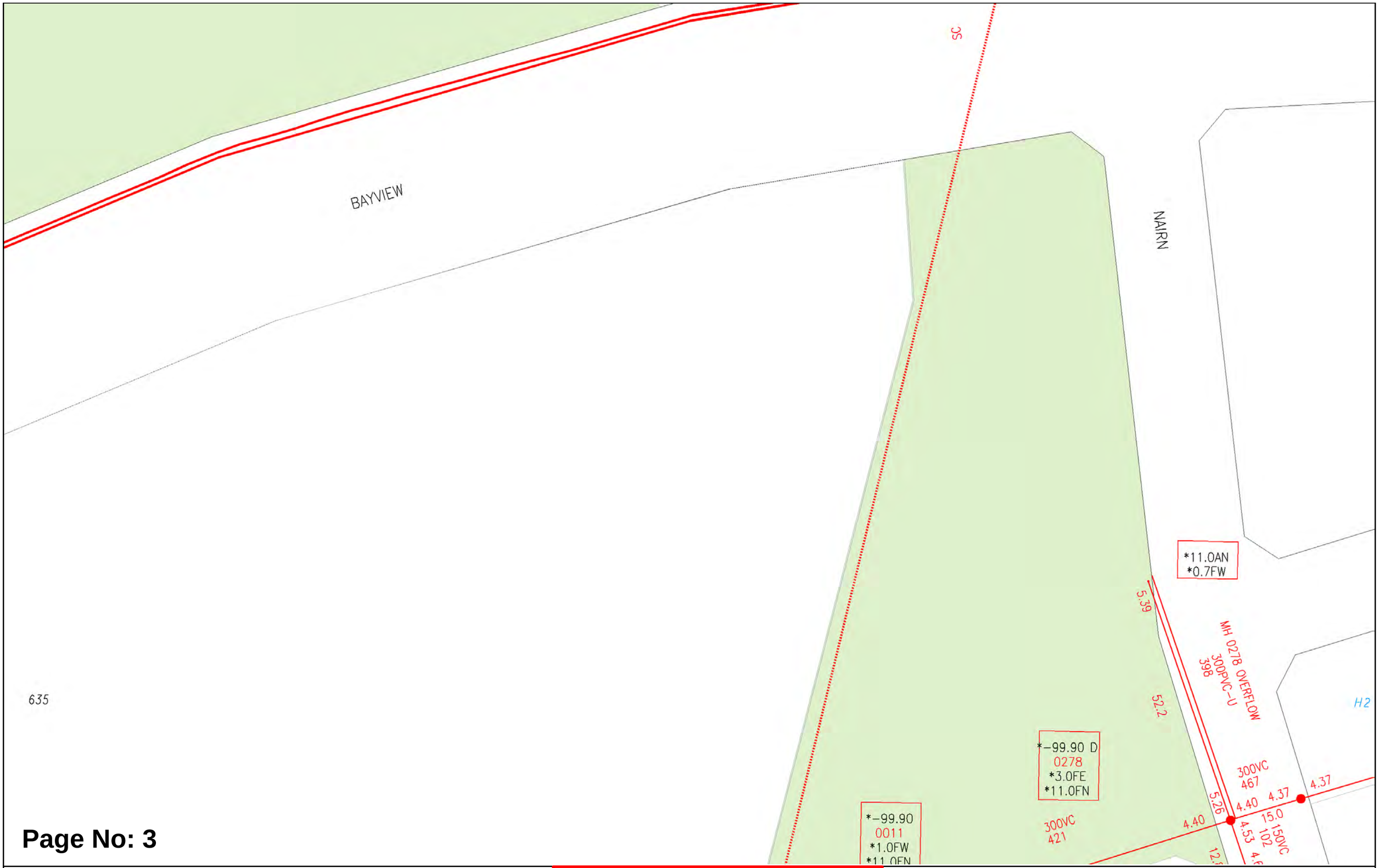
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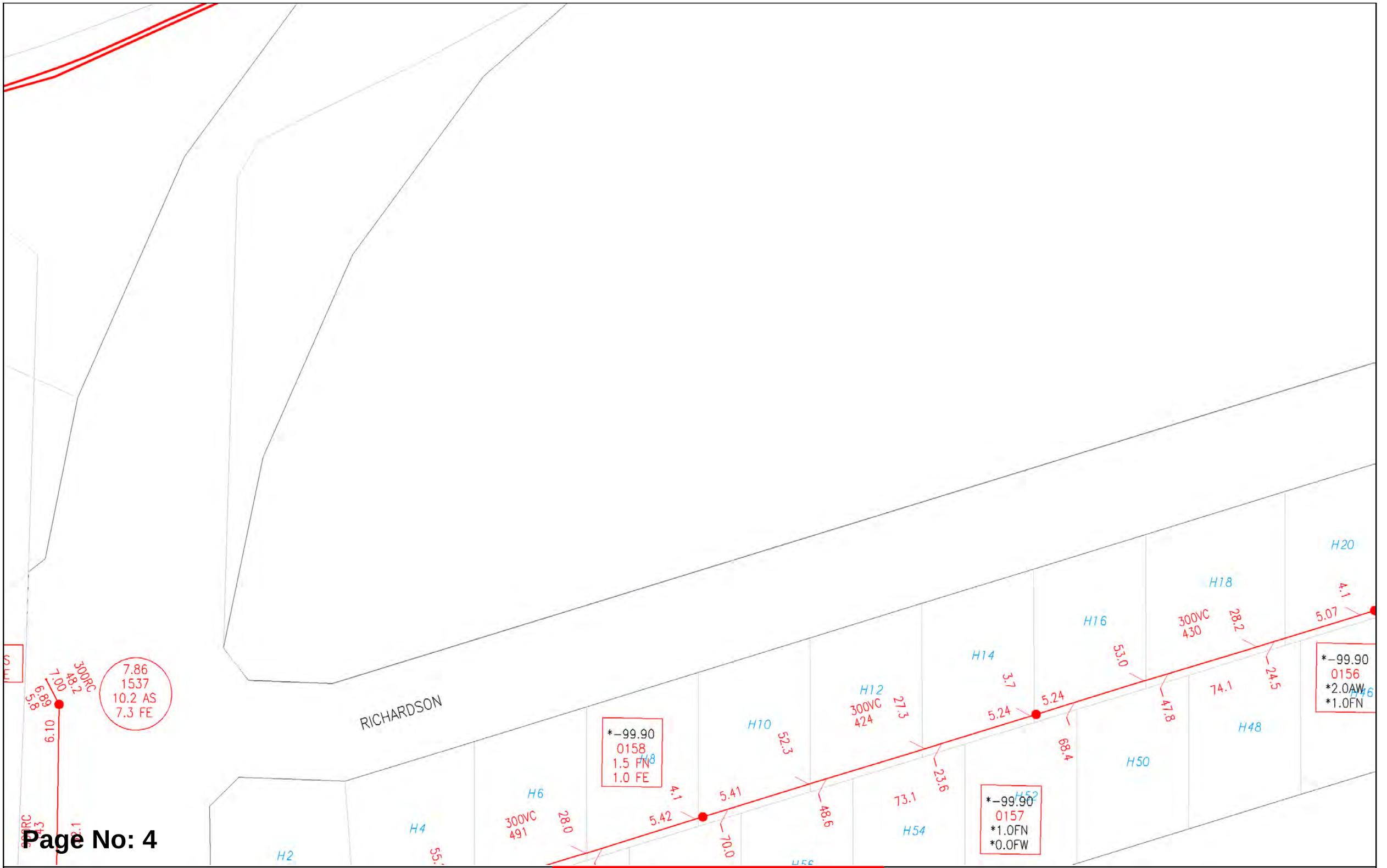
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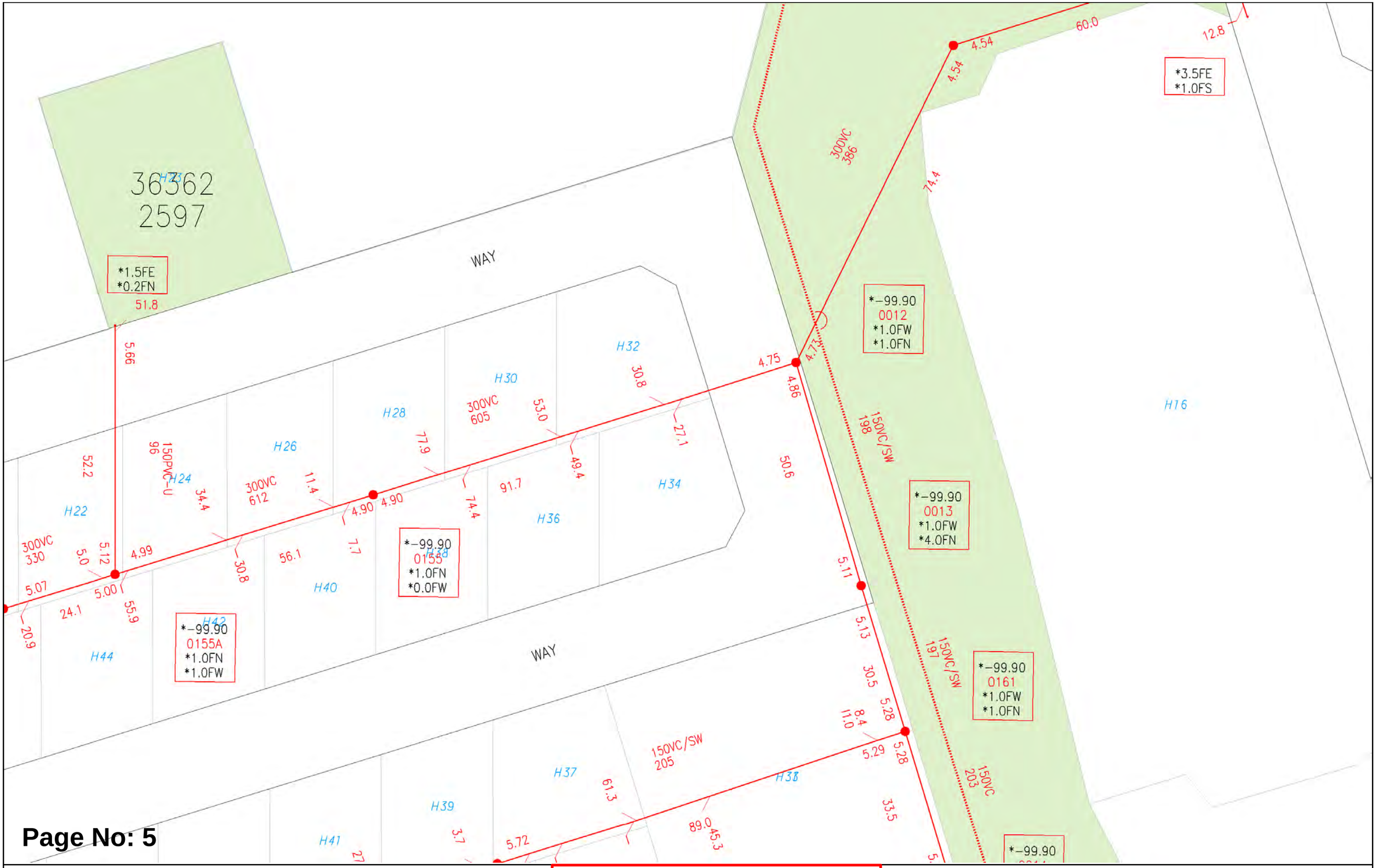
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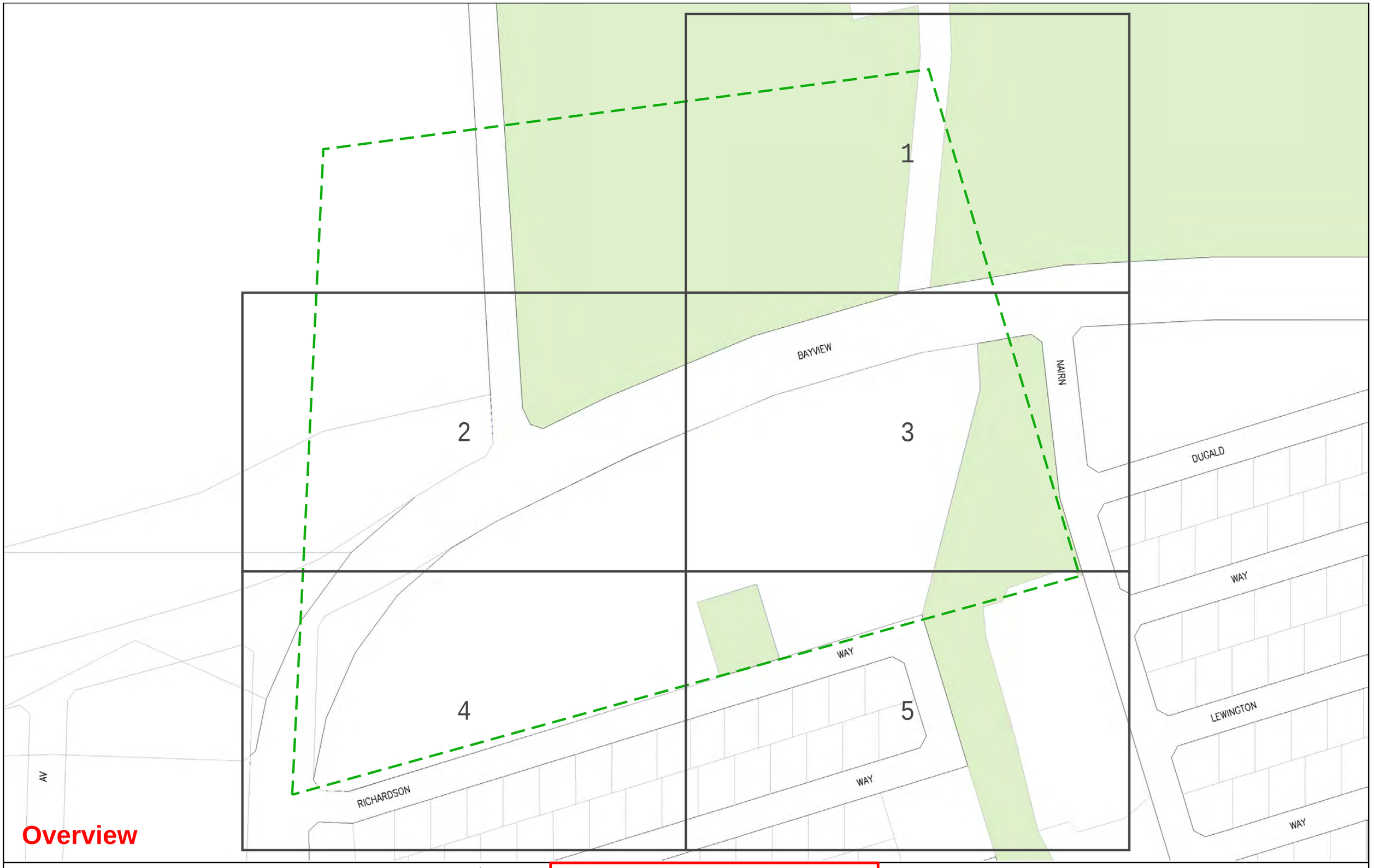
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Overview

WATER CORPORATION

Scale: 1:2306
Job No.: 53399745
Sequence No.: 274377263
Print Date: 11 Jun 2026

N

Water

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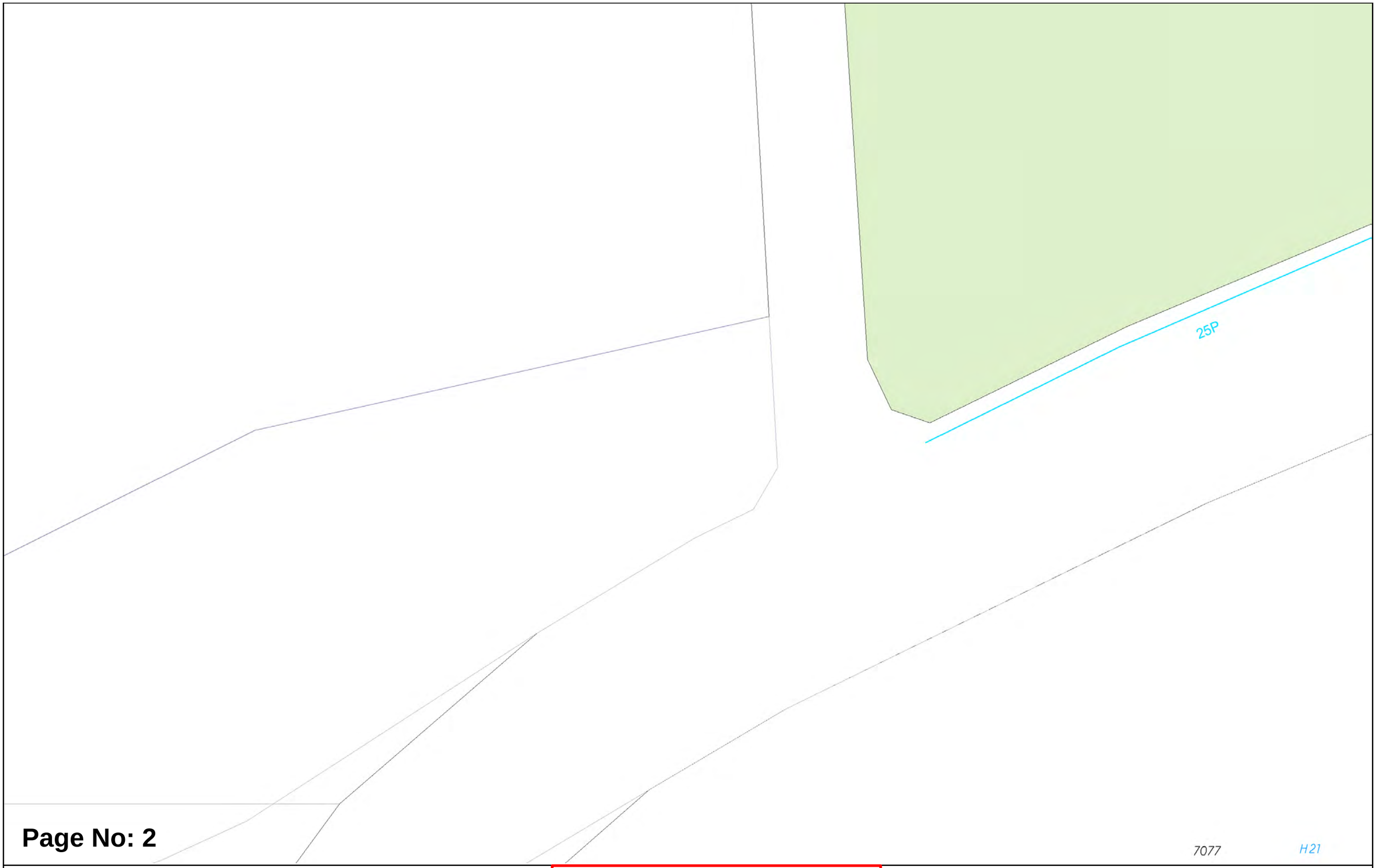
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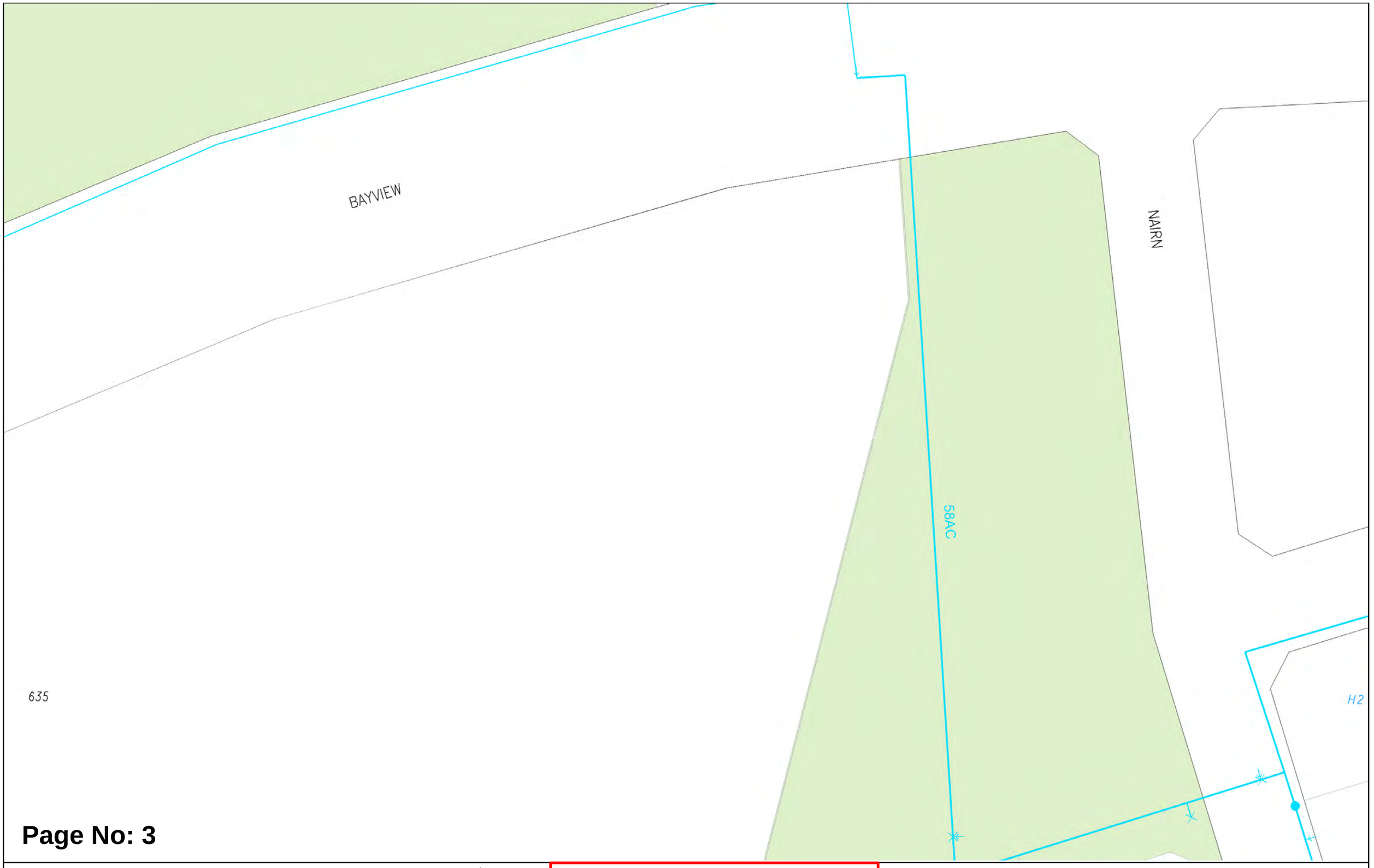
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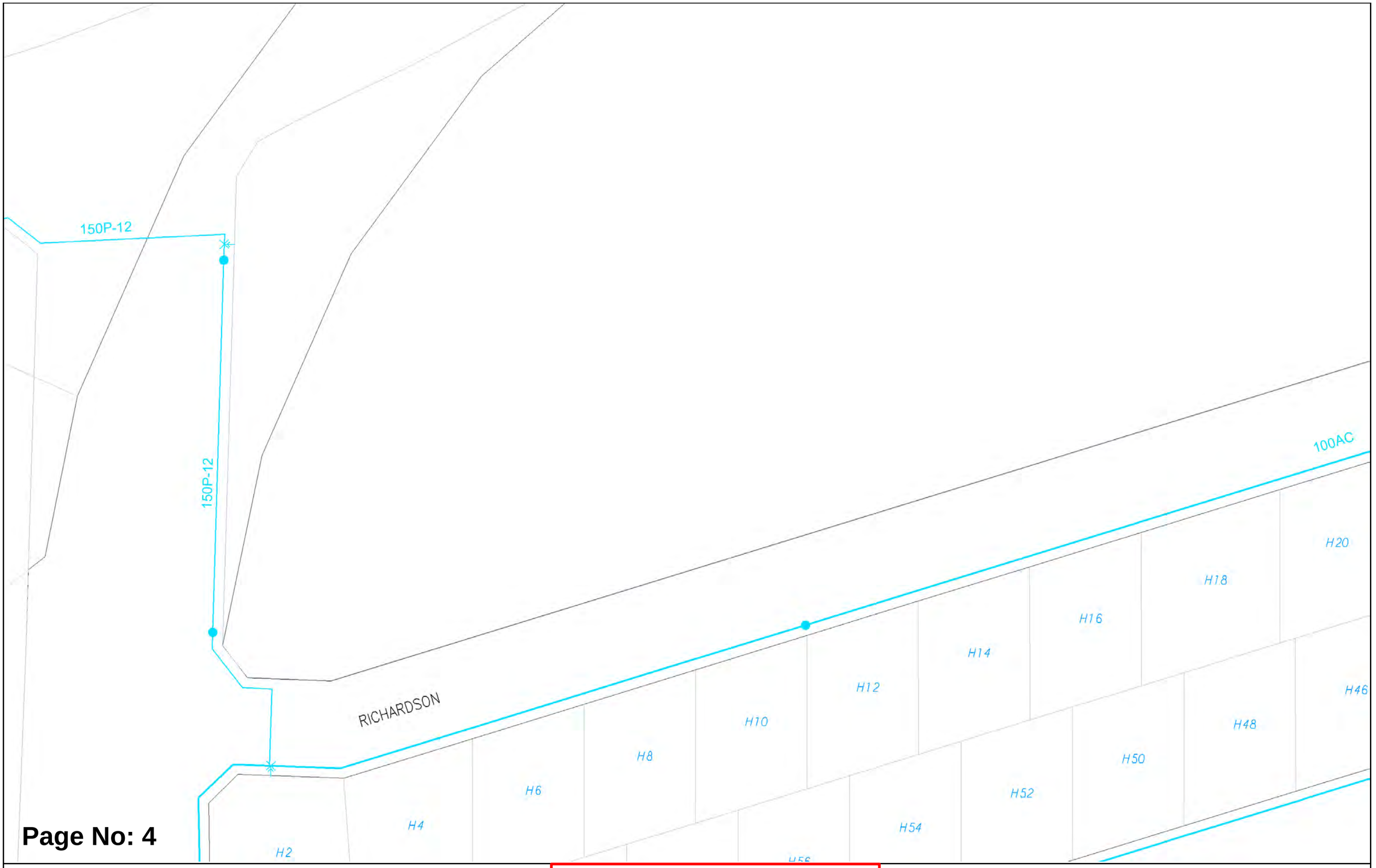
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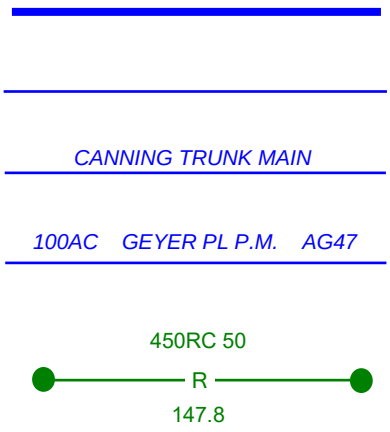
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Plan Legend (summary)
INFORMATION BROCHURE



This legend is provided to Dial Before You Dig users to assist with interpreting Water Corporation plans. A more detailed colour version can be downloaded from www.watercorporation.com.au. (Your business > Working near pipelines > Downloads)

WARNING - Plans may not show all pipes or associated equipment at a site, or their accurate location. Pothole by hand to verify asset location before using powered machinery.



WATER, SEWERAGE AND DRAINAGE PIPELINES

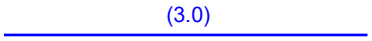
CRITICAL PIPELINE (thick line) EXTRA CAUTION REQUIRED
A risk assessment may be required if working near this pipe. Refer to your Dial Before You Dig information or call 131375.

Pipes are not always labelled on plans as shown here – assume all pipes are significant and pothole to prove location and depth.

P.M.	pressure main
M.S.	main sewer
R	rising main (i.e. drainage pressure main)

Common material abbreviations:

AC	asbestos cement e.g. 100AC NOTE: AC is brittle and is easily damaged.
CI	cast iron
GRP	glass reinforced plastic
P	PVC - class follows pipe material (e.g.100P-12)
RC	reinforced concrete
S	steel
VC	vitrified clay



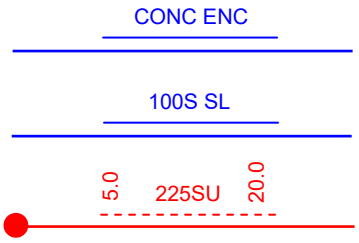
NON-STANDARD ALIGNMENT

Pipes are not always located on standard alignments due to local conditions. (i.e. Other than 2.1 m for reticulation mains and 4.5 m for distribution mains.)



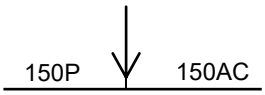
OTHER PIPE SYMBOLS

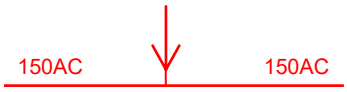
Other numbers or codes shown on pipes are not physical attributes. These are Water Corporation use only.



CONCRETE ENCASEMENT, SLEEVING AND TUNNELS

May be in different forms: steel, poured concrete, box sections, slabs.





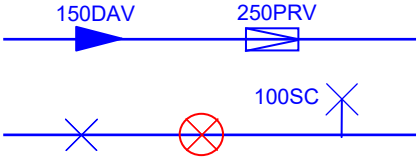
CHANGE INDICATOR ARROW

Indicates a change in pipe type or size. e.g. 150mm diameter PVC to 150mm diameter asbestos cement (AC).



PIPE OVERPASS

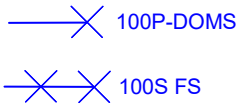
The overpass symbol indicates the shallower of the two pipes.



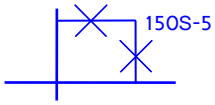
VALVES

Many different valve types are in use. Valve may be in a pit or have a visible valve cover. There may be no surface indication.

Valves may be shallower than the main or offset from it. e.g. A scour valve (SC) may have a pipe coming away from main pipeline on the opposite side to that indicated on the plan.



FIRE SERVICES
100 mm polythene domestic (DOMS) service
FS Fire service
FHS Fire hydrant service
Hydrant may be visible external to the building. Even if not visible a substantial fire service may still be present.



PIPE BYPASS
Bypass will not be on the same alignment as the main pipeline.



CATHODIC PROTECTION (CP)
Buried CP equipment may be located some distance from the pipeline being protected interconnected by buried cable. All CP fittings may not be visible.
A buried anode – various sizes and configurations
TP test point - may be visible on a post or in-ground
TR transformer rectifier



ACCESS TEE OR MANHOLE OR SERVICE ACCESS PIT
NOTE: Opening any manhole or pit is dangerous and is prohibited.
Below ground. May not be any visible signs at ground level or may be located in a pit.



WASTEWATER ACCESS CHAMBERS (MANHOLES)
-- Manhole (shown not labelled)
-- Tee or maintenance shaft (shown not labelled)
MS maintenance shaft (labelled)
WARNING: Opening any manhole or pit is dangerous and is prohibited.



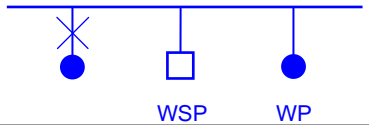
WASTEWATER MANHOLE INFORMATION BOXES
Square non-trafficable Do not drive vehicles over or place loads.
Round trafficable
In general if not located in the road treat as if non-trafficable.



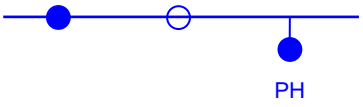
HAZARDOUS MANHOLE
Indicates a potential health hazard from risk of exposure to toxic waste.
WARNING: Opening any manhole is dangerous and is prohibited.



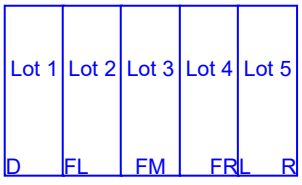
FLOWMETER
Various types of flow meters located in a pit. May be labelled with identifier. (e.g. 50 MFM, 50MM)



STANDPIPE, WATER SAMPLING POINT (WSP), WATER SUPPLY POINT (WP)
May be located adjacent to mains. Usually there will be some visible indication.



Hydrant May not be visible.
Hydrant Tee May not be visible.
Pillar hydrant Visible



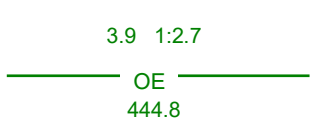
PRE-LAID SERVICES
D Deferred
FL Fully Prelaid Left
FM Fully Prelaid Front Middle
FR Fully Prelaid Right
L Left
R Right

Code indicates on which side of a lot the water service is located:

May be no visible indication at site.



SEWER OR DRAINAGE PUMP STATION
Several pipes and a pressurised main will be in the vicinity.



OPEN CHANNEL
OA Landscaped
OE Normal Open Earth
OF Open channel with flood levee
OH Half Pipe
OL Lined Channel
OS Swale-Shallow Depression
OW Natural Water Course

Drainage structures, even if dry, must be kept clear of any obstruction such as sand stockpiles.

To:	Aidan Power
Phone:	Not Supplied
Fax:	Not Supplied
Email:	Aidan@tredwell.co.nz

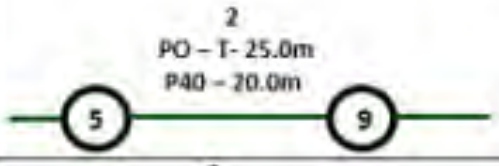
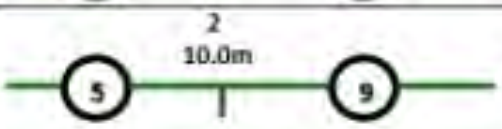
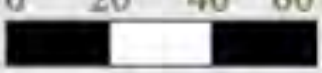
Dial before you dig Job #:	53399745
Sequence #	274377259
Issue Date:	11/06/2026
Location:	21 Richardson Way , Bulgarra , WA , 6714

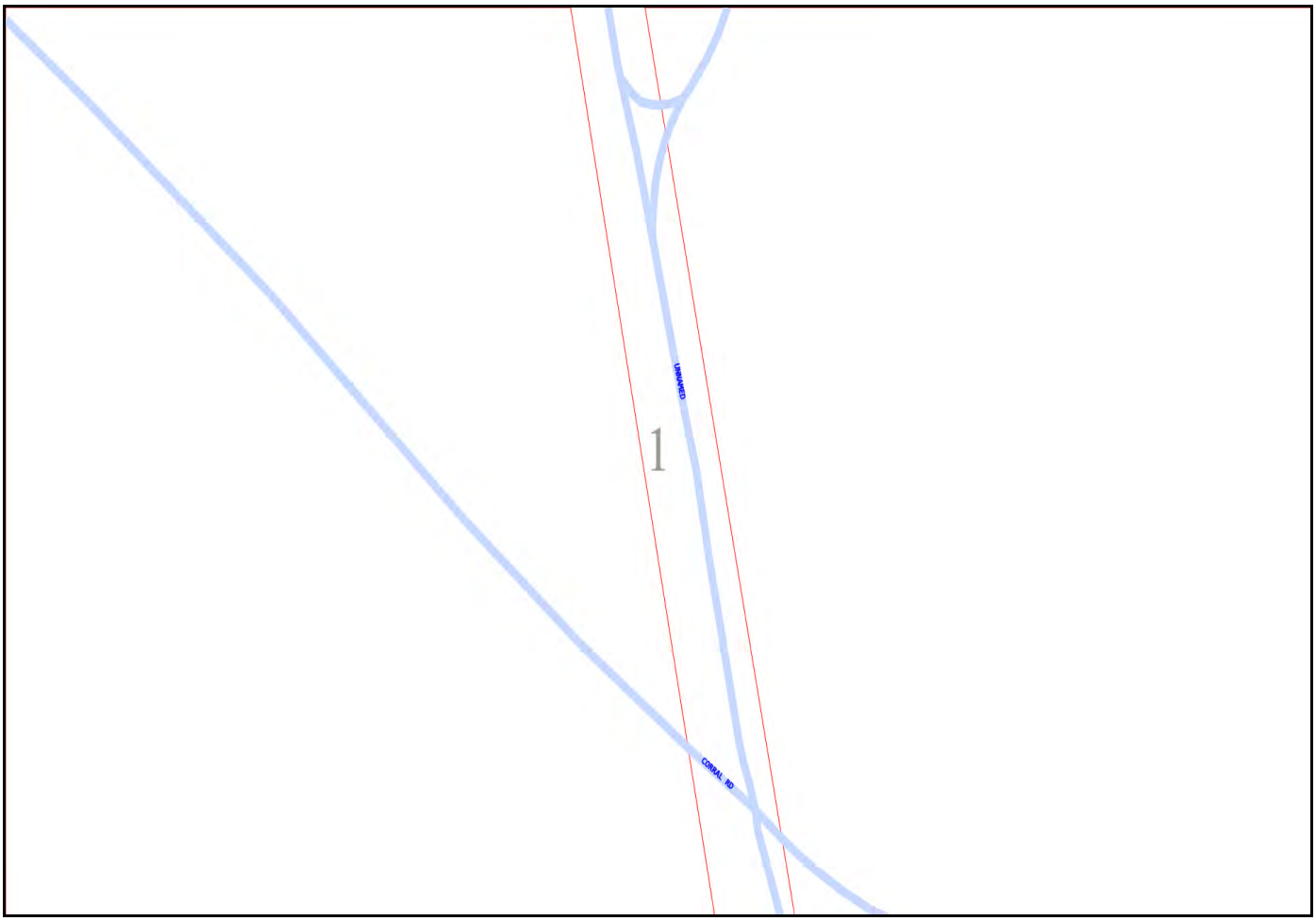
BEFORE YOU DIG www.byda.com.au Zero Damage - Zero Harm

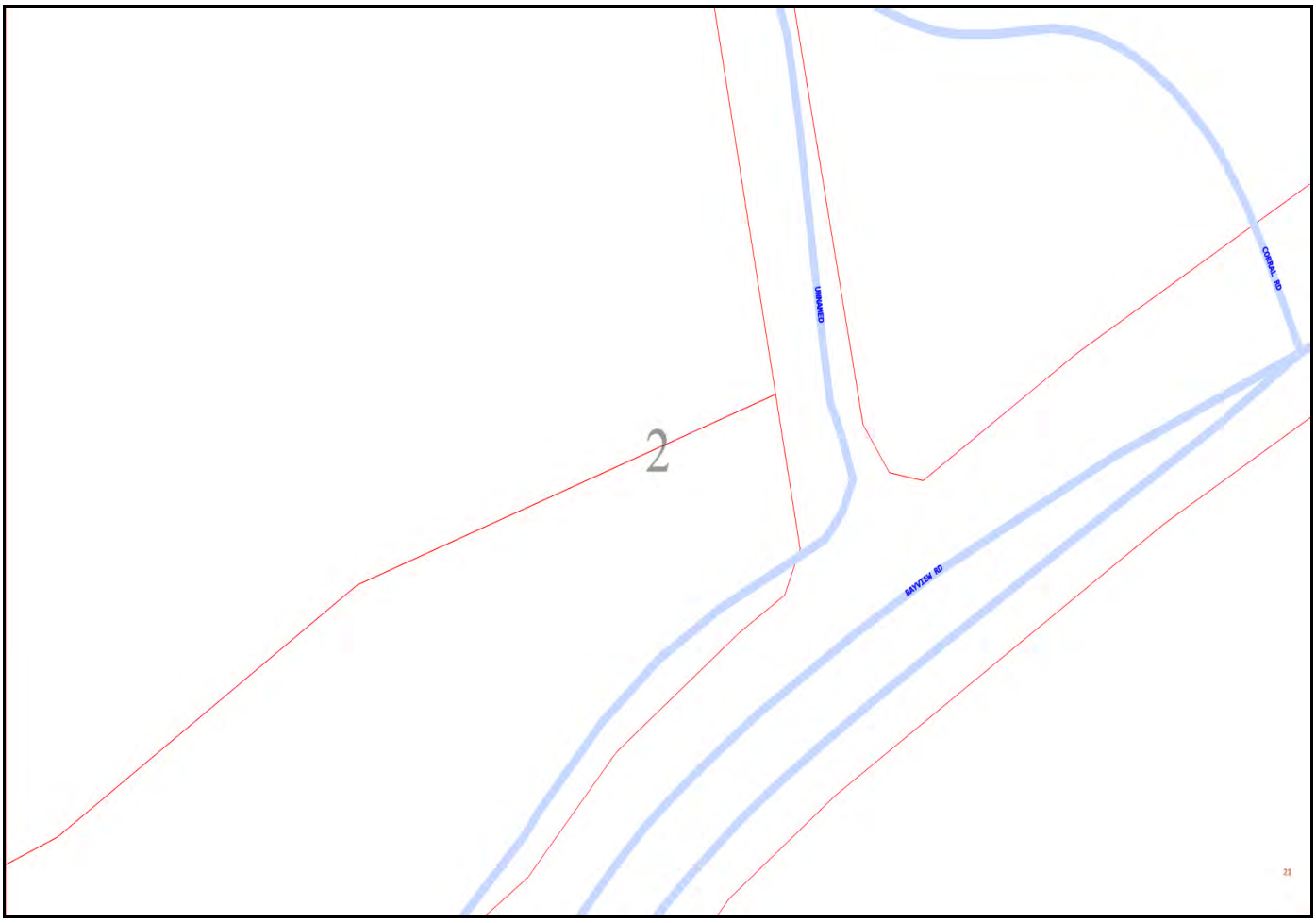
Indicative Plans are tiled below to demonstrate how to layout and read nbn asset plans

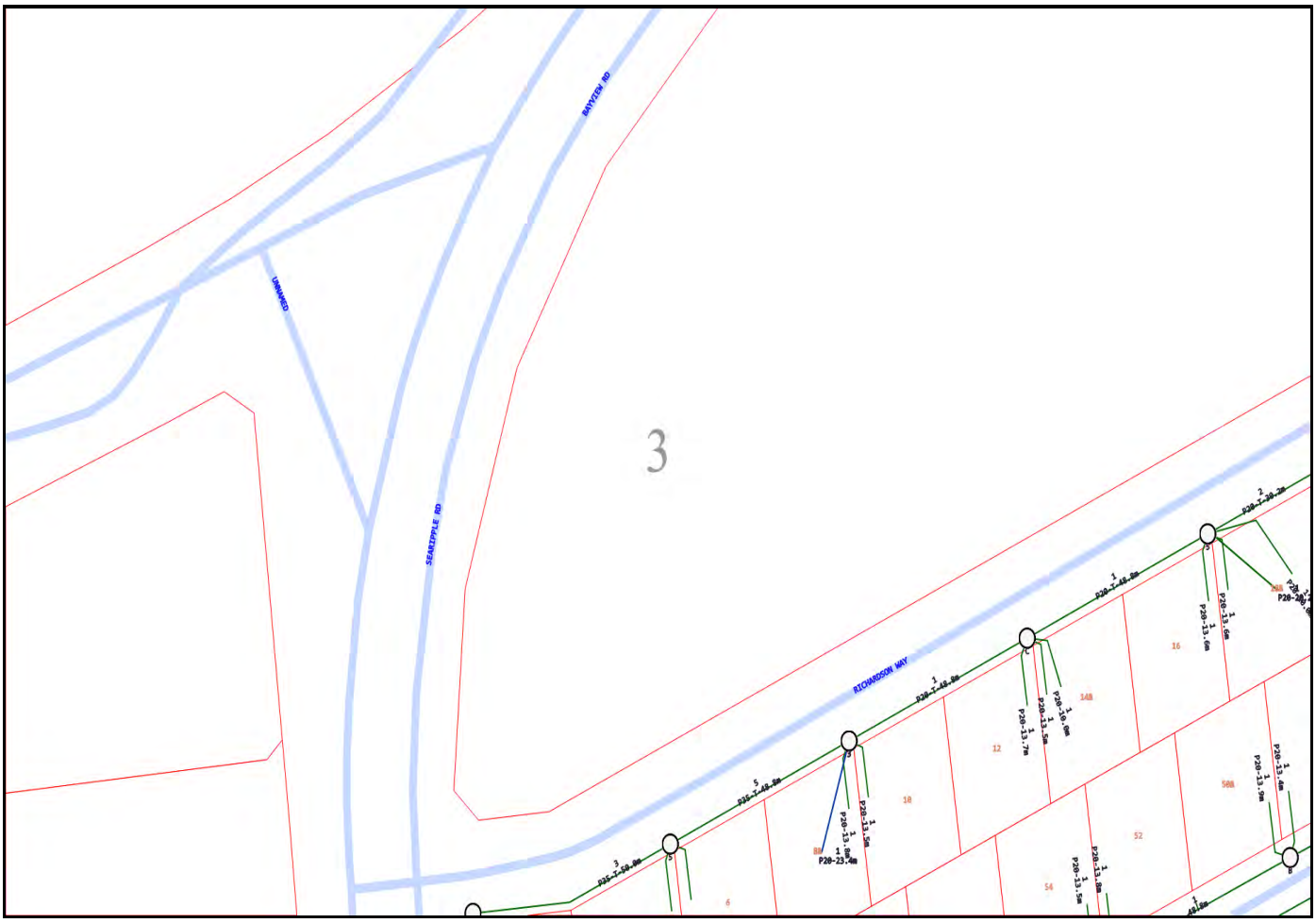
1	4
2	5
3	6

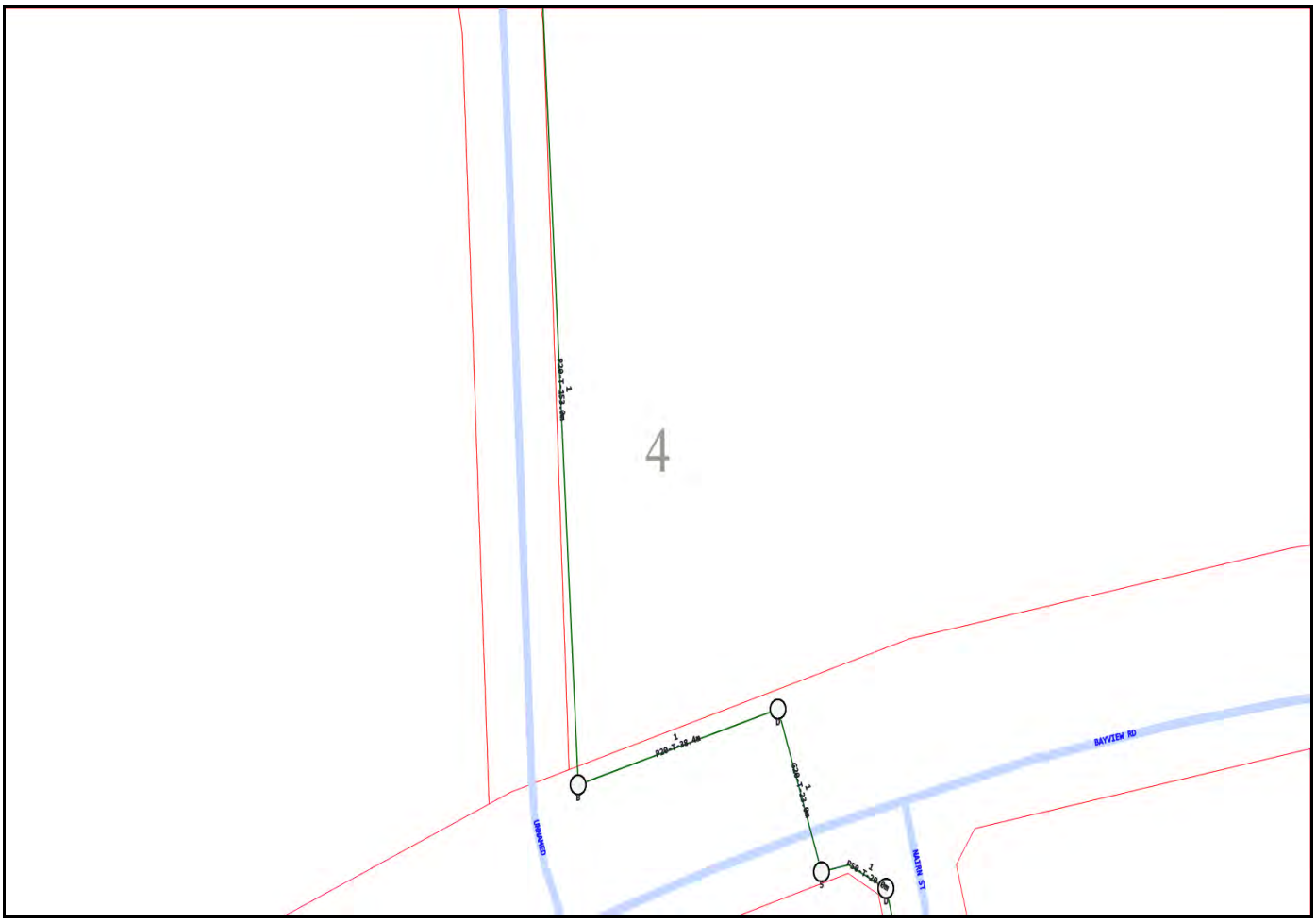
LEGEND

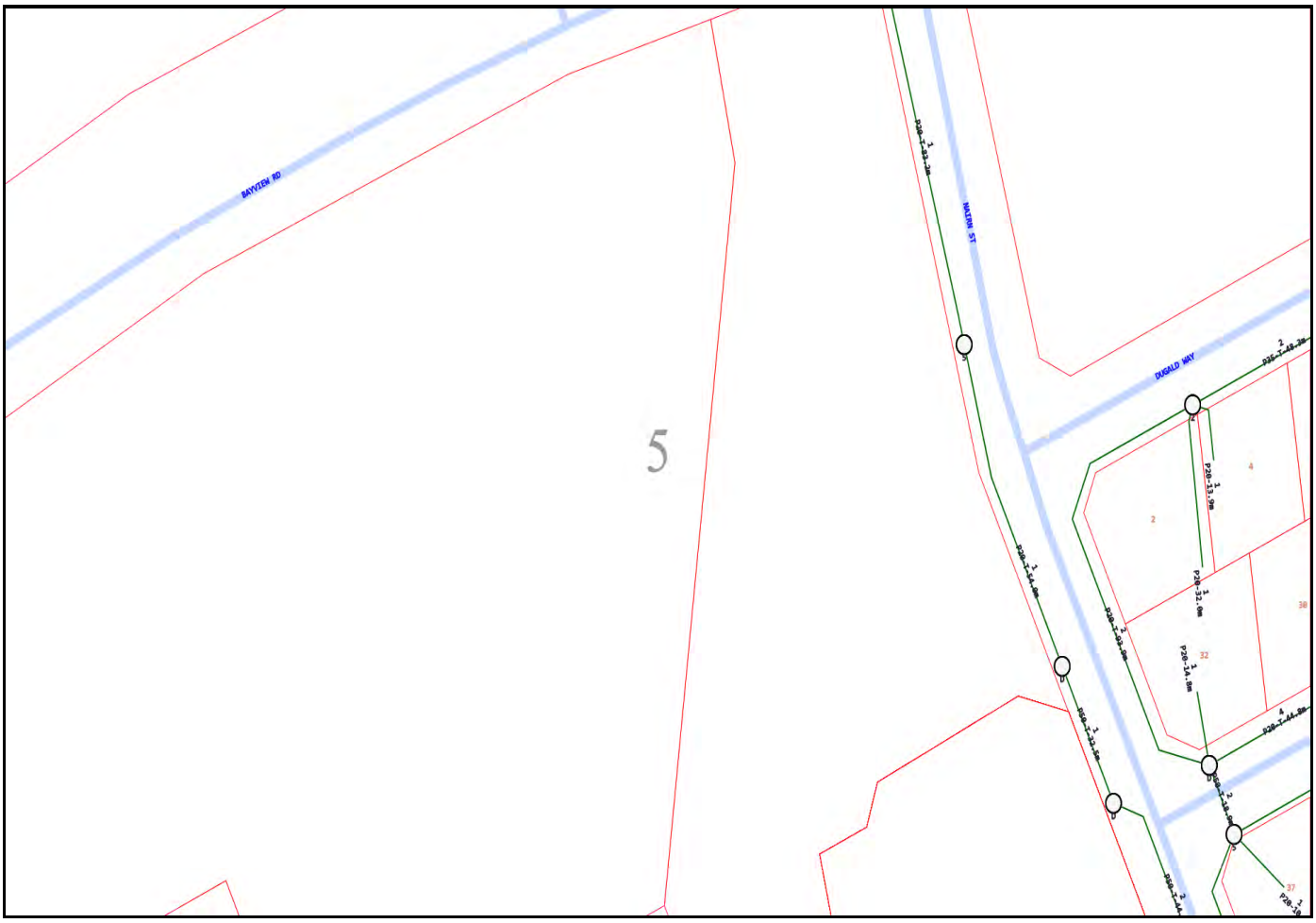
	Parcel and the location
	Pit with size "5"
	Power Pit with size "2E". Valid PIT Size: e.g. 2E, 5E, 6E, 8E, 9E, E, null.
	Manhole
	Pillar
	Cable count of trench is 2. One "Other size" PVC conduit (PO) owned by Telstra (-T-), between pits of sizes, "5" and "9" are 25.0m apart. One 40mm PVC conduit (P40) owned by NBN, between pits of sizes, "5" and "9" are 20.0m apart.
	2 Direct buried cables between pits of sizes ,"5" and "9" are 10.0m apart.
	Trench containing any INSERVICE/CONSTRUCTED (Copper/RF/Fibre) cables.
	Trench containing only DESIGNED/PLANNED (Copper/RF/Fibre/Power) cables.
	Trench containing any INSERVICE/CONSTRUCTED (Power) cables.
	Road and the street name "Broadway ST"
Scale	 1:2000 1 cm equals 20 m

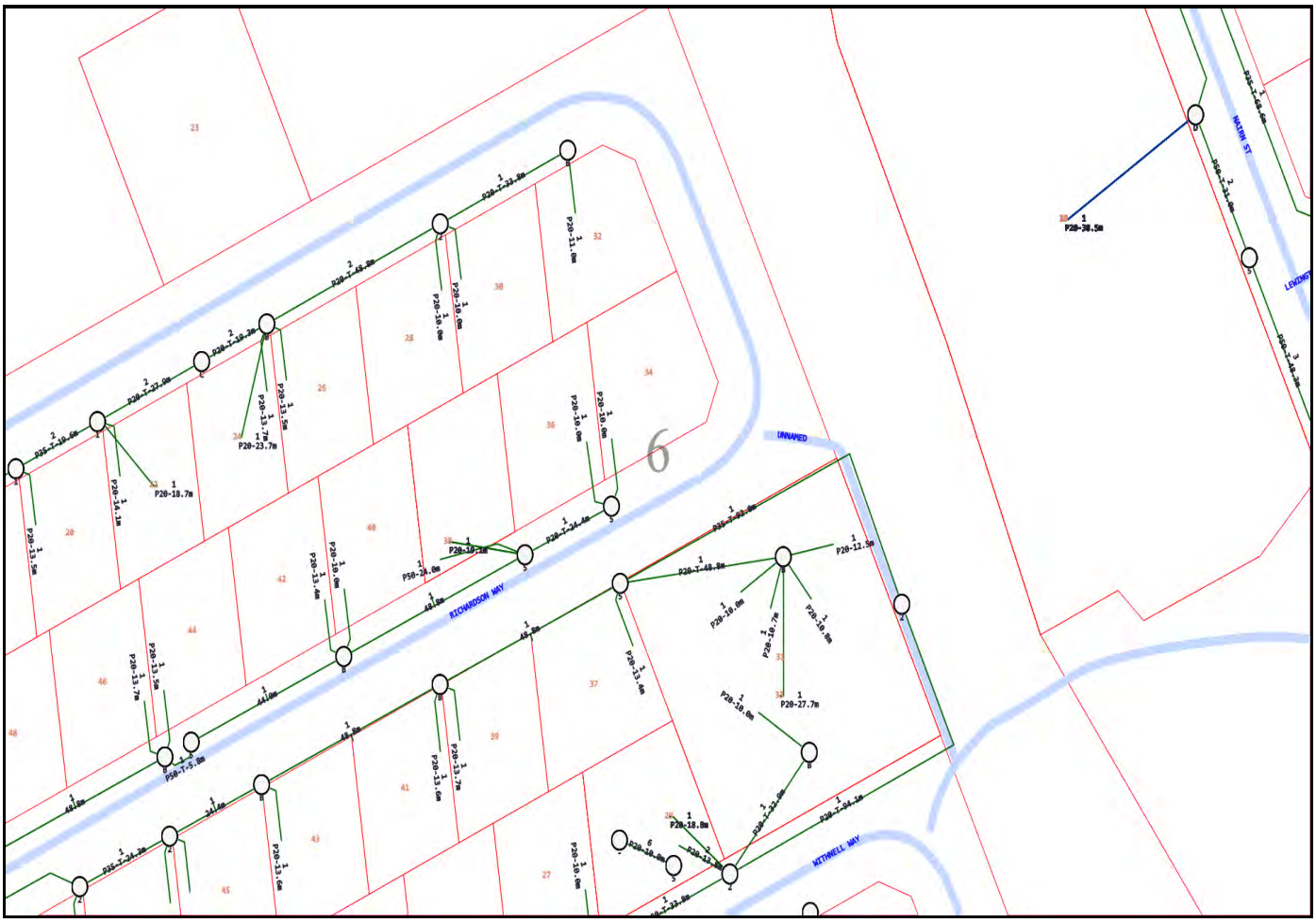

UNNAMED
1
CORRAL RD


2
LIMEWOOD
CORAL RD
BAYVIEW RD


BAYVIEW RD
UNNAMED
SEASIPPLE RD
RICHARDSON WAY
3
16
14B
12
18
50B
52
54
6
8
P20-23.4m
P20-13.6m
P20-13.7m
P20-13.5m
P20-19.9m
P20-13.4m
P20-13.8m


4
BAYVIEW RD
UNNAMED
MAIN ST


BAYVIEW RD
MAIN ST
DUGALD WAY
5
2
4
32
30
37



Emergency Contacts

You must immediately report any damage to the **nbn™** network that you are/become aware of. Notification may be by telephone - 1800 626 329.

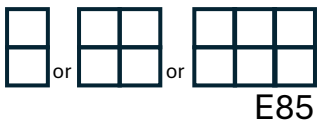
LEGEND

	Leadin terminates at a Customer Address	6 D	Cable Jointing Pit Number / Letter indicating Pit type/size
	Exchange Major Cable Present	EJ	Elevated Joint (above ground joint on buried cable)
	Pillar / Cabinet Above ground Free Standing		Telstra Plant in shared Utility trench
	Above ground Complex Equipment Please note: Powered by 240v electricity		Aerial cable / or cable on wall
OC	Other Carrier Telecommunication Cable/ Asset. Not Telstra Owned		Aerial cable (attached to joint use Pole e.g., Power Pole)
DIST	Distribution cables in Main Cable Ducts	M	Marker Post Installed
MC	Main Cable ducts on a Distribution Plan	T or TR	Buried Transponder
	Blocked or Damaged Duct	MT	Marker Post & Transponder
	Footway Access Chamber (can vary between 1-lid to 12-lid	SMOF	Optical Fibre Cable Direct Buried
	NBN Pillar		Direct Buried Cable
	Third Party Owned Network Non-Telstra		nbn owned network



Single to Multiple Round Conduit Configurations 1,2,4,9 respectively

(attached text denotes conduit type and size)



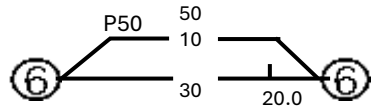
Multiple Square Conduit configurations 2,4,6 respectively

(attached text denotes conduit type and size)

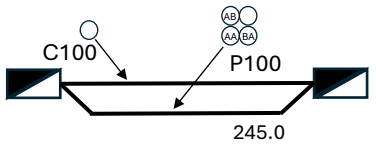
Some examples of conduit type and size:

A - Asbestos cement, P - PVC / Plastic, C - Concrete,
GI - Galvanised Iron, E - Earthenware
Conduit sizes nominally range from 20mm to 100mm
P50 50mm PVC conduit
P100 100mm PVC conduit
A100 100mm asbestos cement conduit

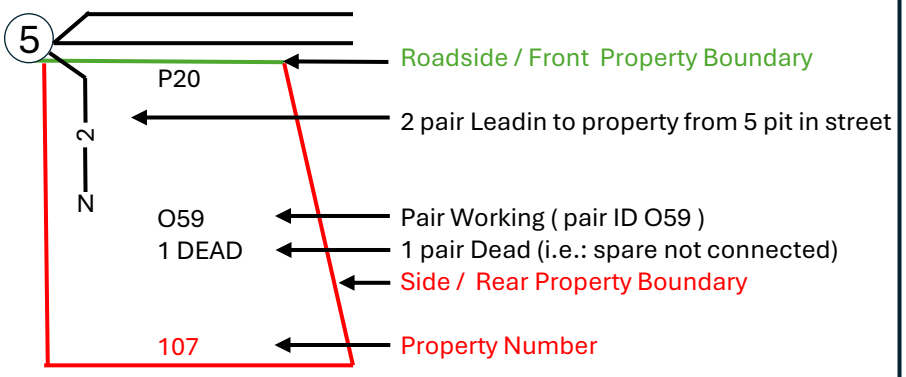
Some Examples of how to read Telstra Plans



One 50mm PVC conduit (P50) containing a 50-pair and a 10-pair cable between two 6 pits. approximately 20.0m apart, with a direct buried 30-pair cable along the same route.



Two separate conduit runs between two footway access chambers (manholes) approximately 245m apart A nest of four 100mm PVC conduits (P100) containing assorted cables in three ducts (one being empty) and one empty 100mm concrete duct (C100) along the same route.



The 5 Ps of Safe Excavation

https://www.byda.com.au/before-you-dig/best-practice-guides/

Plan

Plan your job. Use the BYDA service at least one day before your job is due to begin, and ensure you have the correct plans and information required to carry out a safe project.

Prepare

Prepare by communicating with asset owners if you need assistance. Look for clues onsite. Engage a Certified Locator.

Pothole

Potholing is physically sighting the asset by hand digging or hydro vacuum extraction.

Protect

Protecting and supporting the exposed infrastructure is the responsibility of the excavator. Always erect safety barriers in areas of risk and enforce exclusion zones.

Proceed

Only proceed with your excavation work after planning, preparing, potholing (unless prohibited), and having protective measures in place.

Cable Plan



Report Damage:https://service.telstra.com.au/customer/general/forms/report-damage-to-telstra-
Ph - 13 22 03
Email - Telstra.Plans@team.telstra.com
Planned Services - ph 1800 653 935 (AEST bus hrs only) General Enquiries

TELSTRA LIMITED A.C.N. 086 174 781

Generated On 11/06/2026 14:47:50

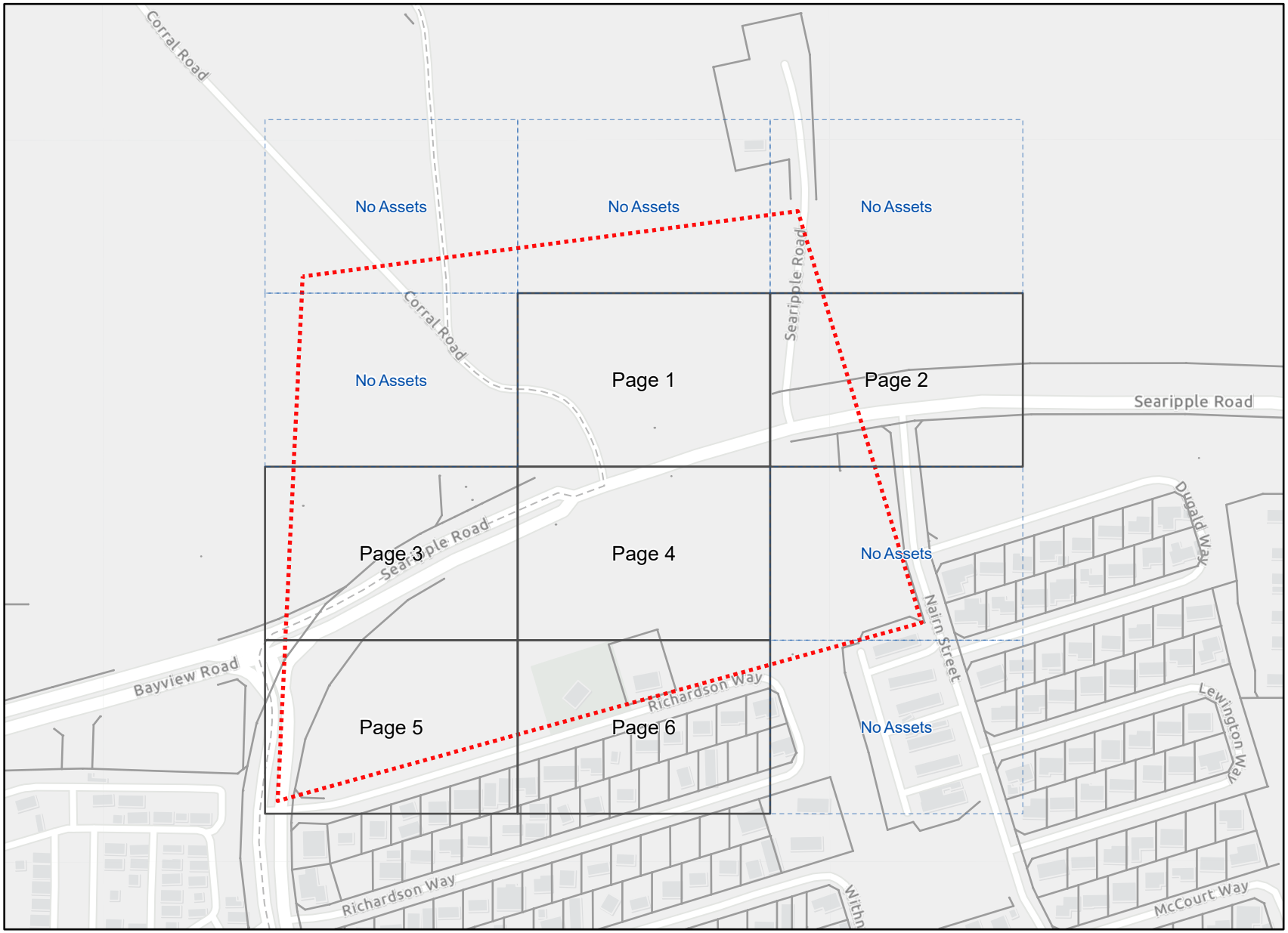
Sequence Number: 274377262

Please read Duty of Care prior to any excavating

WARNING
Telstra plans and location information conform to Quality Level "D" of the Australian Standard AS 5488-Classification of Subsurface Utility Information.
As such,Telstra supplied location information is indicative only.Spatial accuracy is not applicable to Quality Level D.
Refer to AS 5488 for further details. The exact position of Telstra assets can only be validated by physically exposing it.
Telstra does not warrant or hold out that its plans are accurate and accepts no responsibility for any inaccuracy.
Further on site investigation is required to validate the exact location of Telstra plant prior to commencing construction work.
A Certified Locating Organisation is an essential part of the process to validate the exact location of Telstra assets and to ensure the asset is protected during construction works.

See the Steps- Telstra Duty of Care that was provided in the email response.

Job # 53399745
Seq # 274377260
Job site: 21 Richardson Way Bulgarra WA 6714
Provided by City of Karratha



Legend

- BYDA Enquiry
- Detailed map page
- No dig site assets

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Disclaimer: The Plan is provided in response to a Before You Dig request. While all reasonable care has been taken to ensure the accuracy of the information on this plan, its purpose is to provide a general indication of the location of City of Karratha infrastructure. The information provided may contain errors or omissions and the accuracy may not suit all users. A site inspection and investigation is recommended before commencement of any project based on this data.

In an emergency contact City of Karratha on 9186 8555

Index Sheet

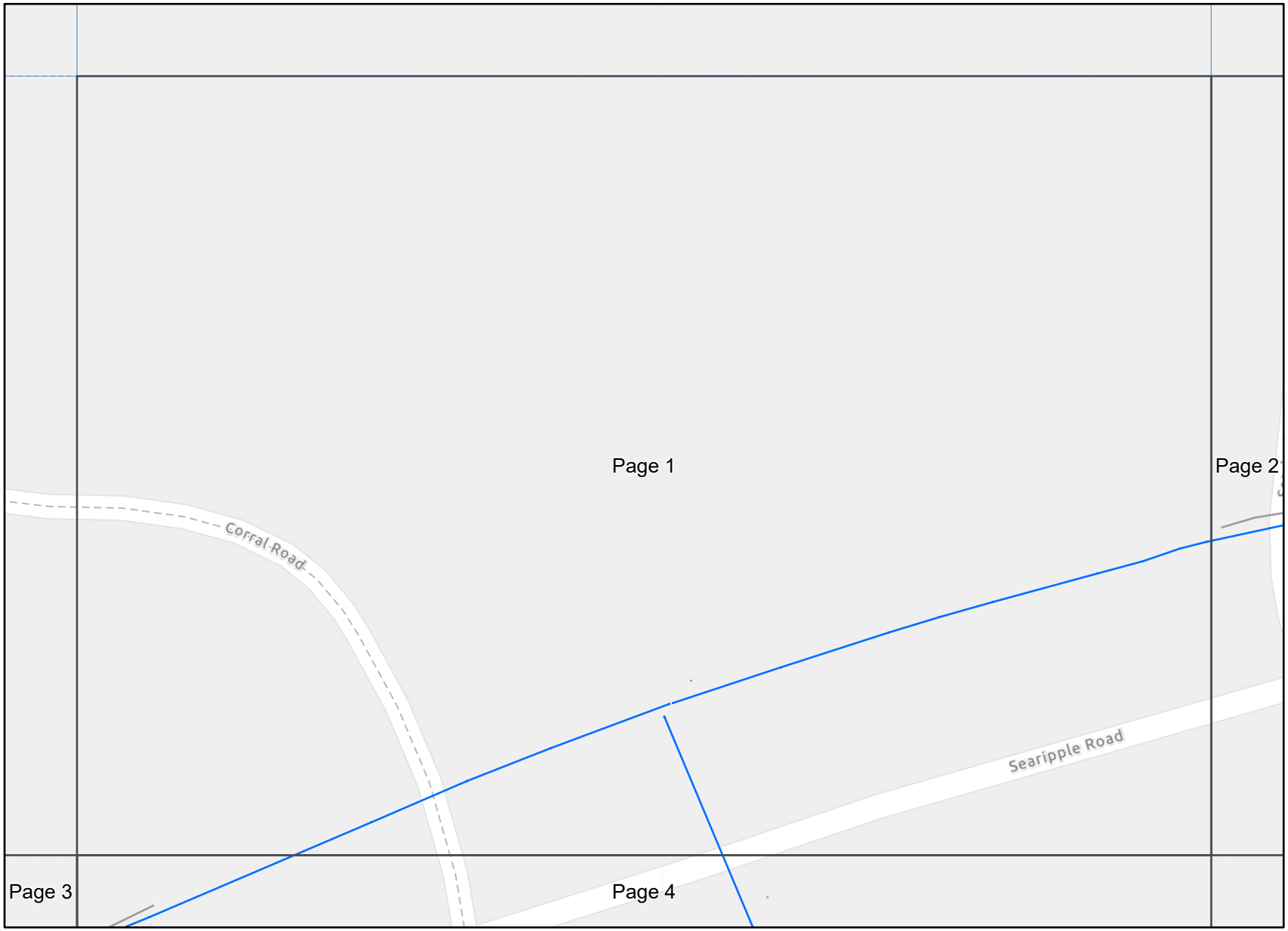
Plans generated by SmarterWX™ Automate

0 50 100 200 m

N

Scale 1:4,500

Job # 53399745
Seq # 274377260
Job site: 21 Richardson Way Bulgarra WA 6714
Provided by City of Karratha



Legend

- BYDA Enquiry
- Water Pipe

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In an emergency contact City of Karratha on 9186 8555

11/06/26 (valid for 30 days)

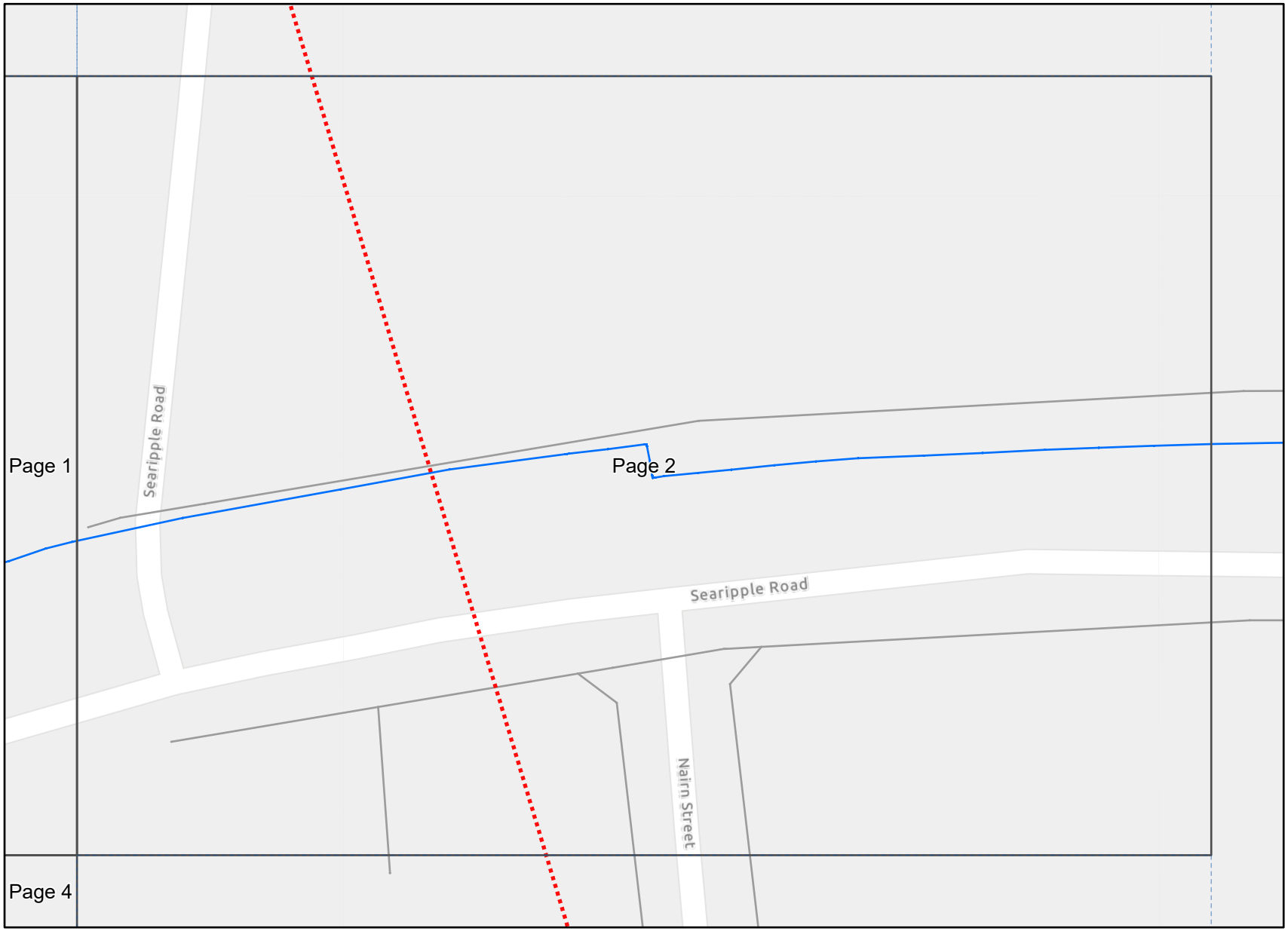
Plans generated by SmarterWX™ Automate

0 10 20 40 m

N

Scale 1:1,000

Job # 53399745
Seq # 274377260
Job site: 21 Richardson Way Bulgarra WA 6714
Provided by City of Karratha



Legend

- BYDA Enquiry
- Water Pipe

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In an emergency contact City of Karratha on 9186 8555

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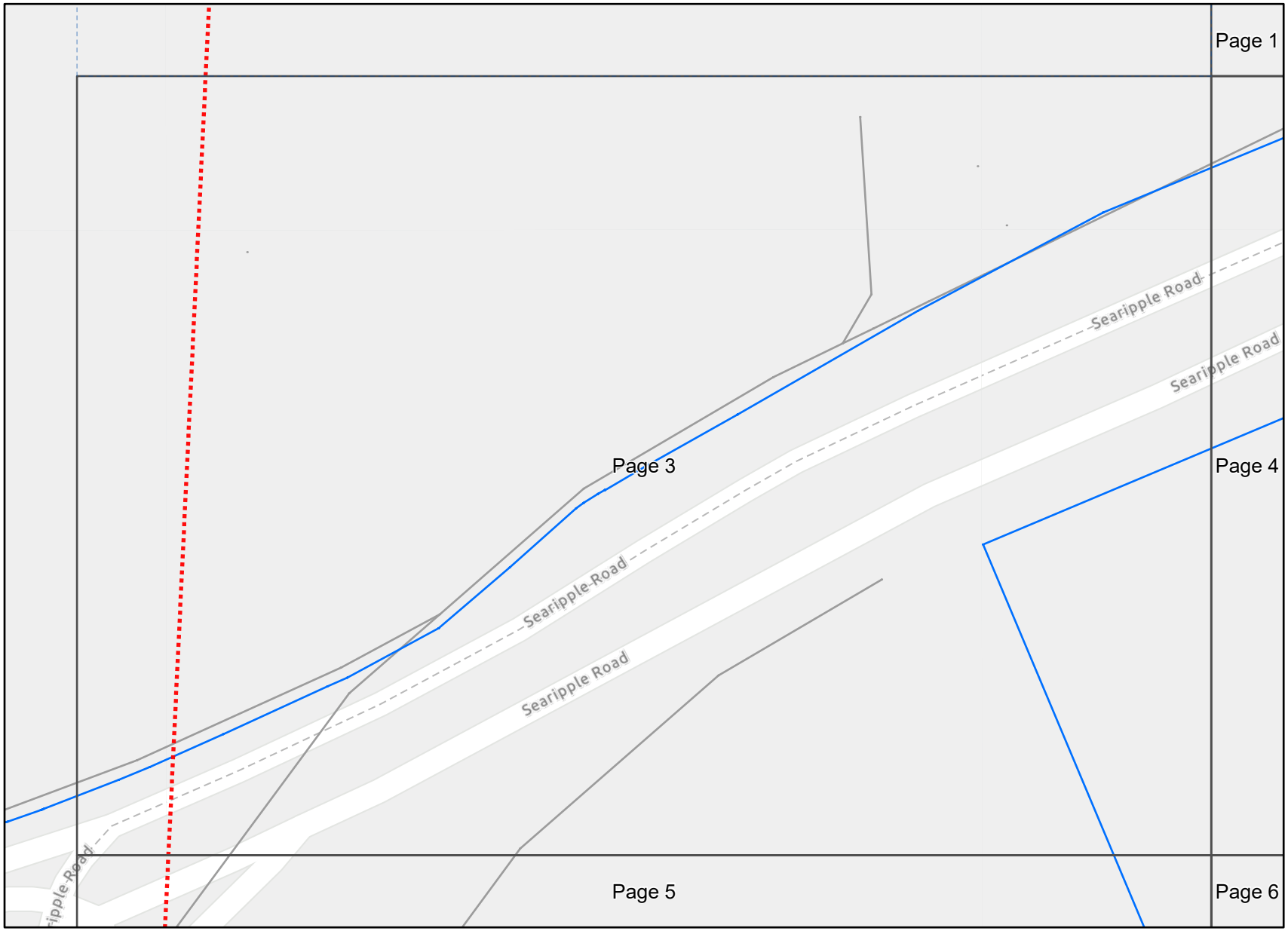
Plans generated by SmarterWX™ Automate

0 10 20 40 m

N

Scale 1:1,000

Job # 53399745
Seq # 274377260
Job site: 21 Richardson Way Bulgarra WA 6714
Provided by City of Karratha



Legend

- BYDA Enquiry
- Water Pipe

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In an emergency contact City of Karratha on 9186 8555

11/06/26 (valid for 30 days)

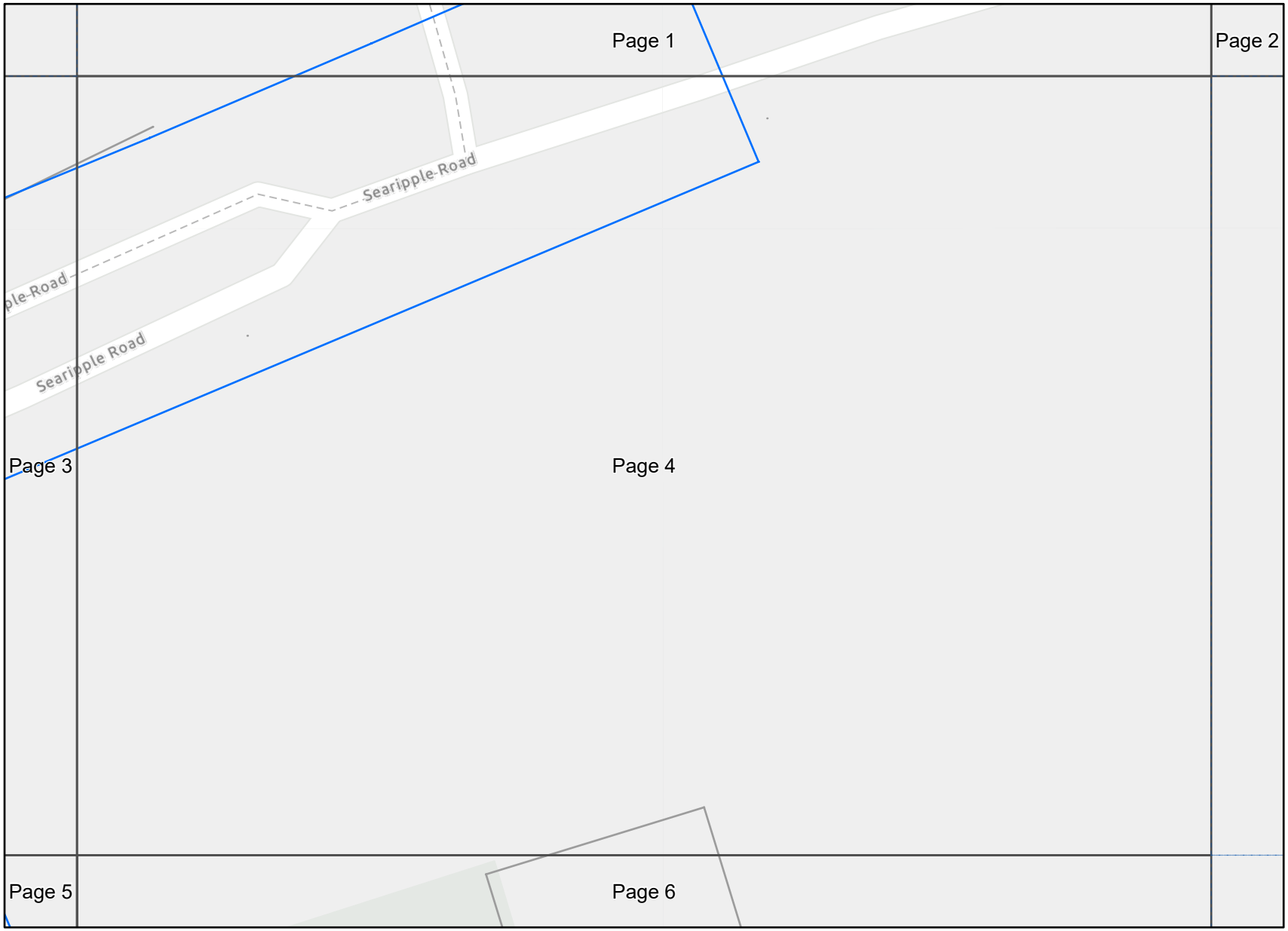
Plans generated by SmarterWX™ Automate

0 10 20 40 m

N

Scale 1:1,000

Job # 53399745
Seq # 274377260
Job site: 21 Richardson Way Bulgarra WA 6714
Provided by City of Karratha



Legend

- BYDA Enquiry
- Water Pipe

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11/06/26 (valid for 30 days)

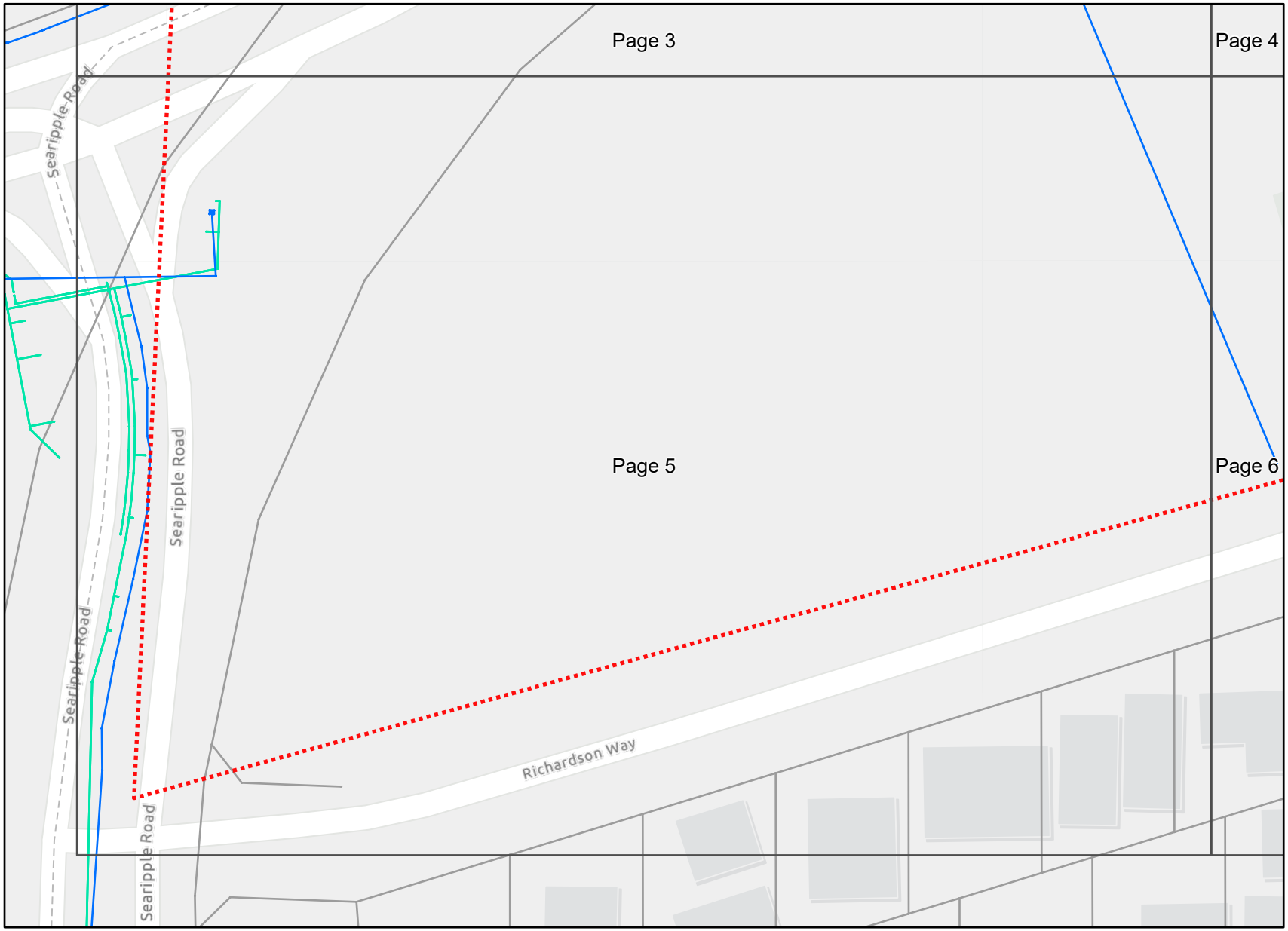
Plans generated by SmarterWX™ Automate

0 10 20 40 m

N

Scale 1:1,000

Job # 53399745
Seq # 274377260
Job site: 21 Richardson Way Bulgarra WA 6714
Provided by City of Karratha



Legend

- BYDA Enquiry
- Water Pipe
- Lateral Line

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11/06/26 (valid for 30 days)

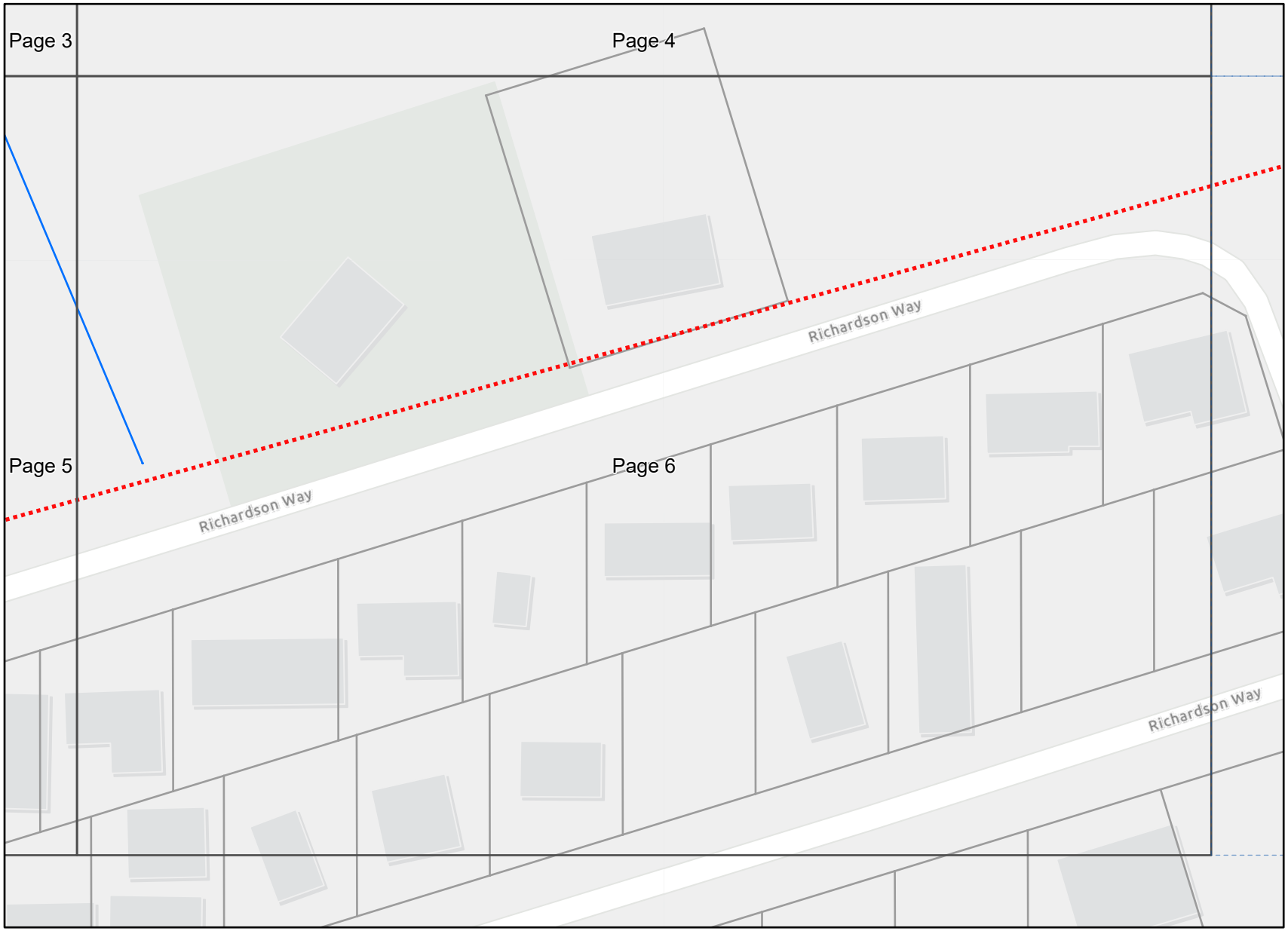
Plans generated by SmarterWX™ Automate

0 10 20 40 m

N

Scale 1:1,000

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Legend

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In an emergency contact City of Karratha on 9186 8555

11/06/26 (valid for 30 days)

Plans generated by SmarterWX™ Automate

0 10 20 40 m

N

Scale 1:1,000

Appendix
Additional Site Analysis Considerations - Bulgarra Sporting Precinct

Native Title - Bulgarra Sporting Oval



7/8/2026, 2:49:33 PM

Determinations

In effect - Finalised

1:3,027

0 0.02 0.04 0.09 mi

0 0.04 0.07 0.15 km

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National Native Title Tribunal

© Commonwealth of Australia



LEGEND

LOCAL SCHEME RESERVES

- Conservation, recreation and nature landscape
- District roads
- Infrastructure
- Local roads
- Parks, recreation and drainage
- Public purposes - Airport (A)
- Public purposes - Cemetery (C)
- Public purposes - Community (CM)
- Public purposes - Education (ED)
- Public purposes - Energy (E)
- Public purposes - Health (H)
- Public purposes - Telecommunications (T)
- Public purposes - Waste disposal and treatment (WDT)
- Public purposes - Water and drainage (WD)
- State and regional roads

LOCAL SCHEME ZONES

- City centre
- Commercial
- Industrial development
- Industry
- Mixed business
- Residential
- Rural
- Rural residential
- Special use
- Strategic industry
- Tourism
- Town centre
- Urban development

OTHER CATEGORIES

(see scheme text for additional information)

- Scheme Boundary
- Local Government Boundary
- Additional uses (AI)
- Restricted uses (RI)
- Special use area (SU1)
- R Codes (R20)
- Airport noise restriction SCA
- Airport obstacle height limitation area SCA
- City centre precinct - retail (P1)
- City centre precinct - commercial (P2)
- City centre precinct - entertainment (P3)
- City centre precinct - accommodation (P4)
- Cossack and Jarman Island low-impact tourism precinct SCA
- Cossack historic town SCA
- Dampier Salt SCA
- Industry buffer SCA
- Roebourne flood management SCA
- Structure plan areas (DA1)
- Withnell Bay SCA

- No zone
- Oceans/Waterways

Department of Planning, Lands and Heritage
GOVERNMENT OF WESTERN AUSTRALIA

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Produced by Data Analytics, Department of Planning, Lands and Heritage.

City of Karratha

Local Planning Scheme No. 8

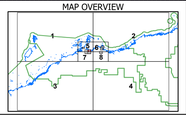
(District Scheme)

N

0 200 400 600 800

Meters

MAP OVERVIEW



Authorised: T.Servaas

Plot Date: 13 April 2026

G.Gazette: Tuesday, 22 August 2000

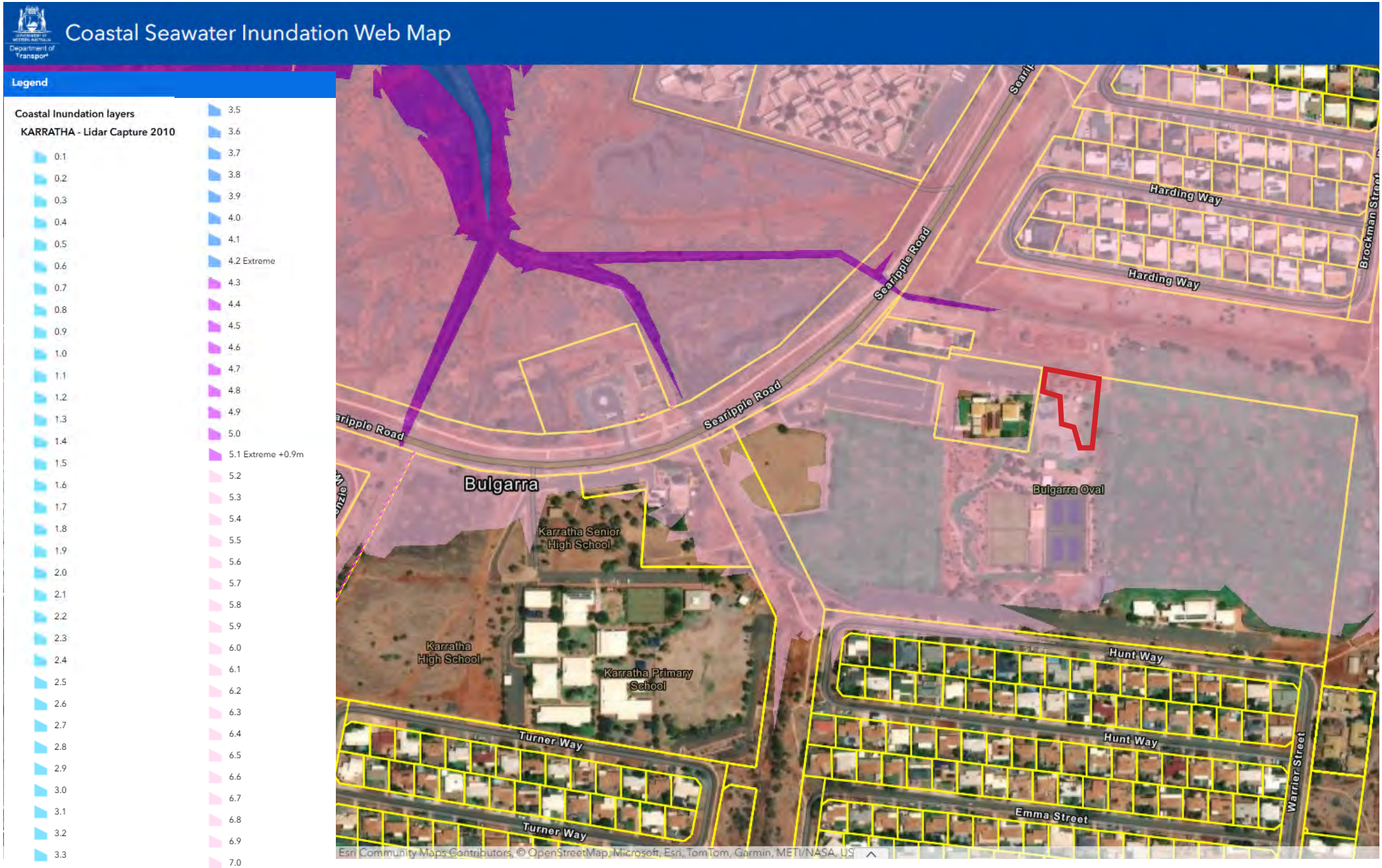
Local Planning Scheme Map No. 11 of 16
MAP: Karratha Townsite Centre

City of Karratha

Local Planning Scheme No. 8

(District Scheme)

Bulgarra Sporting Precinct - Coastal Seawater Inundation Map

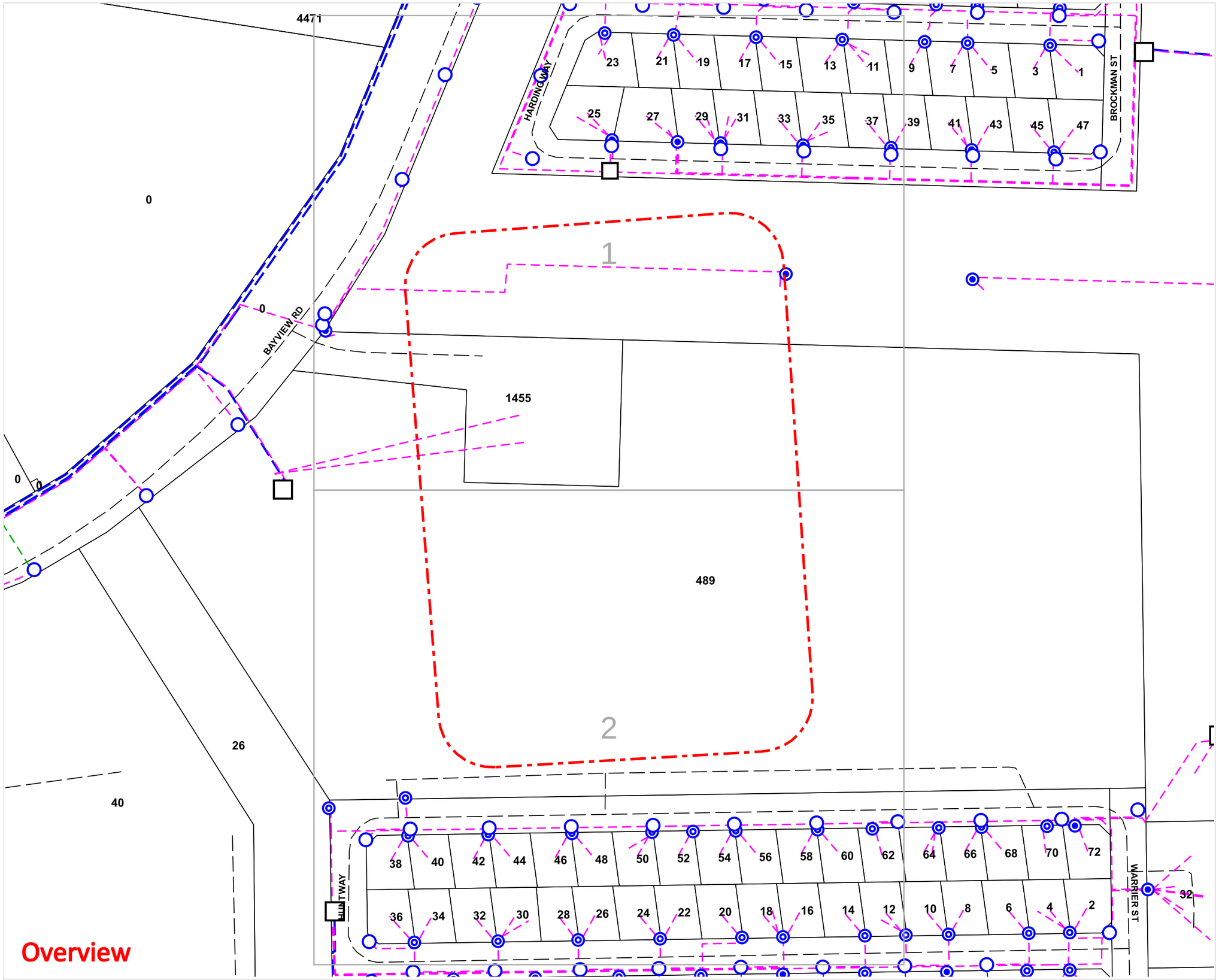


Preferred Waterpark Development Area

HORIZON POWER *energy for life*

Sequence No: 274376696
Job No: 53399646
Location: 489 Searipple Road, Bulgarra, WA 6714

DIAL BEFORE YOU DIG www.1100.com.au *The Essential First Step.*



Overview

Legend

Existing	Proposed	
SUB	SUB	Distribution Substation
○	○	Distribution Pole
◎	◎	LV Mini Pillar
◉	◉	LV Universal Pillar
LVF	LVF	LV Cabinet
UMS	UMS	LV Unmetered Supply Pit
PIT	PIT	LV Service Pit
FB	FB	LV Wall Mounted Box
LV	LV	LV Unknown Structure
- - -	- - -	LV Distribution Cable - Underground
———	———	LV Distribution Wire - Overhead
- - -	- - -	HV Distribution Cable - Underground
———	———	HV Distribution Wire - Overhead
Ø	Ø	Stay Anchor
———	———	Stay Wire
- - -	- - -	Transmission Cable - Underground
———	———	Transmission Wire - Overhead
●	●	Transmission Pole
a	a	Transmission Tower
- - -		Communications Cable
- - -		Fibre Optic Cable
▭	▭	Zone Substation

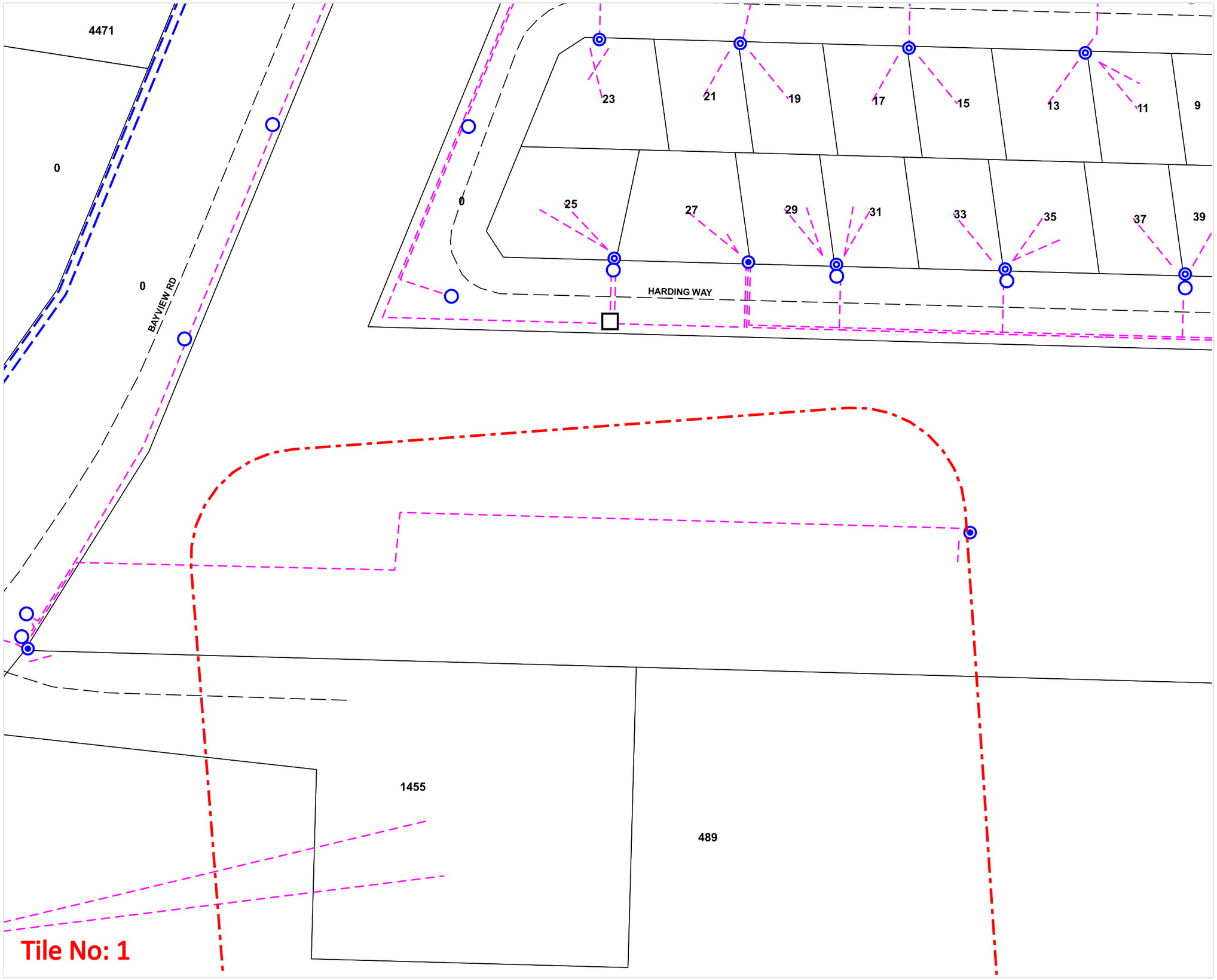
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Scale: 1:2050
Expires: 09 Jul 2026

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Sequence No: 274376696
Job No: 53399646
Location: 489 Searipple Road, Bulgarra, WA 6714

DIAL BEFORE YOU DIG www.1100.com.au
The Essential First Step.



Legend

Existing	Proposed	
SUB	SUB	Distribution Substation
		Distribution Pole
		LV Mini Pillar
		LV Universal Pillar
LVF	LVF	LV Cabinet
UMS	UMS	LV Unmetered Supply Pit
PIT	PIT	LV Service Pit
FB	FB	LV Wall Mounted Box
LV	LV	LV Unknown Structure
		LV Distribution Cable - Underground
		LV Distribution Wire - Overhead
		HV Distribution Cable - Underground
		HV Distribution Wire - Overhead
Ø	Ø	Stay Anchor
		Stay Wire
		Transmission Cable - Underground
		Transmission Wire - Overhead
		Transmission Pole
a	a	Transmission Tower
		Communications Cable
		Fibre Optic Cable
		Zone Substation

N

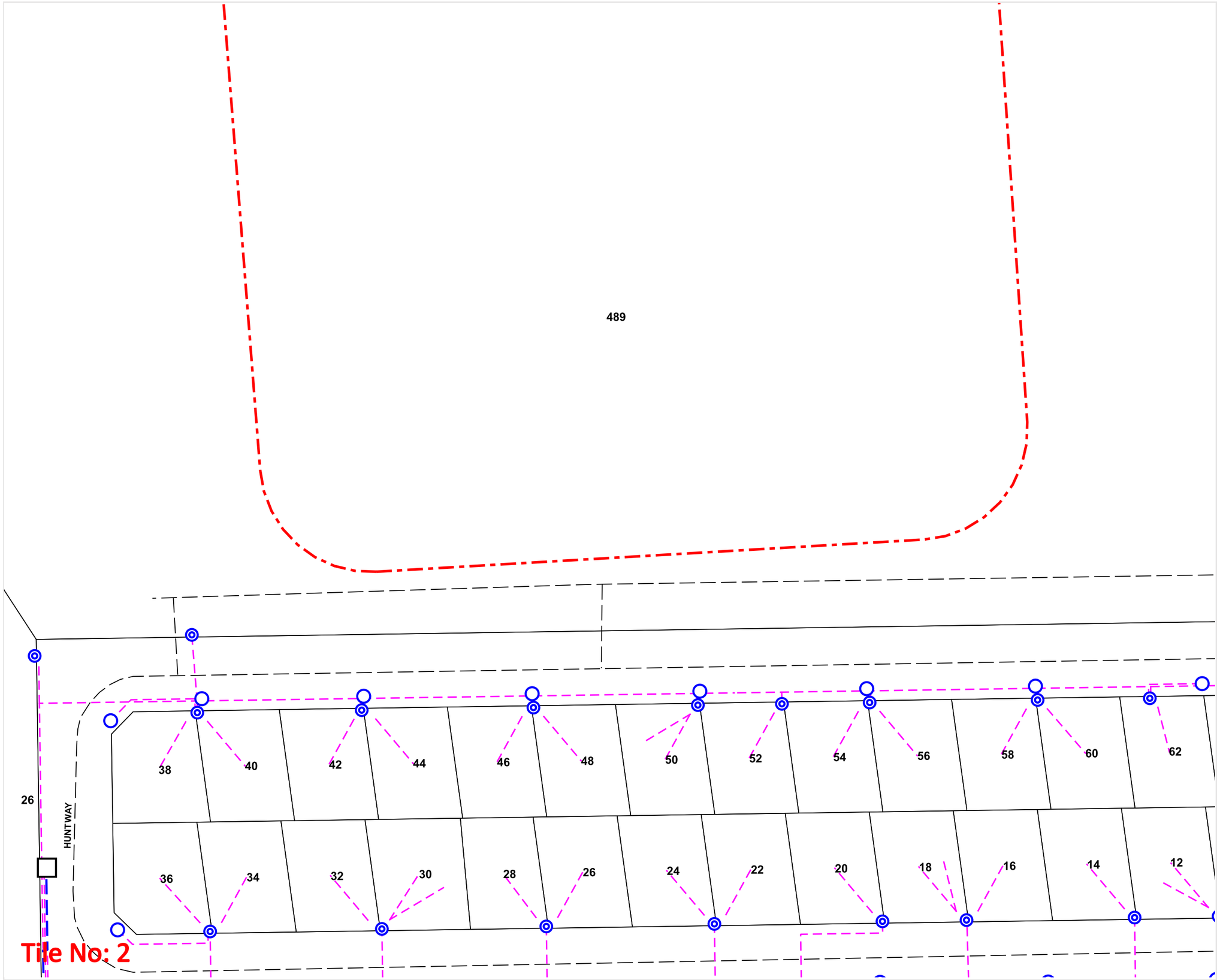
Scale: 1:1000
Expires: 09 Jul 2026

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Legend

Existing	Proposed	
SUB	SUB	Distribution Substation
		Distribution Pole
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		LV Distribution Wire - Overhead
		HV Distribution Cable - Underground
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Scale: 1:1000
Expires: 09 Jul 2026

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Overview

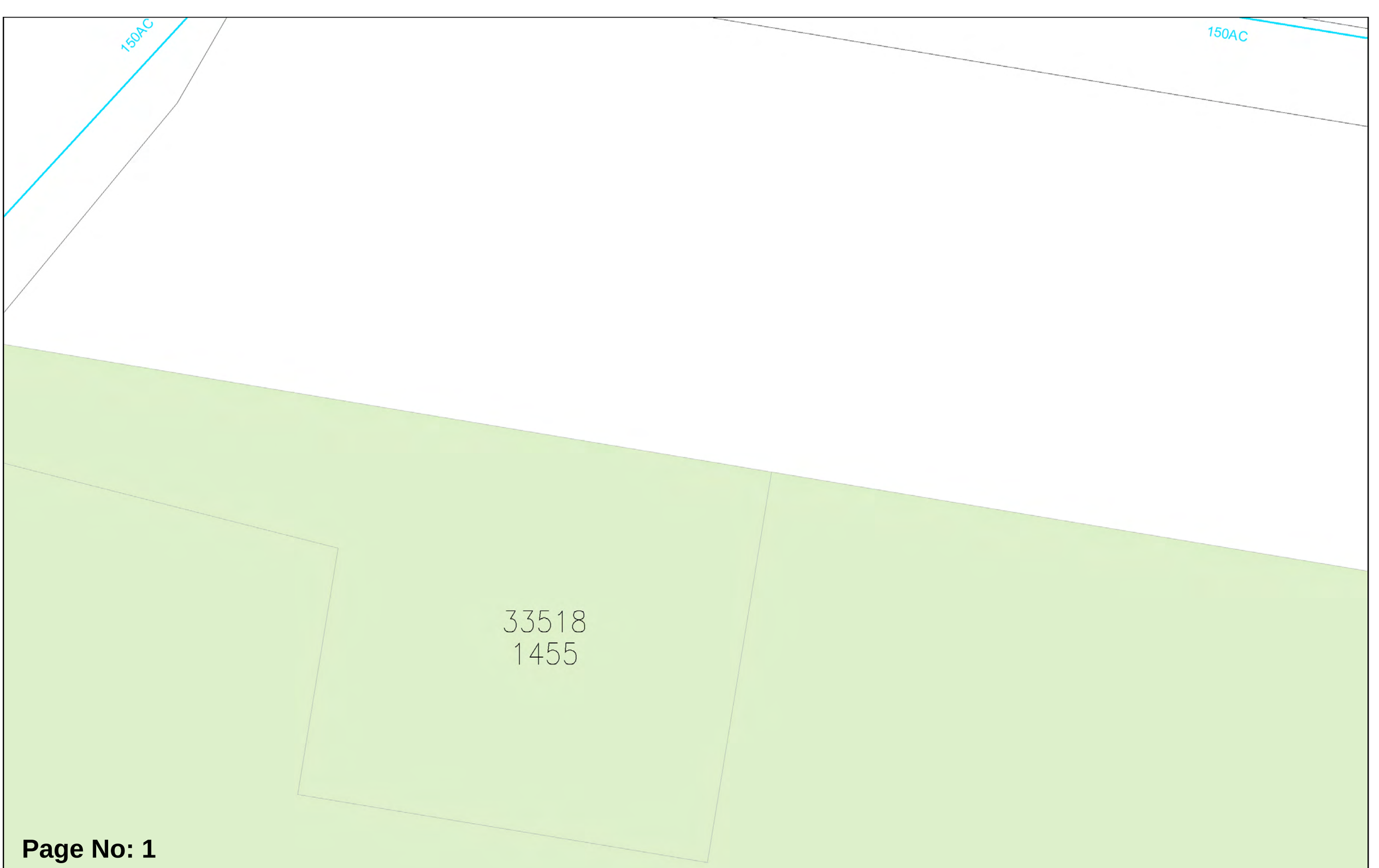
WATER CORPORATION

Scale: 1:1538
Job No.: 53399646
Sequence No.: 274376698
Print Date: 11 Jun 2026

N

Water

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Page No: 1

WATER CORPORATION

Scale:	1:750
Job No.:	53399646
Sequence No.:	274376698
Print Date:	11 Jun 2026

N

Water

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32320
489

H489

HUNT

Page No: 2

Scale:	1:750
Job No.:	53399646
Sequence No.:	274376698
Print Date:	11 Jun 2026

Water

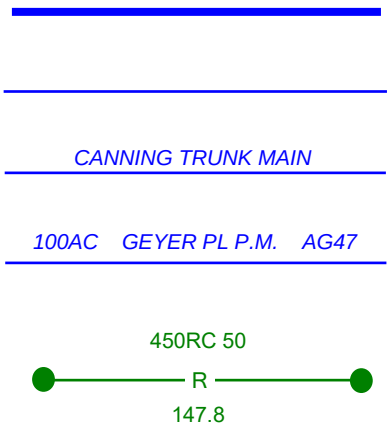
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Plan Legend (summary)
INFORMATION BROCHURE



This legend is provided to Dial Before You Dig users to assist with interpreting Water Corporation plans. A more detailed colour version can be downloaded from www.watercorporation.com.au. (Your business > Working near pipelines > Downloads)

WARNING - Plans may not show all pipes or associated equipment at a site, or their accurate location. Pothole by hand to verify asset location before using powered machinery.



WATER, SEWERAGE AND DRAINAGE PIPELINES

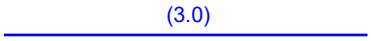
CRITICAL PIPELINE (thick line) EXTRA CAUTION REQUIRED
A risk assessment may be required if working near this pipe. Refer to your Dial Before You Dig information or call 131375.

Pipes are not always labelled on plans as shown here – assume all pipes are significant and pothole to prove location and depth.

P.M.	pressure main
M.S.	main sewer
R	rising main (i.e. drainage pressure main)

Common material abbreviations:

AC	asbestos cement e.g. 100AC NOTE: AC is brittle and is easily damaged.
CI	cast iron
GRP	glass reinforced plastic
P	PVC - class follows pipe material (e.g.100P-12)
RC	reinforced concrete
S	steel
VC	vitrified clay



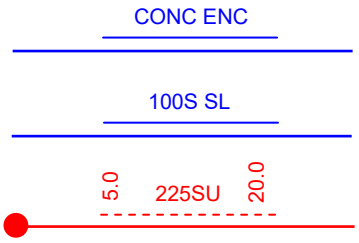
NON-STANDARD ALIGNMENT

Pipes are not always located on standard alignments due to local conditions. (i.e. Other than 2.1 m for reticulation mains and 4.5 m for distribution mains.)



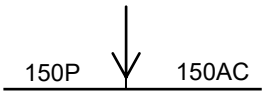
OTHER PIPE SYMBOLS

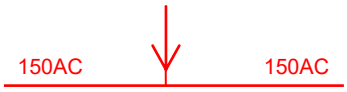
Other numbers or codes shown on pipes are not physical attributes. These are Water Corporation use only.



CONCRETE ENCASEMENT, SLEEVING AND TUNNELS

May be in different forms: steel, poured concrete, box sections, slabs.





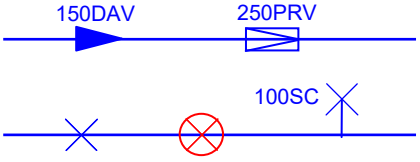
CHANGE INDICATOR ARROW

Indicates a change in pipe type or size. e.g. 150mm diameter PVC to 150mm diameter asbestos cement (AC).



PIPE OVERPASS

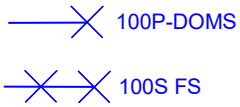
The overpass symbol indicates the shallower of the two pipes.



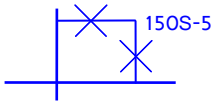
VALVES

Many different valve types are in use. Valve may be in a pit or have a visible valve cover. There may be no surface indication.

Valves may be shallower than the main or offset from it. e.g. A scour valve (SC) may have a pipe coming away from main pipeline on the opposite side to that indicated on the plan.



FIRE SERVICES
100 mm polythene domestic (DOMS) service
FS Fire service
FHS Fire hydrant service
Hydrant may be visible external to the building. Even if not visible a substantial fire service may still be present.



PIPE BYPASS
Bypass will not be on the same alignment as the main pipeline.



CATHODIC PROTECTION (CP)
Buried CP equipment may be located some distance from the pipeline being protected interconnected by buried cable. All CP fittings may not be visible.
A buried anode – various sizes and configurations
TP test point - may be visible on a post or in-ground
TR transformer rectifier



ACCESS TEE OR MANHOLE OR SERVICE ACCESS PIT
NOTE: Opening any manhole or pit is dangerous and is prohibited.
Below ground. May not be any visible signs at ground level or may be located in a pit.



WASTEWATER ACCESS CHAMBERS (MANHOLES)
-- Manhole (shown not labelled)
-- Tee or maintenance shaft (shown not labelled)
MS maintenance shaft (labelled)
WARNING: Opening any manhole or pit is dangerous and is prohibited.



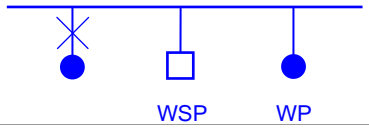
WASTEWATER MANHOLE INFORMATION BOXES
Square non-trafficable Do not drive vehicles over or place loads.
Round trafficable
In general if not located in the road treat as if non-trafficable.



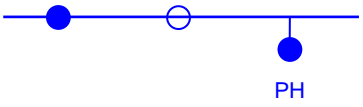
HAZARDOUS MANHOLE
Indicates a potential health hazard from risk of exposure to toxic waste.
WARNING: Opening any manhole is dangerous and is prohibited.



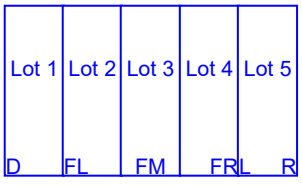
FLOWMETER
Various types of flow meters located in a pit. May be labelled with identifier. (e.g. 50 MFM, 50MM)



STANDPIPE, WATER SAMPLING POINT (WSP), WATER SUPPLY POINT (WP)
May be located adjacent to mains. Usually there will be some visible indication.



Hydrant May not be visible.
Hydrant Tee May not be visible.
Pillar hydrant Visible



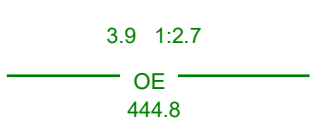
PRE-LAID SERVICES
D Deferred
FL Fully Prelaid Left
FM Fully Prelaid Front Middle
FR Fully Prelaid Right
L Left
R Right

Code indicates on which side of a lot the water service is located:

May be no visible indication at site.



SEWER OR DRAINAGE PUMP STATION
Several pipes and a pressurised main will be in the vicinity.



OPEN CHANNEL
OA Landscaped
OE Normal Open Earth
OF Open channel with flood levee
OH Half Pipe
OL Lined Channel
OS Swale-Shallow Depression
OW Natural Water Course

Drainage structures, even if dry, must be kept clear of any obstruction such as sand stockpiles.

Job # 53399646
Seq # 274376695
Job site: 489 Searipple Road Bulgarra WA 6714
Provided by City of Karratha



Legend

BYDA Enquiry

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In an emergency contact City of Karratha on 9186 8555

Index Sheet

Plans generated by SmarterWX™ Automate

0 25 50 100 m

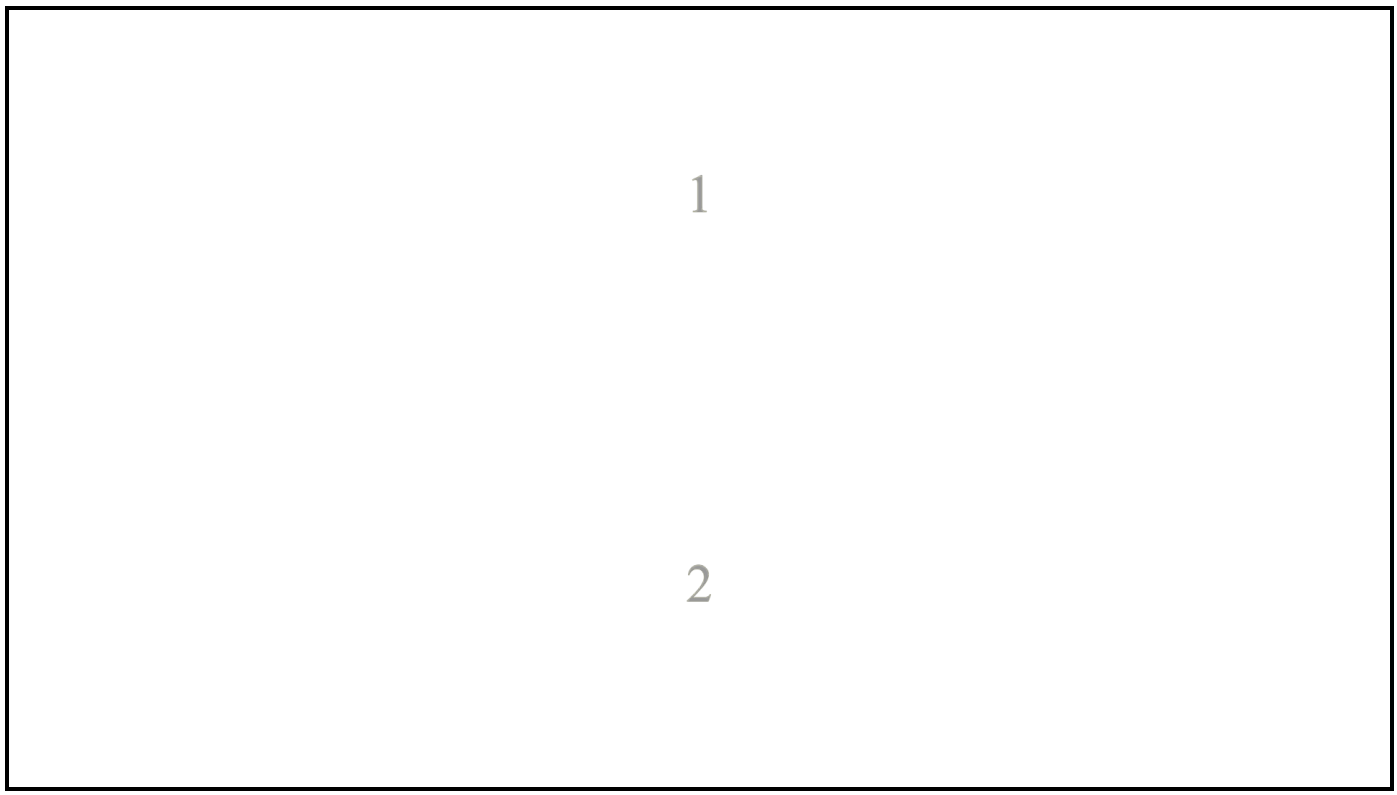
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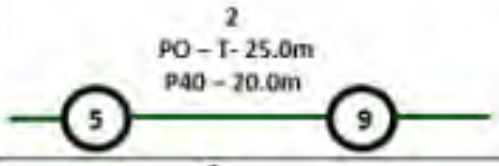
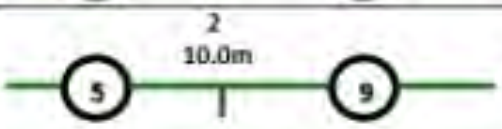
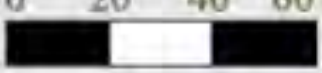
To:	Aidan Power
Phone:	Not Supplied
Fax:	Not Supplied
Email:	Aidan@tredwell.co.nz

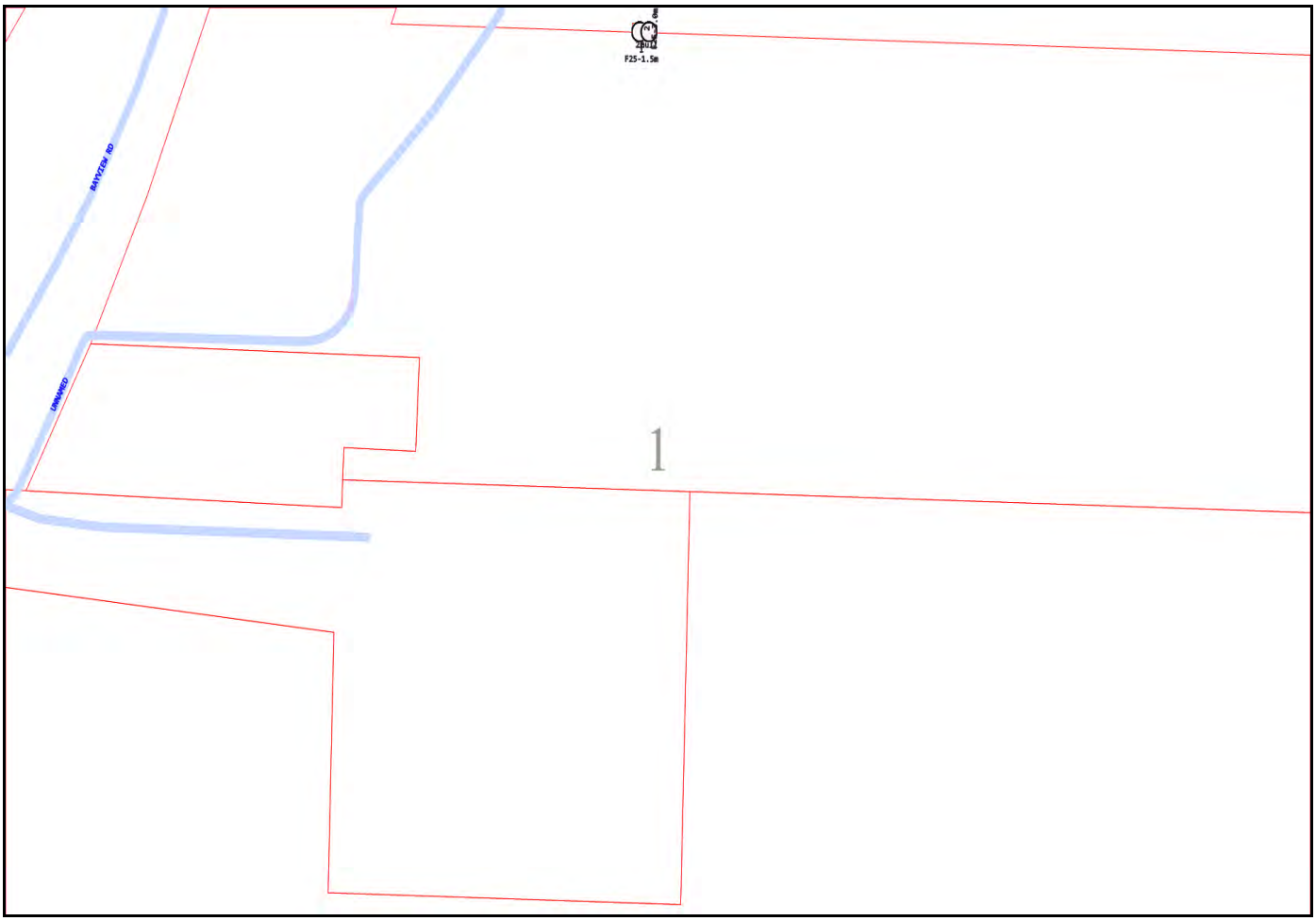
Dial before you dig Job #:	53399646	BEFORE YOU DIG www.byda.com.au Zero Damage - Zero Harm
Sequence #	274376694	
Issue Date:	11/06/2026	
Location:	489 Searipple Road , Bulgarra , WA , 6714	

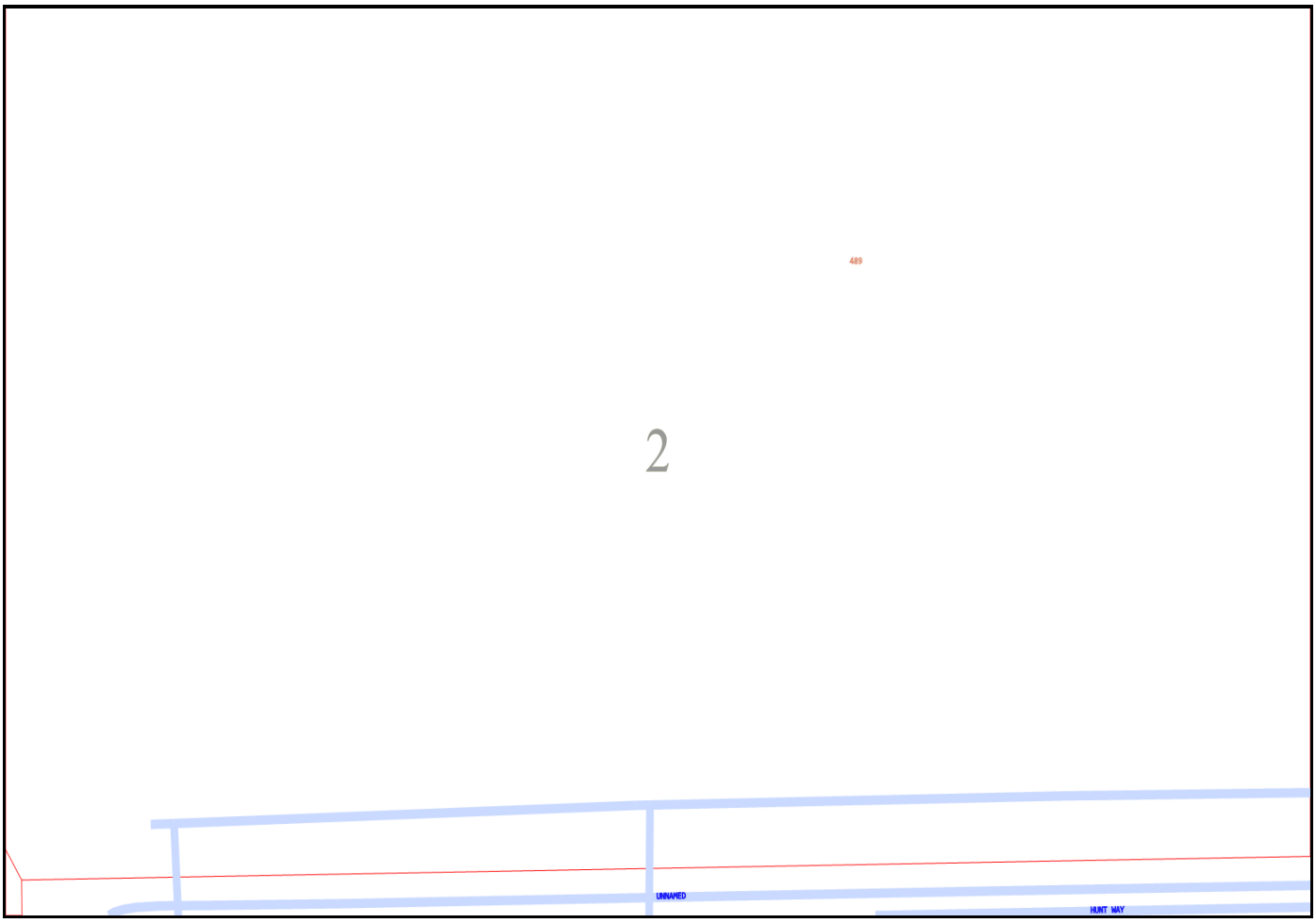
Indicative Plans are tiled below to demonstrate how to layout and read nbn asset plans



LEGEND

	Parcel and the location
	Pit with size "5"
	Power Pit with size "2E". Valid PIT Size: e.g. 2E, 5E, 6E, 8E, 9E, E, null.
	Manhole
	Pillar
	Cable count of trench is 2. One "Other size" PVC conduit (PO) owned by Telstra (-T-), between pits of sizes, "5" and "9" are 25.0m apart. One 40mm PVC conduit (P40) owned by NBN, between pits of sizes, "5" and "9" are 20.0m apart.
	2 Direct buried cables between pits of sizes ,"5" and "9" are 10.0m apart.
	Trench containing any INSERVICE/CONSTRUCTED (Copper/RF/Fibre) cables.
	Trench containing only DESIGNED/PLANNED (Copper/RF/Fibre/Power) cables.
	Trench containing any INSERVICE/CONSTRUCTED (Power) cables.
	Road and the street name "Broadway ST"
Scale	 1:2000 1 cm equals 20 m


F25-1.5m
BAYVIEW RD
UNNAMED
1



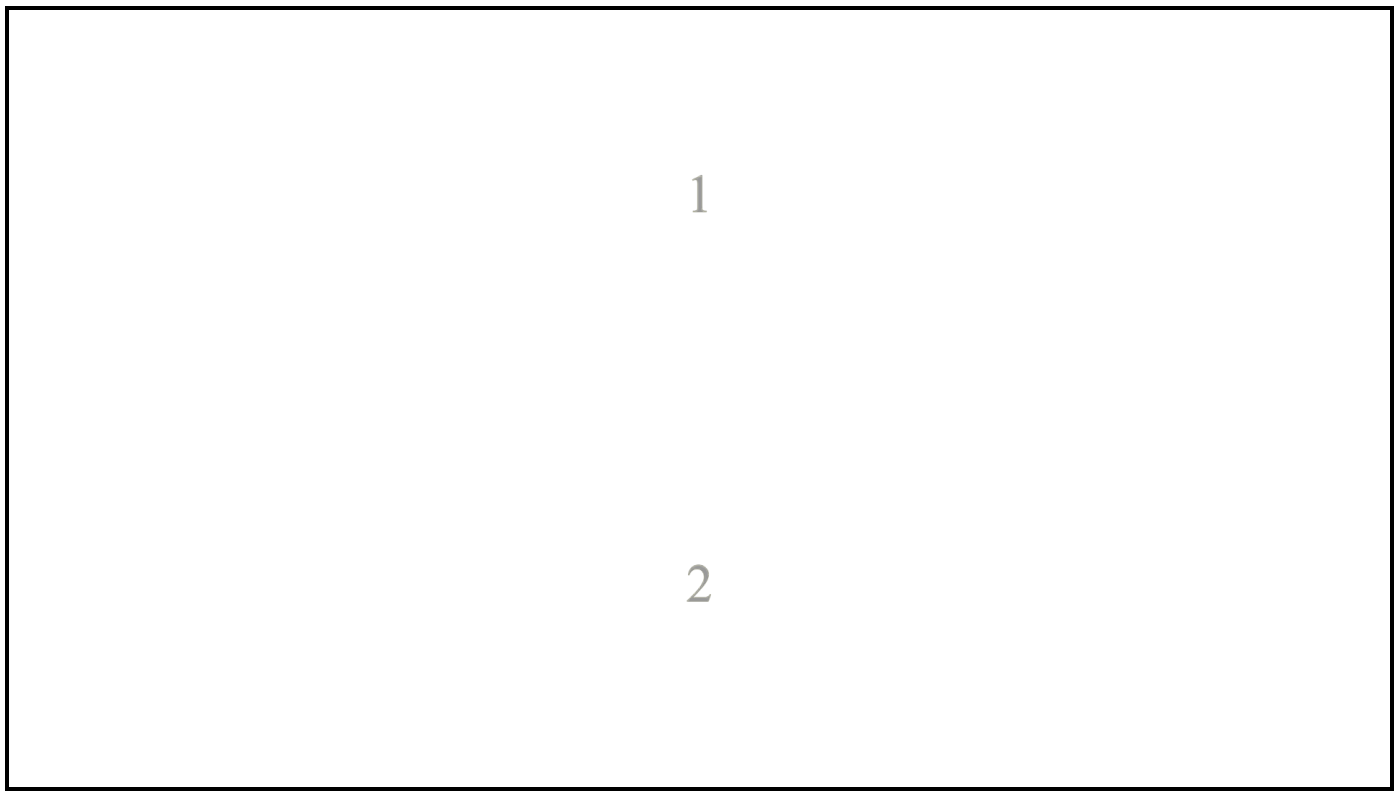
Emergency Contacts

You must immediately report any damage to the **nbn™** network that you are/become aware of. Notification may be by telephone - 1800 626 329.

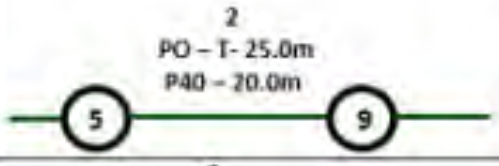
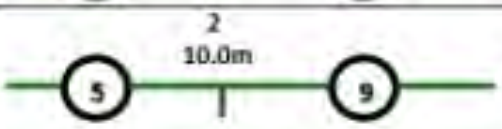
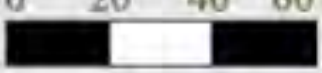
To:	Aidan Power
Phone:	Not Supplied
Fax:	Not Supplied
Email:	Aidan@tredwell.co.nz

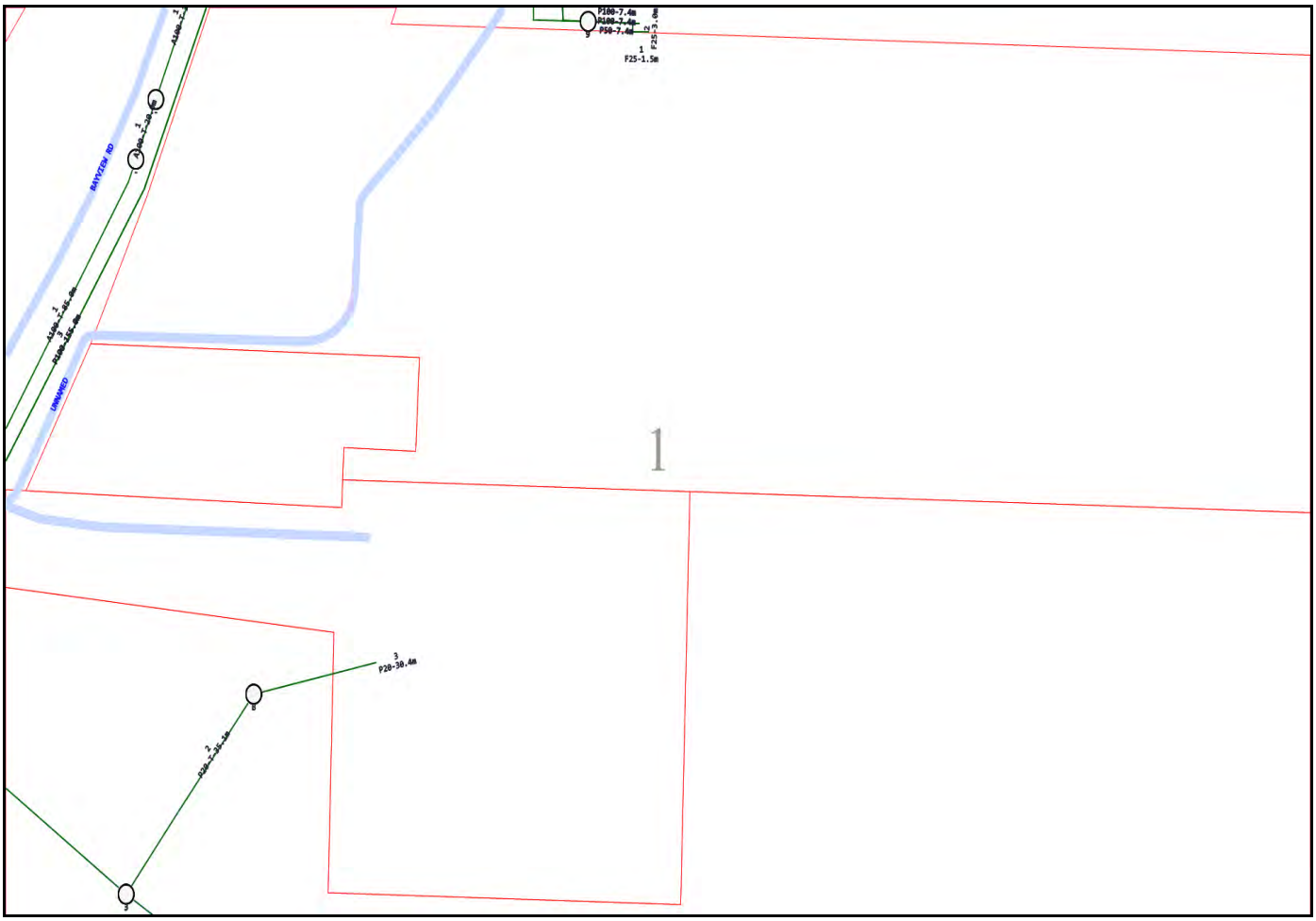
Dial before you dig Job #:	53399646	BEFORE YOU DIG www.byda.com.au Zero Damage - Zero Harm
Sequence #	274376694	
Issue Date:	11/06/2026	
Location:	489 Searipple Road , Bulgarra , WA , 6714	

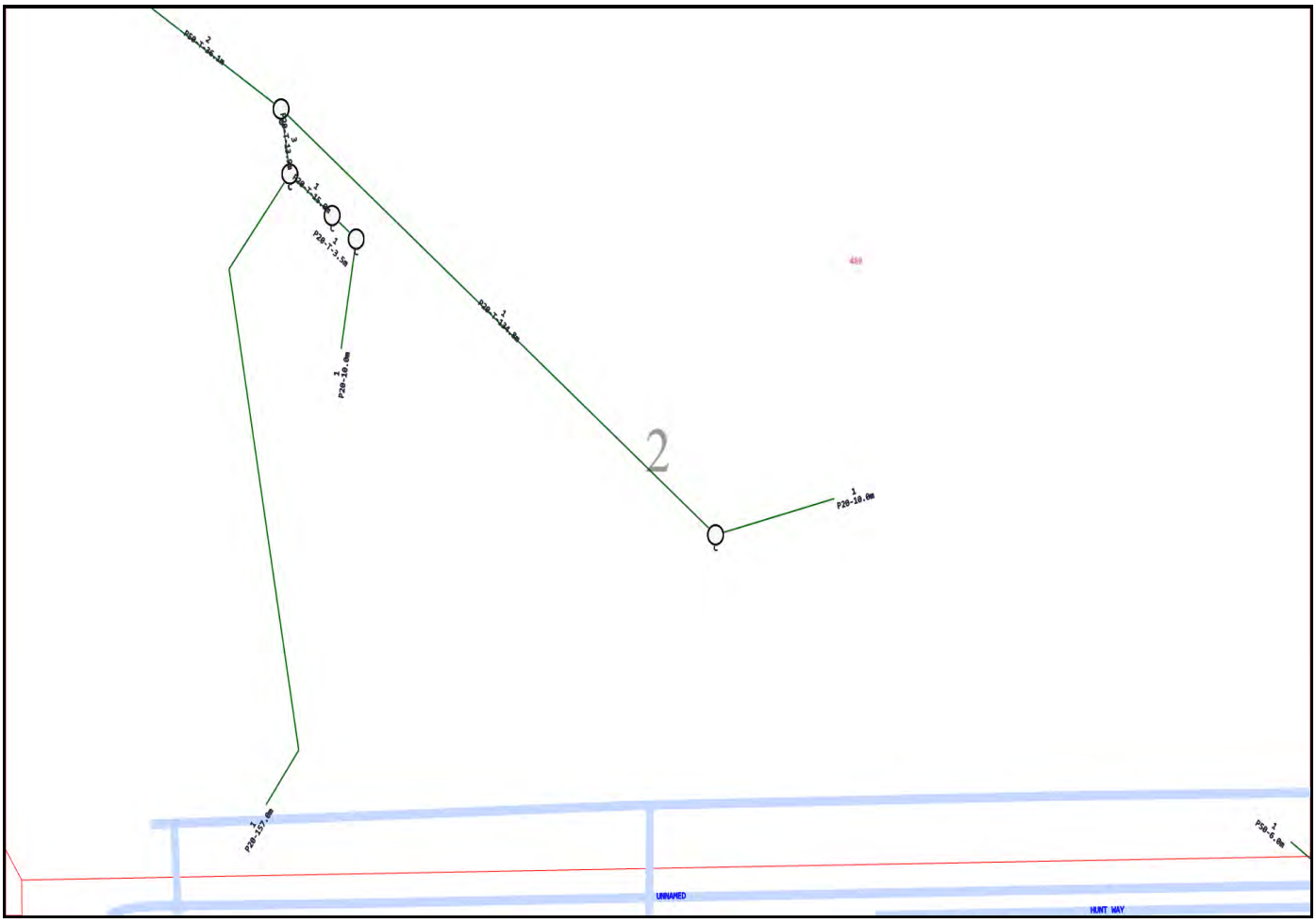
Indicative Plans are tiled below to demonstrate how to layout and read nbn asset plans



LEGEND

	Parcel and the location
	Pit with size "5"
	Power Pit with size "2E". Valid PIT Size: e.g. 2E, 5E, 6E, 8E, 9E, E, null.
	Manhole
	Pillar
	Cable count of trench is 2. One "Other size" PVC conduit (PO) owned by Telstra (-T-), between pits of sizes, "5" and "9" are 25.0m apart. One 40mm PVC conduit (P40) owned by NBN, between pits of sizes, "5" and "9" are 20.0m apart.
	2 Direct buried cables between pits of sizes ,"5" and "9" are 10.0m apart.
	Trench containing any INSERVICE/CONSTRUCTED (Copper/RF/Fibre) cables.
	Trench containing only DESIGNED/PLANNED (Copper/RF/Fibre/Power) cables.
	Trench containing any INSERVICE/CONSTRUCTED (Power) cables.
	Road and the street name "Broadway ST"
Scale	 1:2000 1 cm equals 20 m


P100-7.4m
P100-7.4m
P50-7.4m
F25-3.8m
1
F25-1.5m
BAYZEM RD
UNNAMED
1
3
P20-30.4m
2
P20-7.35.4m



Emergency Contacts

You must immediately report any damage to the **nbn™** network that you are/become aware of. Notification may be by telephone - 1800 626 329.

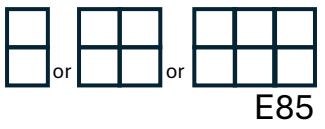
LEGEND

	Leadin terminates at a Customer Address	6 D	Cable Jointing Pit Number / Letter indicating Pit type/size
	Exchange Major Cable Present	EJ	Elevated Joint (above ground joint on buried cable)
	Pillar / Cabinet Above ground Free Standing		Telstra Plant in shared Utility trench
	Above ground Complex Equipment Please note: Powered by 240v electricity		Aerial cable / or cable on wall
OC	Other Carrier Telecommunication Cable/ Asset. Not Telstra Owned		Aerial cable (attached to joint use Pole e.g., Power Pole)
DIST	Distribution cables in Main Cable Ducts	M	Marker Post Installed
MC	Main Cable ducts on a Distribution Plan	T or TR	Buried Transponder
	Blocked or Damaged Duct	MT	Marker Post & Transponder
	Footway Access Chamber (can vary between 1-lid to 12-lid	SMOF	Optical Fibre Cable Direct Buried
	NBN Pillar		Direct Buried Cable
	Third Party Owned Network Non-Telstra		nbn owned network



Single to Multiple Round Conduit Configurations 1,2,4,9 respectively

(attached text denotes conduit type and size)



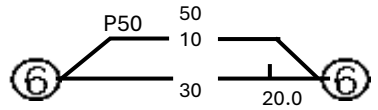
Multiple Square Conduit configurations 2,4,6 respectively

(attached text denotes conduit type and size)

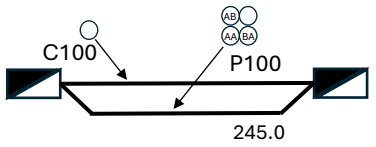
Some examples of conduit type and size:

A - Asbestos cement, P - PVC / Plastic, C - Concrete,
GI - Galvanised Iron, E - Earthenware
Conduit sizes nominally range from 20mm to 100mm
P50 50mm PVC conduit
P100 100mm PVC conduit
A100 100mm asbestos cement conduit

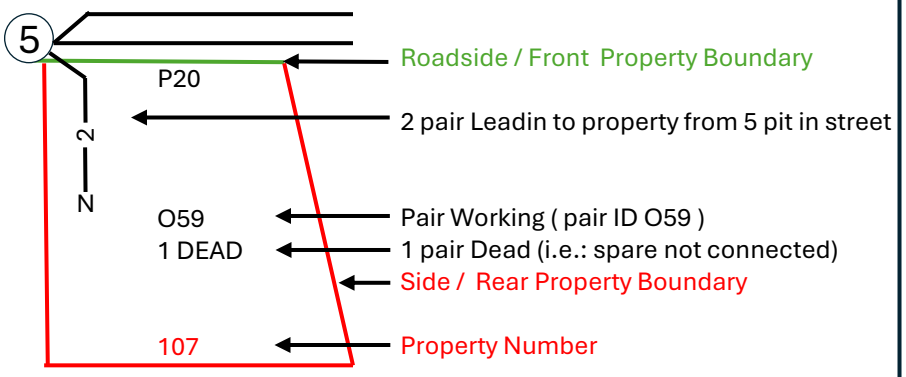
Some Examples of how to read Telstra Plans



One 50mm PVC conduit (P50) containing a 50-pair and a 10-pair cable between two 6 pits. approximately 20.0m apart, with a direct buried 30-pair cable along the same route.



Two separate conduit runs between two footway access chambers (manholes) approximately 245m apart A nest of four 100mm PVC conduits (P100) containing assorted cables in three ducts (one being empty) and one empty 100mm concrete duct (C100) along the same route.



The 5 Ps of Safe Excavation

https://www.byda.com.au/before-you-dig/best-practice-guides/

Plan

Plan your job. Use the BYDA service at least one day before your job is due to begin, and ensure you have the correct plans and information required to carry out a safe project.

Prepare

Prepare by communicating with asset owners if you need assistance. Look for clues onsite. Engage a Certified Locator.

Pothole

Potholing is physically sighting the asset by hand digging or hydro vacuum extraction.

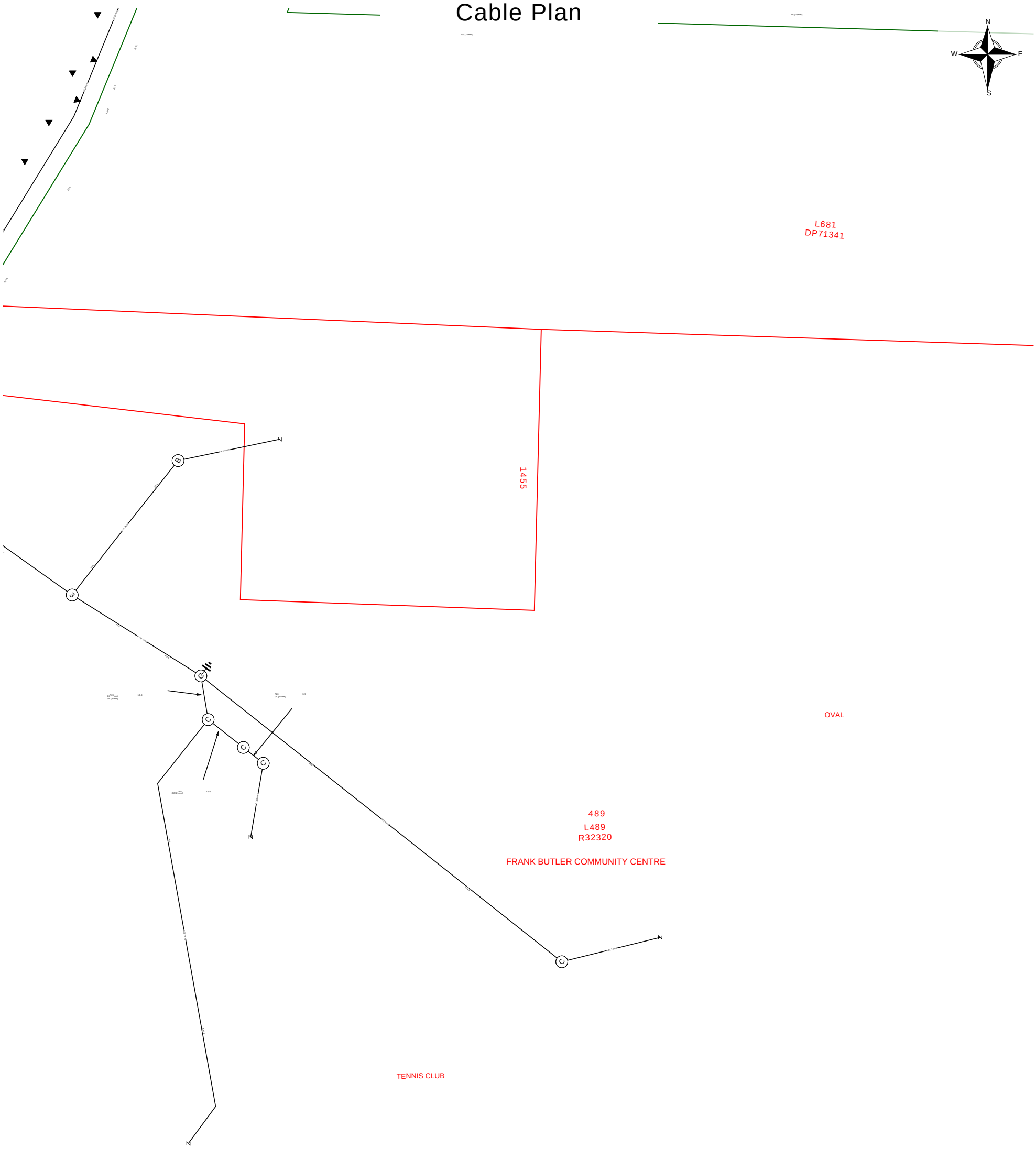
Protect

Protecting and supporting the exposed infrastructure is the responsibility of the excavator. Always erect safety barriers in areas of risk and enforce exclusion zones.

Proceed

Only proceed with your excavation work after planning, preparing, potholing (unless prohibited), and having protective measures in place.

Cable Plan



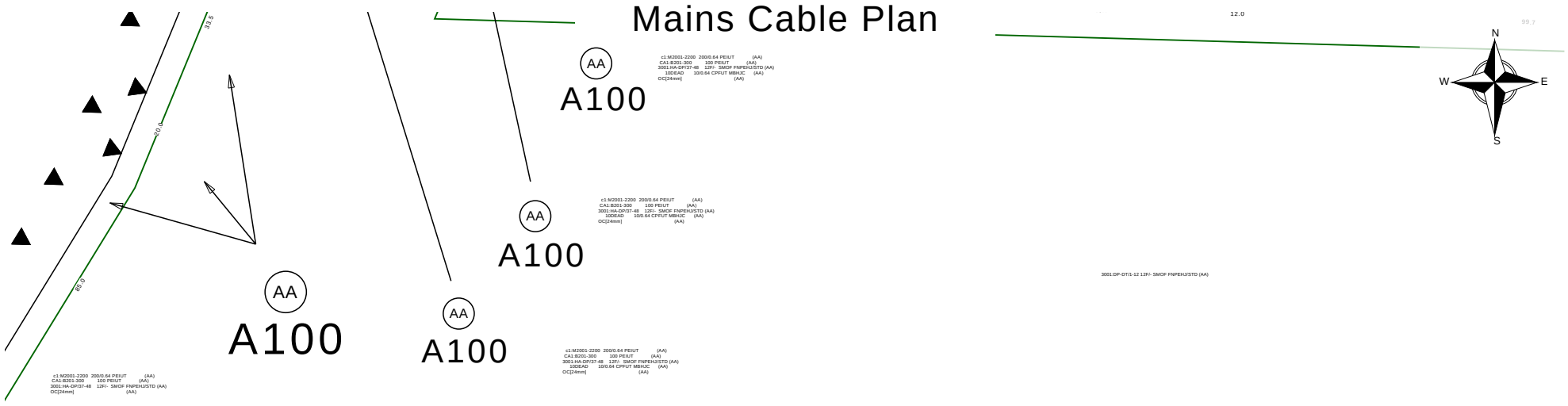
Report Damage:https://service.telstra.com.au/customer/general/forms/report-damage-to-telstra-(Ph - 13 22 03 Email - Telstra.Plans@team.telstra.com Planned Services - ph 1800 653 935 (AEST bus hrs only) General Enquiries	Sequence Number: 274376697
TELSTRA LIMITED A.C.N. 086 174 781	CAUTION: Fibre optic and/ or major network present in plot area. Please read the Duty of Care and contact InfraCo Plan Services should you require any assistance.
Generated On 11/06/2026 14:37:38	

The above plan must be viewed in conjunction with the Mains Cable Plan on the following page

WARNING
Telstra plans and location information conform to Quality Level "D" of the Australian Standard AS 5488-Classification of Subsurface Utility Information.
As such,Telstra supplied location information is indicative only.Spatial accuracy is not applicable to Quality Level D.
Refer to AS 5488 for further details. The exact position of Telstra assets can only be validated by physically exposing it.
Telstra does not warrant or hold out that its plans are accurate and accepts no responsibility for any inaccuracy.
Further on site investigation is required to validate the exact location of Telstra plant prior to commencing construction work.
A Certified Locating Organisation is an essential part of the process to validate the exact location of Telstra assets and to ensure the asset is protected during construction works.

See the Steps- Telstra Duty of Care that was provided in the email response.

Mains Cable Plan



{100}pr cable TLS-ID {000000015055390130}
has been replaced with
{10}pr cable TLS-ID {000000015055390128}
Cable range has not been changed downstream
due to the excessive pair range changes in TPNI / Netmaps.

c1:M2001-2200 200 PEIUT (AA)
CA1:B201-300 100 PEIUT (AA)
3001:BY-HA/1-12 12F/- SMOF FNPEHJ/STD (AA)
OC[24mm] (AA)

0

Report Damage:https://service.telstra.com.au/customer/general/forms/report-damage-to-telstra-
Ph - 13 22 03
Email - Telstra.Plans@team.telstra.com
Planned Services - ph 1800 653 935 (AEST bus hrs only) General Enquiries

TELSTRA LIMITED A.C.N. 086 174 781

Generated On 11/06/2026 14:37:39

Sequence Number: 274376697

CAUTION: Fibre optic and/ or major network present in plot area. Please read the Duty of Care and contact InfraCo Plan Services should you require any assistance.

The above plan must be viewed in conjunction with the Mains Cable Plan on the following page

WARNING
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See the Steps- Telstra Duty of Care that was provided in the email response.

Appendix E - Site Selection Analysis Maps

Dampier Foreshore

The Esplanade, Dampier WA 6713, Australia



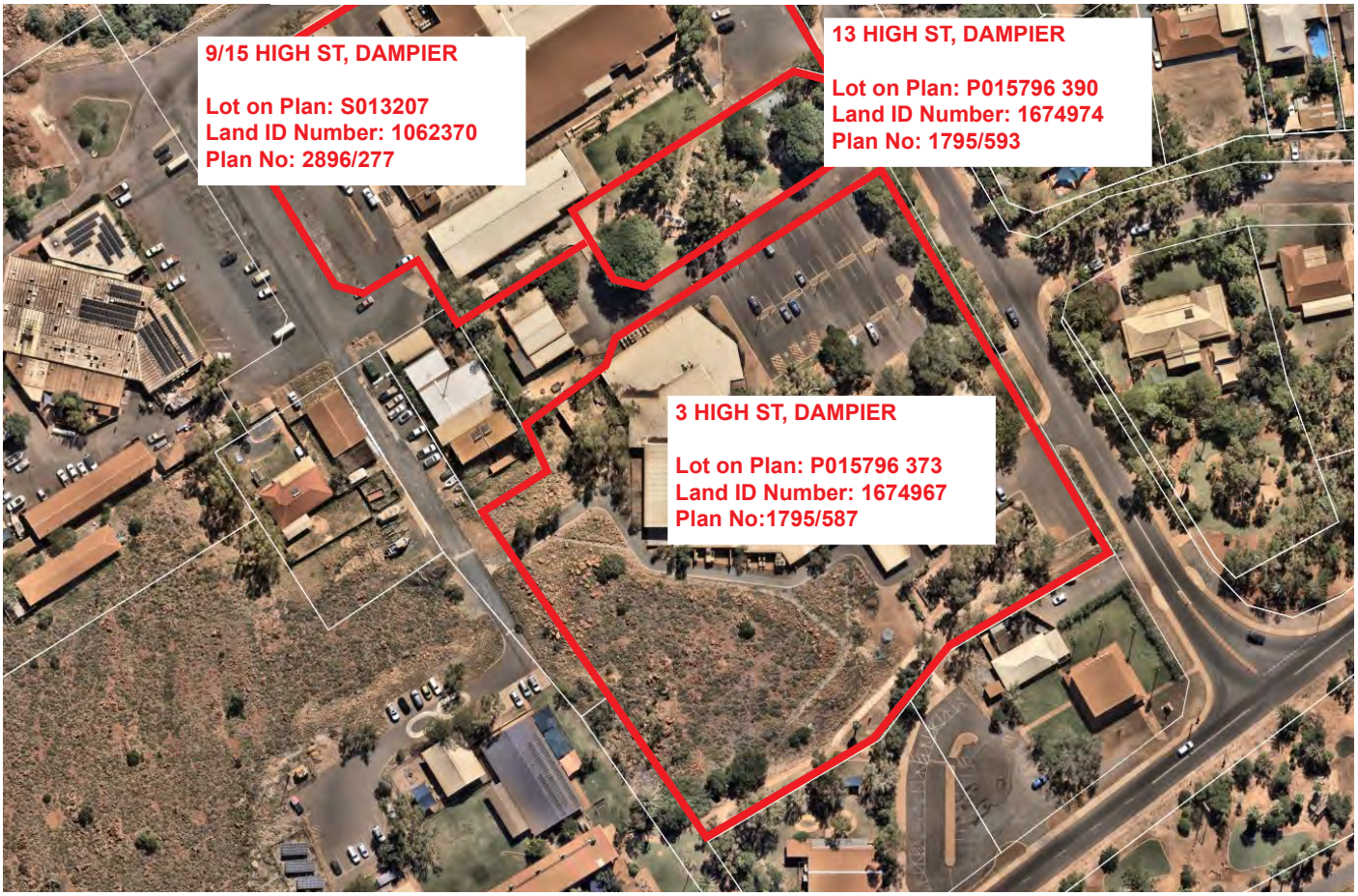
Dampier Foreshore (Inflatable site)

17 The Esplanade, Dampier WA 6713, Australia



Dampier Community Centre

373 High St, Dampier WA 6713, Australia



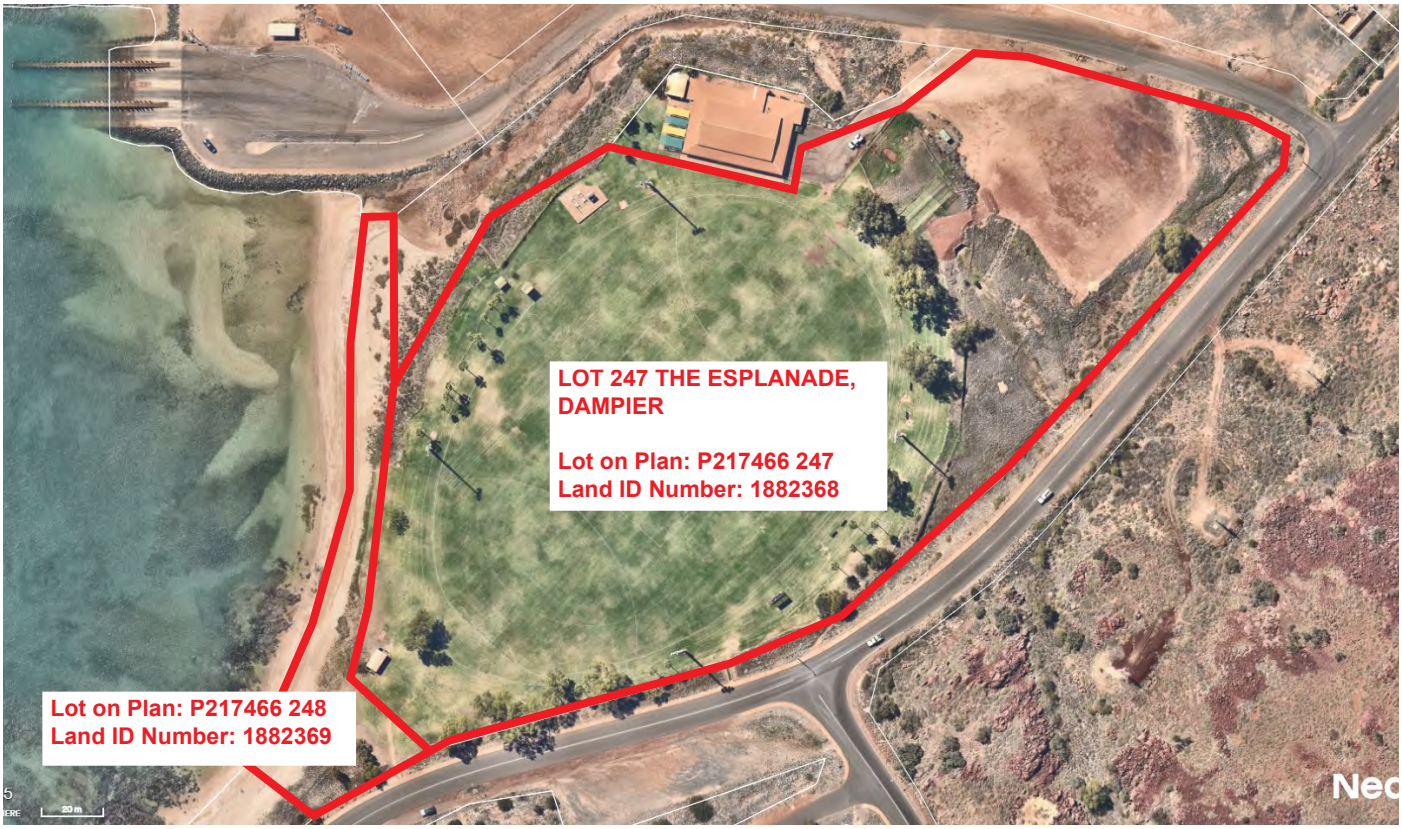
Dampier - Lions Park

Cnr Central Ave and Dawson Drive, Dampier WA 6713, Australia



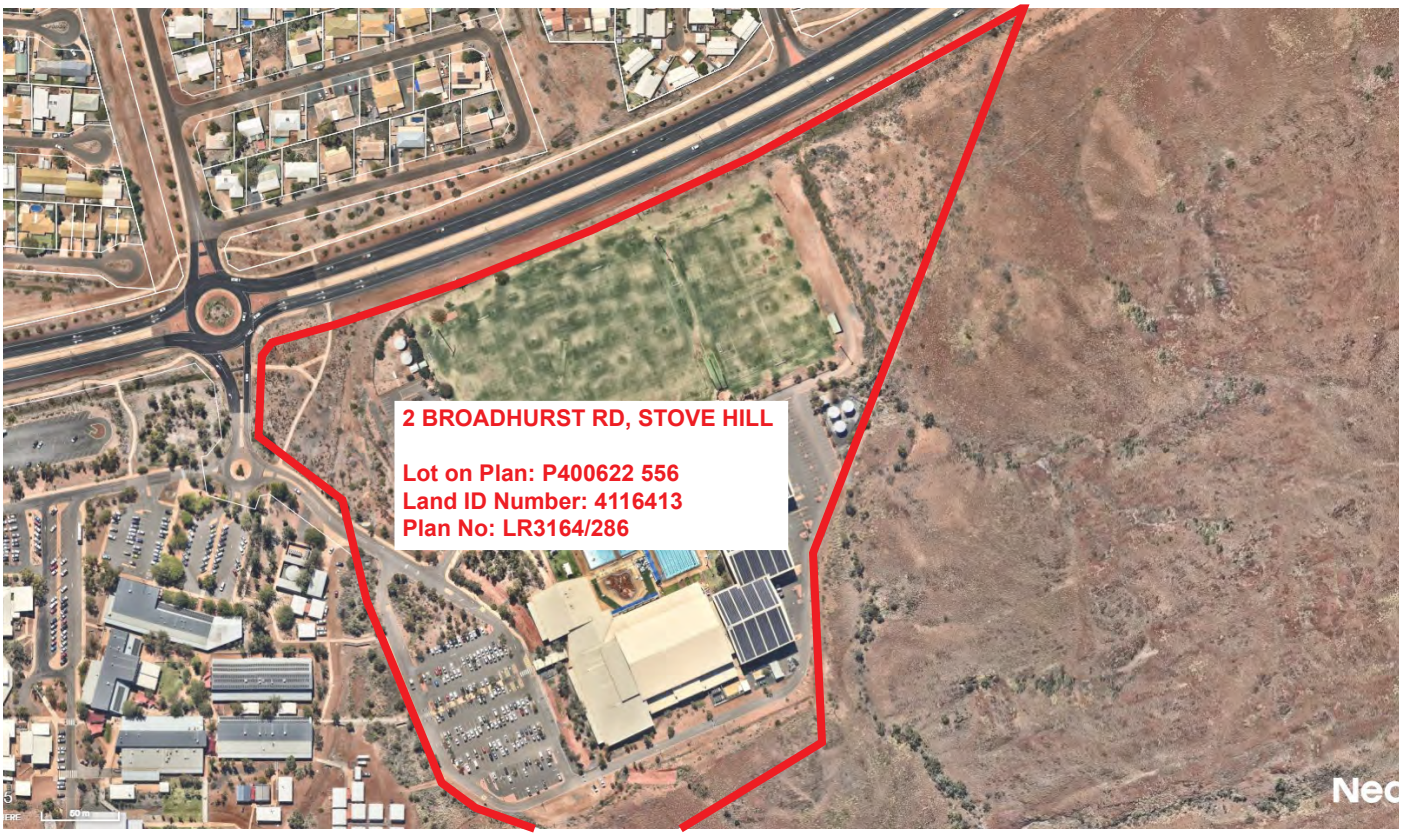
Dampier Football Oval

Ian Williams Cres, Dampier WA 6713, Australia



Karratha Leisureplex

Opposite Broadhurst Road, Dampier Hwy, Pegs Creek WA 6714, Australia



Karratha Leisureplex Alternate Sites

Opposite Broadhurst Road, Dampier Hwy, Pegs Creek WA 6714, Australia



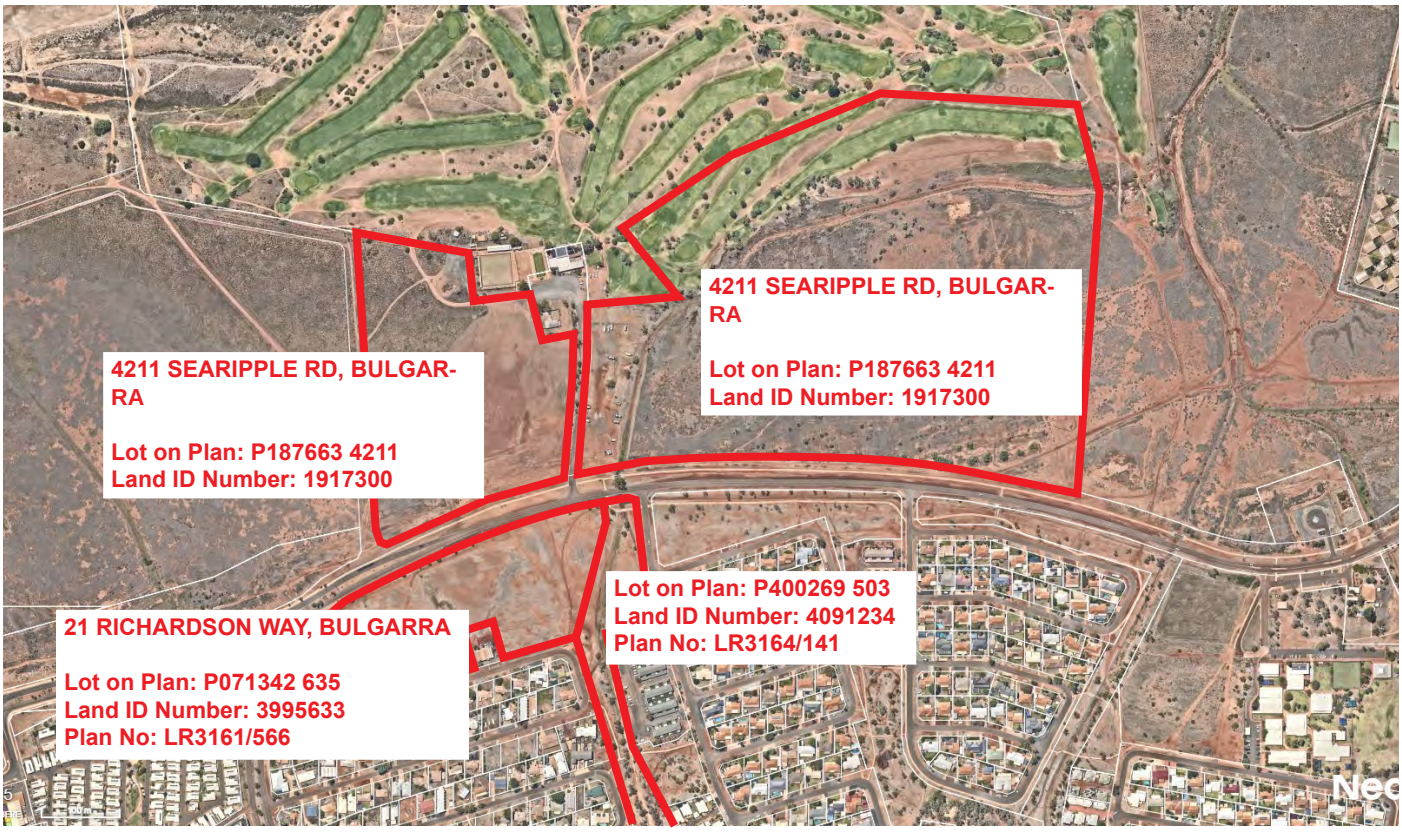
Karratha - Potential Hotel + Civic Buildings

Cnr Balmoral Road and Basset Road



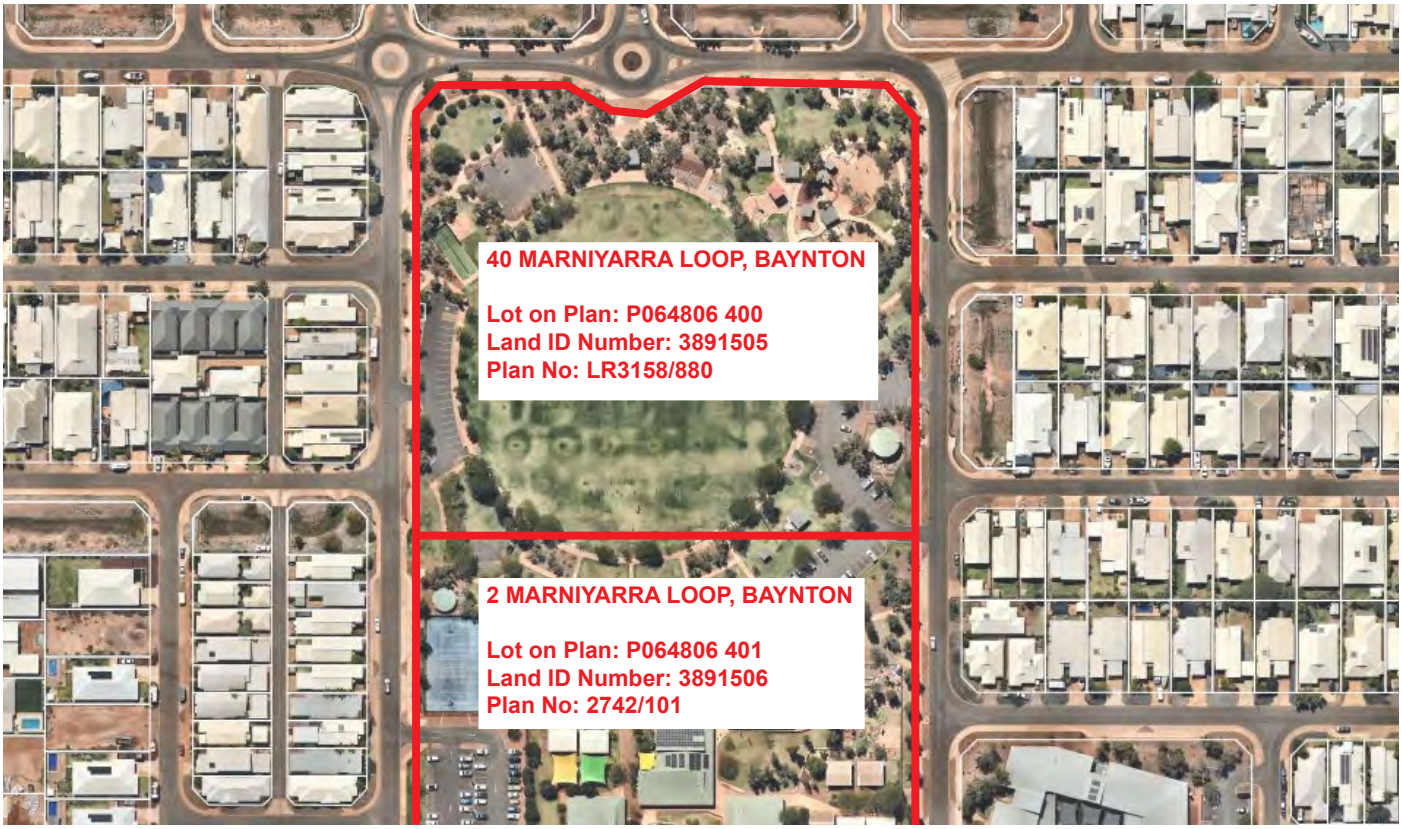
Karratha - Richardson Way / Country Club

Karratha Country Club, Searipple Road, Karratha WA 6714, Australia



Karratha - Baynton West Park

Gardugarli Dr, Baynton WA 6714, Australia



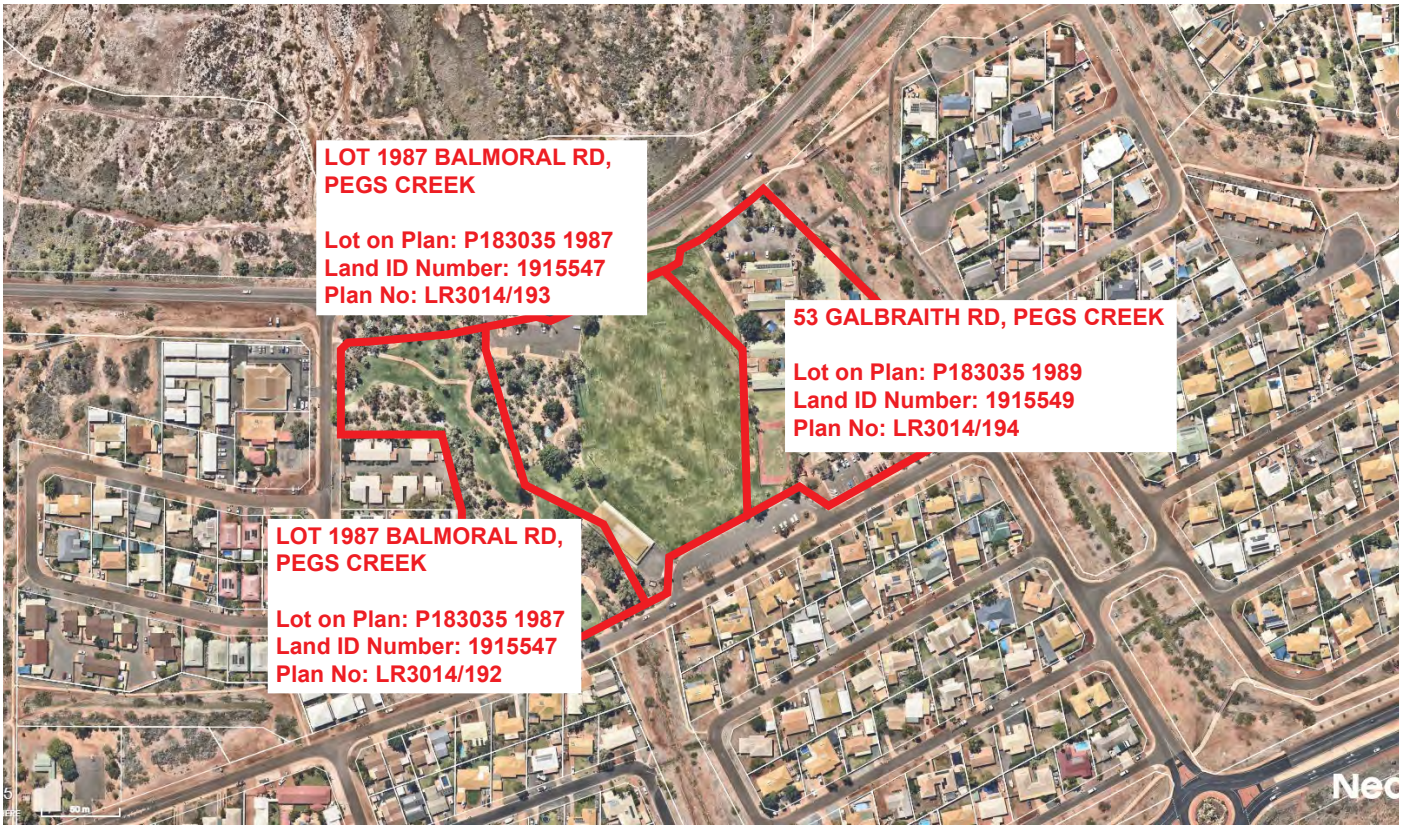
Karratha - Balyarra Park & Pump Track

31-49 Bajamalu Dr, Baynton WA 6714, Australia



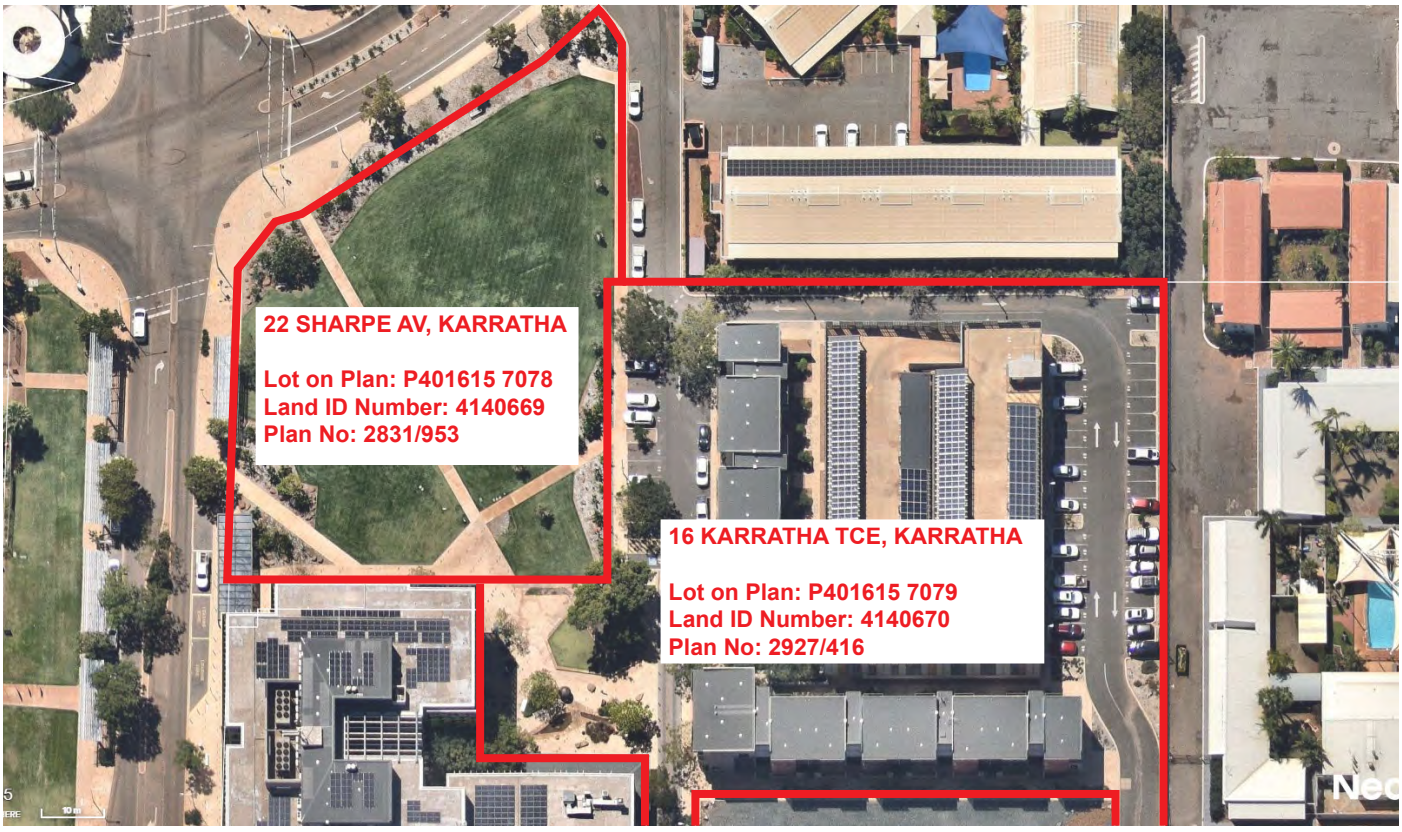
Karratha - Cattrall Park, Pegs Creek

44 Galbraith Rd, Pegs Creek WA 6714, Australia



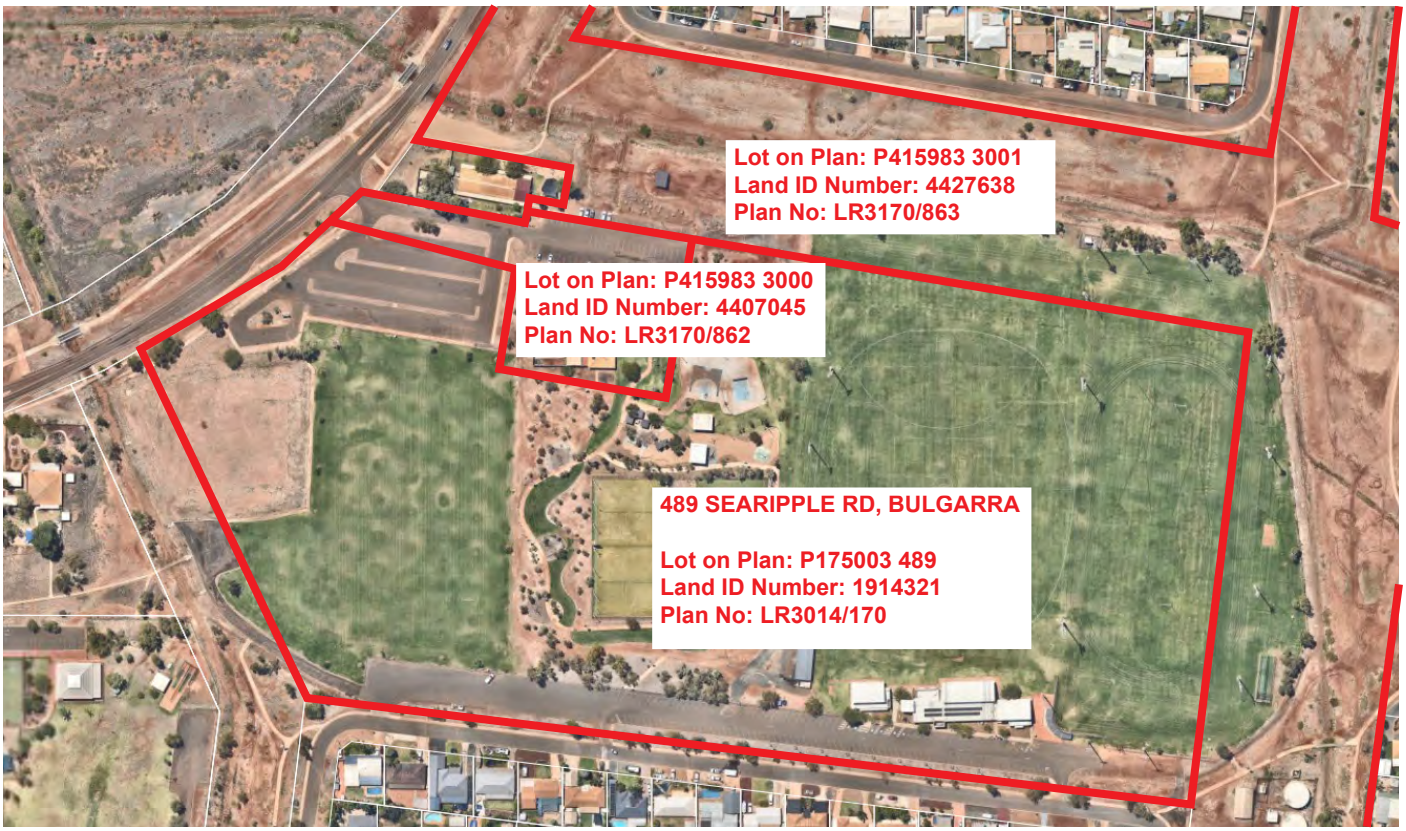
Karratha - Urban Open Space

22 Sharpe Ave, Karratha WA 6714, Australia



Karratha - Hockey and AFL Oval

Searipple Park, Bulgarra WA 6714, Australia



Karratha - Skatepark Site (Nickol West Park)

2 Kookaburra Pkwy, Nickol WA 6714, Australia



Karratha - Red Earth Arts Precinct

27 Welcome Rd, Karratha WA 6714, Australia



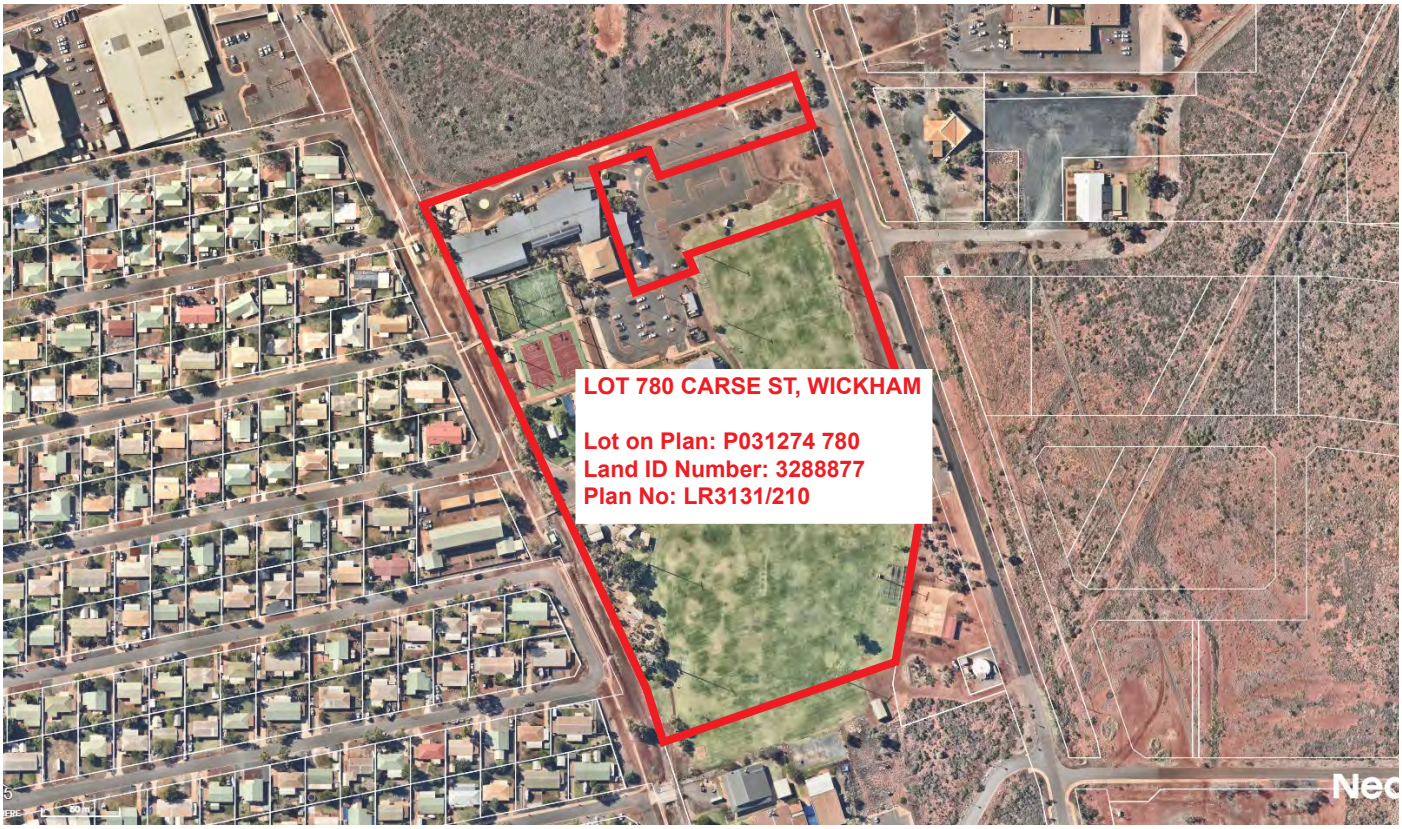
Karratha - Back Beach

Mystery Rd, Mulataga WA 6714, Australia



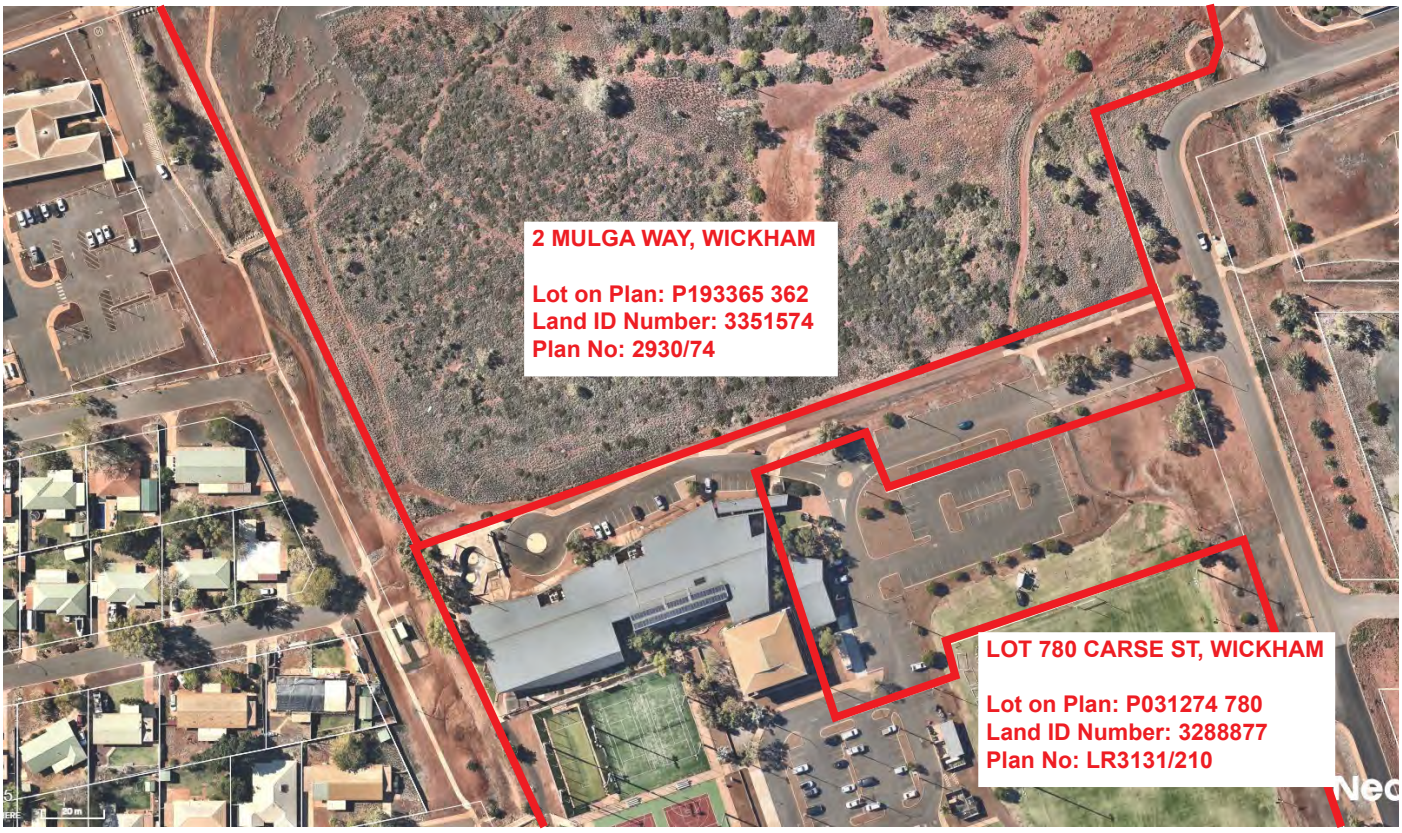
Wickham Recreation Precinct

Carse St, Wickham WA 6720, Australia



Wickham Community Hub

Carse St, Wickham WA 6720, Australia



Wickham South Park

1-7 Bottlebrush Rd, Wickham WA 6720, Australia



Roebourne Aquatic Centre

2 Sholl St, Roebourne WA 6718, Australia



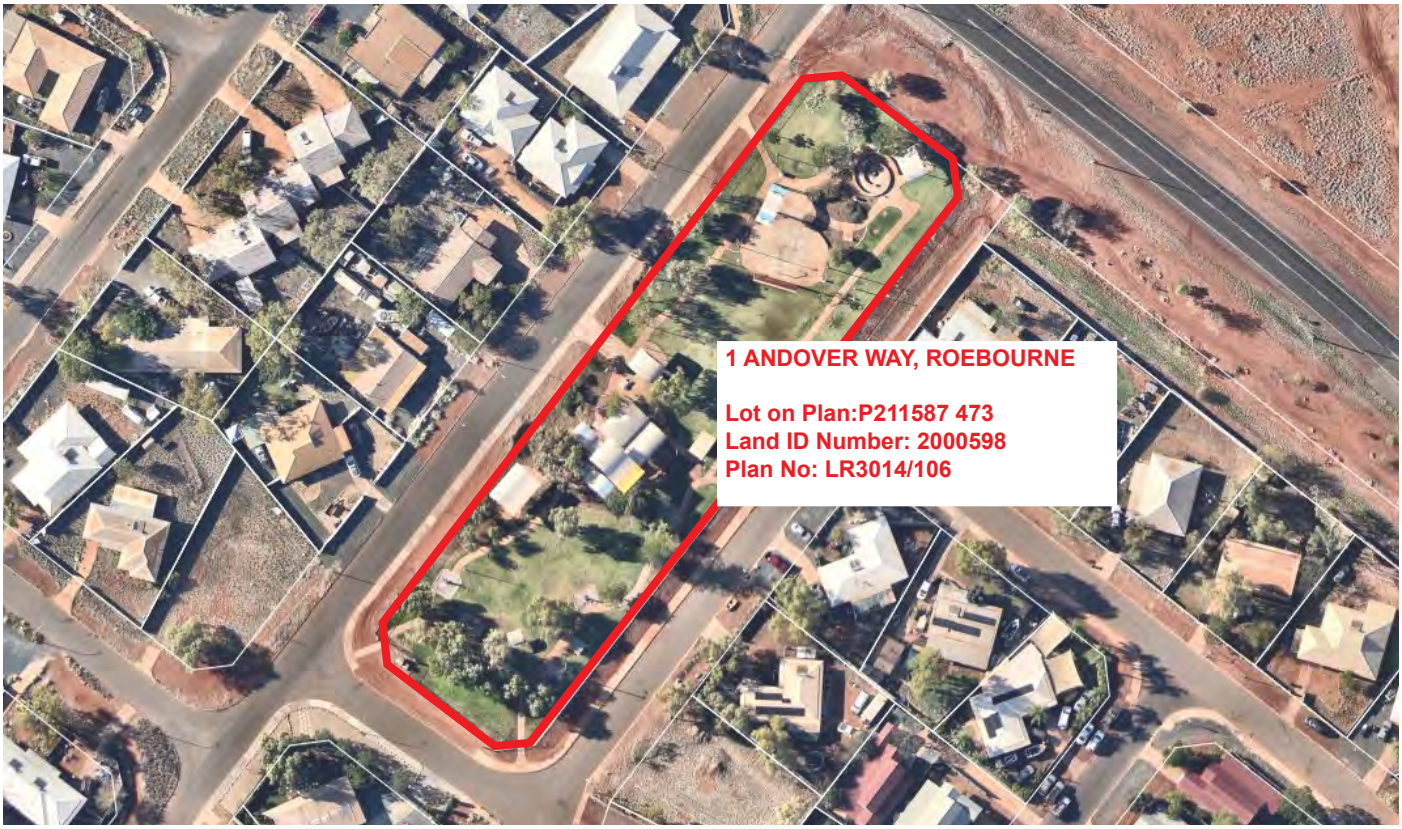
Roebourne Public Library

38 Roe St, Roebourne WA 6718, Australia



Andover Park

1 Andover Way, Roebourne WA 6718, Australia



Point Samson Community Park

Roebourne Rd After, Meares Dr, Point Samson WA 6720, Australia



Point Samson (Inflatable site)

18-10 Miller Cl, Point Samson WA 6720, Australia



Appendix F - Concept Scenario Option Plans

SCALE BAR

0
2m
4m
6m
8m
10m
12m
14m
16m
18m
20m

EXISTING DRY PLAY GROUND

THE ESPLANADE

THE PALMS (EXISTING

EXISTING PAVED BOARD WALK AND BEACH ACCESS RAMP

EXISTING ACCESS WALKWAY

WATER TREATMENT PLANT (100m²)

OPERATIONS AND STORAGE (20m²)

EXISTING CAR PARK

FAMILY SPLASH PAD (300m²)

EXISTING PUBLIC AMENITIES LOCATED IN PAVILION BUILDING

TERRACED LANDSCAPE SEATING OVER LOOKING FAMILY SPASH PAD

EXISTING ACCESS WALKWAY

HAMPTON OVAL (EXISTING)

JUNIOR SPLASH PAD (200m²)

EXISTING SPORTING PAVILION

EXISTING PAVED AREA AND TERRACED SEATIN

EXISTING DRY PLAYGROUND

donovan payne

KARRATHA SPLASH

CITY OF KARRATHA

DAMPIER FORESHORE

N

- BUILDER MUST CHECK ALL DIMENSIONS, HEIGHTS, AND LEVELS ON SITE BEFORE COMMENCING ANY WORK.
- DIMENSIONS TO GOVERN SCALE.
- ALL REFERENCES TO ELECTRICAL AND MECHANICAL SERVICES ARE INDICATIVE ONLY. REFER TO THE RELEVANT ENGINEERS DRAWINGS AND SPEC. FOR FINAL SELECTIONS AND LAYOUT.

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SCALE	@ A1
DRAWN	SHO
CHECKED	SHO
JOB NO.	p2601

DWG NUMBER: SK01

REV.: b

SCALE BAR
0
2m
4m
6m
8m
10m
12m
14m
16m
18m
20m

EXISTING SPORTS OVAL.

EXISTING SPORTS PAVILION

RETAIN PORTION OF EXISTING LANDSCAPED AREA AND BBQ CABANA

EXISTING 50m COMPETITION POOL

EXISTING PROGRAMME/ LEISURE POOL

WATER TREATMENT PLANT (120 m²)

OPERATIONS AND STORAGE (30 m²)

SLIDE ACCESS TOWER AND RUN-OUT AREA

ADJUST ACCESS TRACK AROUND SLIDE TOWER

TWO FLUME SLIDES (APPROX. 40m LONG)

ADJUST FENCELINE TO SUIT SPLASH PAD

20m x 10m LEARN-TO-SWIM (LTS) PROGRAMME POOL

EXISTING STORMWATER DRAIN

SHADE STRUCTURE OVER SPLASH PAD SHOWN DASHED

SPLASH PAD (WET AREA 300m²)

SPRAY PARK / MARSHALLING AREA

OPTIONAL UPGRADE TO EXISTING SPLASHPAD AREA.

EXISTING KARRATHA LEISUREPLEX BUILDING

EXISTING CAR PARK

donovan payne

KARRATHA SPLASH

CITY OF KARRATHA

KLP

- BUILDER MUST CHECK ALL DIMENSIONS, HEIGHTS, AND LEVELS ON SITE BEFORE COMMENCING ANY WORK.
- DIMENSIONS TO GOVERN SCALE.
- ALL REFERENCES TO ELECTRICAL AND MECHANICAL SERVICES ARE INDICATIVE ONLY. REFER TO THE RELEVANT ENGINEER'S DRAWINGS AND SPEC. FOR FINAL SELECTIONS AND LAYOUT.

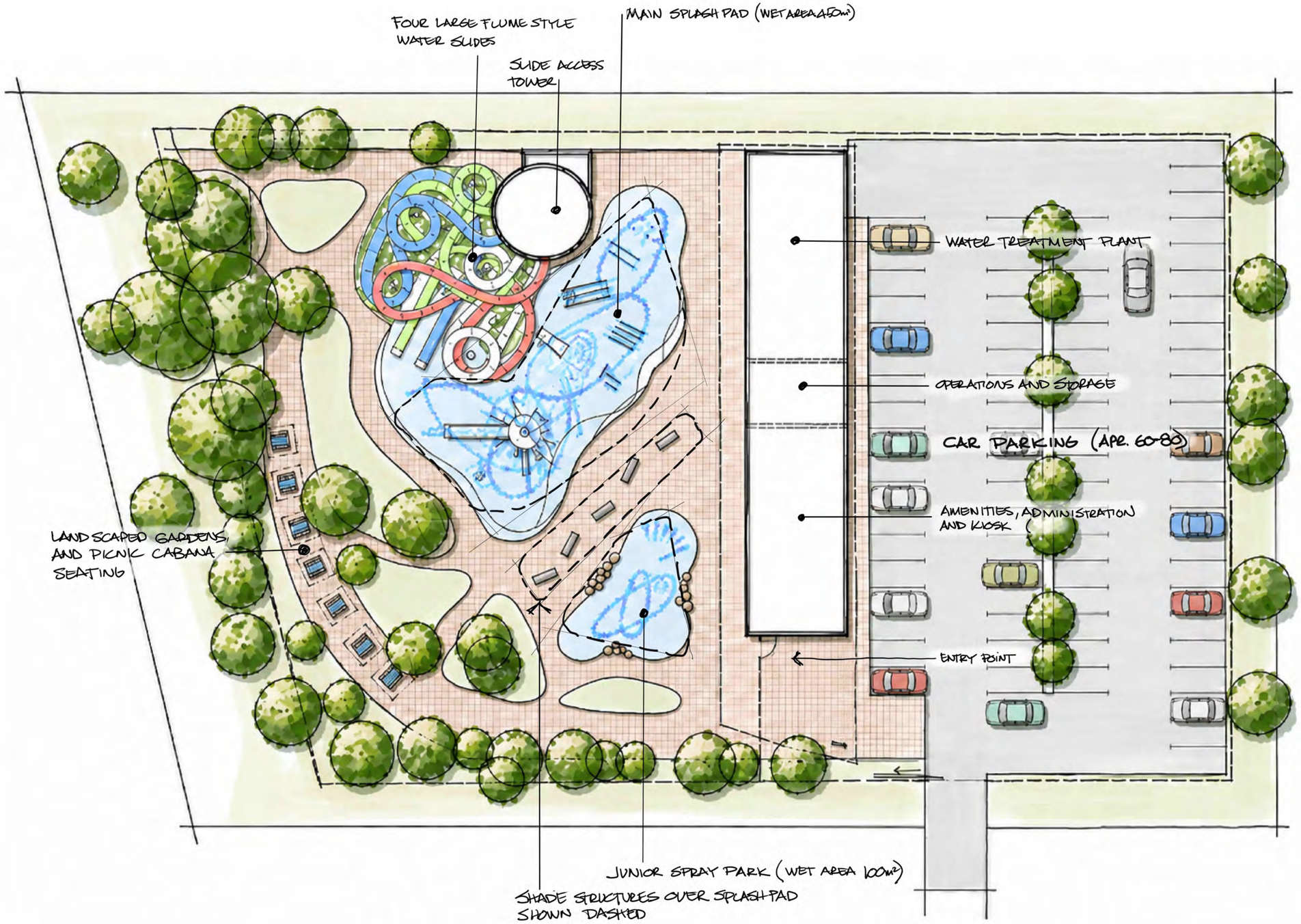
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SCALE 1 : 200 @ A1
DRAWN SHO
CHECKED SHO
JOB NO. p2601

DWG NUMBER SK03
REV. b

SCALE BAR

0
2m
4m
6m
8m
10m
12m
14m
16m
18m
20m



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KARRATHA SPLASH

CITY OF KARRATHA

REGIONAL WATER PLAY PARK

- BUILDER MUST CHECK ALL DIMENSIONS, HEIGHTS, AND LEVELS ON SITE BEFORE COMMENCING ANY WORK.
- DIMENSIONS TO GOVERN SCALE.
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SCALE 1 : 200 @ A1
DRAWN SHO
CHECKED SHO
JOB NO. p2601

DWG NUMBER SK2.1

REV. b

SCALE BAR

0
2m
4m
6m
8m
10m
12m
14m
16m
18m
20m

SEVICE YARD

WATER TREATMENT PLANT (85m²)

OPERATIONAL AND STORAGE AREA (20m²)

EXISTING CAR PARK

EXISTING COMMUNITY CENTRE

PUBLIC AMENITIES (35 m²)

SHADE STRUCTURE OVER SHOWN DASHED

TIPPING BUCKET

SPLASH PAD (WET AREA 600m²)

GATE

TODDLER DISCOVERY ZONE

GROUND SPRAY PLAZA

EXISTING SKATE ZONE

CABANA SEATING

LINE OF SPLASH PAD FENCE

WATER JOURNEY PLAY ZONE

GATE

EXISTING SPORTS HARDSTAND

EXISTING PLAYING FIELDS

donovan payne

KARRATHA SPLASH

CITY OF KARRATHA

BULGARRA OVAL

- BUILDER MUST CHECK ALL DIMENSIONS, HEIGHTS, AND LEVELS ON SITE BEFORE COMMENCING ANY WORK.
- DIMENSIONS TO GOVERN SCALE.
- ALL REFERENCES TO ELECTRICAL AND MECHANICAL SERVICES ARE INDICATIVE ONLY. REFER TO THE RELEVANT ENGINEER'S DRAWINGS AND SPEC. FOR FINAL SELECTIONS AND LAYOUT.

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SCALE	@ A1
DRAWN	SHO
CHECKED	SHO
JOB NO.	p2601

DWG NUMBER: SK04

REV: b

Tredwell Management Services

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E: admin@tredwell.com.au
W: www.tredwell.com.au