

# Ben Hammond Complex – Single Site Consolidation Project

Regulatory Business Case 2024-29

30 November 2023

# Contents

---

<b>1. Summary</b>	<b>2</b>
1.1 Business Need	2
1.2 Options Analysis	3
1.3 Recommended Option	5

---

<b>2. Identified Need</b>	<b>7</b>
---------------------------	----------

<b>3. Options analysis</b>	<b>11</b>
3.1 Reference Project (Base Case) – Business As Usual	11
3.2 Credible Options	12
3.3 Option 1: IL4 Rated Multi-Storey Office and Multi-Storey Carpark with Grant Funding	12
3.4 Option 2: IL4 Rated Multi-Storey Office and Multi-Storey Carpark (Excludes Grant Funding)	15
3.5 Option 3: Multi-Storey Office and Multi-Storey Carpark (Excludes IL4 Rating and Grant Funding)	16
3.6 Option 4: IL4 Rated Multi-Storey Office and Ground Level Carpark (Excludes Grant Funding)	17
3.7 Comparison of Credible Options	19
3.8 Non-Credible Options	28

---

<b>4. Recommendation</b>	<b>30</b>
4.1 Strategic alignment	30
4.2 Dependent projects	30
4.3 Deliverability	30
4.4 Customer Considerations	31
4.5 Expenditure profile	31
4.6 High-level scope	32

# 1. Summary

## 1.1 Business Need

The consolidation of our Darwin-based staff at the Ben Hammond Complex is critical to our continuous improvement. It reflects financial prudence, and underpins our efforts to improve operational excellence, reduce our own emissions, and provide a safe and secure environment for our staff. Each of these objectives benefits our customers.

### **Strategic Context**

Power and Water is a Northern Territory Government-owned Corporation operating under the Government Owned Corporations Act 2001. As a multi-utility, it provides a range of electricity, gas, system control, water, and sewerage services. These services are provided to urban, rural, regional, and remote communities and to a diversified demographic customer base.

Our operating environment is dynamic, harsh, and unique. It presents substantial challenges, risks, and opportunities as we transition to the new operating model and requirements of the NT National Electricity Rules (NT NER).

### **Power and Water's Property Strategy**

Power and Water's Property Strategy aligns with Power and Water's strategic plan to provide safe, fit for purpose, reliable and cost-effective operational property and building assets, contributing to Power and Water's ability to deliver its vision of being "A proud, trusted, modern multi-utility delivering value now and into the future." It encompasses the provision of purpose-built facilities, compliance with diverse legislative and regulatory requirements, mitigation of the aging condition of property infrastructure and the agile adaptation to evolving operational demands across various business units. Moreover, it seeks to optimise property locations to amplify value, boost engagement, enhance productivity and ensure responsiveness during both core and non-core activities.

The Property Strategy acknowledges the imperative for ongoing adaptation. Increasing service standards and community expectations require an agile response. Over the next decade, Power and Water is dedicated to investing in internal systems and capabilities to increase our service delivery. We are also proactively exploring initiatives to cultivate a positive workplace culture, foster staff collaboration, improve environmental outcomes, and minimise our property footprint.

The Property Strategy also plays a crucial role in advancing our broader renewables strategy and targets by actively contributing to our renewable energy initiatives through essential activities such as accommodation master-planning, infrastructure development, strategic asset management and building compliance programs. These activities are integral to the Northern Territory Government's 50% renewables target by 2030.

The Property Strategy is customer-centric in that it provides the flexibility to evolve in response to the changing landscape of industry dynamics and heightened stakeholder expectations, further ensuring our commitment to environmental responsibility and the integration of renewables into our broader business objectives.

## **Rationale for Single Site Consolidation**

A pivotal element of the Property Strategy is the consolidation of employees from the leased entities of Mitchell Centre and Jacana House into a purpose-built precinct at the Ben Hammond Complex, Darwin. This move has a number of key benefits:

### *Expenditure Efficiencies*

We have undertaken a cost benefit analysis to understand both the tangible and intangible benefits of the project over the next 40 years.

We have identified a number of direct benefits<sup>1</sup> over the life of the new complex:

- \$67 million of property lease costs.
- \$36 million of travel costs.
- \$10 million of general operating expenditure (e.g. electricity use and repairs and maintenance).

The analysis shows there is also around \$90 million of indirect benefits attributed to productivity gains, and a significant boost to the NT economy, resulting in a range of benefits across the options assessed from \$270 to \$380 million largely driven by the different scope of construction activities.

### *Safety, Security and Compliance*

The single site consolidation project is critical to delivering our commitment to safety and compliance. The move to a new building enables us to modernise our infrastructure, guaranteeing that our facilities not only meet modern, industry standard safety standards but also provide enhanced security outcomes consistent with our operational role as the provider of essential services in the Territory.

### *Advancing Our Renewables Commitment*

Power and Water is taking proactive steps to actively support and further the NT Government's renewable energy targets. The project integrates solar generation and energy-efficient infrastructure into the project's design and construction. This project shows our commitment to environmental responsibility, aligns with the overarching renewables strategy, and provides tangible benefits in terms of sustainability and the corporation's clean energy transition.

### *Operational Efficiency and Interoperability*

The consolidation of our staff into one location enhances operational efficiency and fosters enhanced interoperability among teams. By co-locating diverse functions, we are able to streamline workflows and communication, subsequently boosting the overall performance of the corporation.

Ultimately, this consolidation enhances our ability to deliver value to our customers. By concentrating our efforts and resources, we can respond more effectively to their needs and deliver improved services and solutions.

## **1.2 Options Analysis**

### **1.2.1 Options Identification**

We have assessed a number of options. Each has been compared with the established base case, which represents the current practice of leasing office space in the Mitchell Centre and Jacana House. The costs associated with the base case over the next 40 years is \$67 million.

---

<sup>1</sup> In present value terms

An overview of these options is presented in Table 1.

Table 1. Summary of credible options

Option No.	Option name	Description
1	IL4 Rated Multi-Storey Office and Multi-Storey Carpark with Grant Funding	<p>Single Site Consolidation at Ben Hammond Complex comprising:</p> <ul style="list-style-type: none"> <li>• Construction of multi-story office (<b>IL4 cyclone rating</b>)</li> <li>• Construction of multi-story carpark (<b>IL4 cyclone rating used as a public cyclone shelter</b>)</li> <li>• Link bridge between office and carpark</li> </ul> <p>Discontinue Mitchell Centre and Jacana House leases on commissioning of new SSC complex.</p> <p>Key Assumptions:</p> <ul style="list-style-type: none"> <li>• Total construction cost: ~\$180M</li> <li>• Contingent on government grant for public cyclone shelter: ~\$70M</li> <li>• Standard Control Services Capex Component: ~\$60M</li> </ul>
2	IL4 Rated Multi-Storey Office and Multi-Storey Carpark (Excludes Grant Funding)	<p>This is the same design concept as Option 1 but excludes strategic grant funding.</p> <p>Key Assumptions:</p> <ul style="list-style-type: none"> <li>• Total construction cost: ~\$180M</li> <li>• No grant funding</li> <li>• Standard Control Services Capex Component: ~\$100M</li> </ul>
3	Multi-storey Office and Multi-Storey Carpark (Excludes IL4 Rating and Grant Funding)	<p>Single Site Consolidation at Ben Hammond Complex comprising:</p> <ul style="list-style-type: none"> <li>• Construction of multi-story office (<b>not IL4 rated</b>)</li> <li>• Construction of multi-story carpark (<b>not IL4 rated and not used as a public cyclone shelter</b>)</li> <li>• Link bridge between office and carpark</li> </ul> <p>Discontinue Mitchell Centre and Jacana House leases on commissioning of new SSC complex.</p> <p>Key Assumptions:</p> <ul style="list-style-type: none"> <li>• Total construction cost: ~\$165M</li> <li>• No grant funding</li> <li>• Standard Control Services Capex Component: ~\$90M</li> </ul>
4	IL4 Rated Multi-Storey Office and Ground Level Carpark (Excludes Grant Funding)	<p>Single Site Consolidation at Ben Hammond Complex comprising:</p> <ul style="list-style-type: none"> <li>• Construction of multi-story office (<b>IL4 rating</b>)</li> <li>• Purchase of land and modification for use as a ground-level carpark</li> </ul> <p>Discontinue Mitchell Centre and Jacana House leases on commissioning of new SSC complex</p> <p>Key Assumptions:</p> <ul style="list-style-type: none"> <li>• Construction cost [REDACTED]</li> <li>• Land acquisition cost [REDACTED]</li> <li>• Total project cost: ~\$120M</li> <li>• No grant funding</li> <li>• Standard Control Services Capex Component: ~\$70M</li> </ul>

### 1.2.2 Options Assessment

To further assess the impact of consolidating our Darwin-based staff into a single location, we took two key steps:

1. We initiated a 25% design concept for the Ben Hammond Complex.
2. We engaged an independent local advisory firm to conduct a cost benefit analysis (CBA).

The purpose of the CBA was to comprehensively evaluate the economic, financial and various other implications associated with the construction, employee consolidation and the full operational transition at Power and Water's Ben Hammond Complex. By undertaking a CBA, we ensure a transparent and comprehensive assessment of all pertinent economic, financial and related factors. This approach provides the insights needed to make well-informed investment decisions.

### 1.3 Recommended Option

The CBA recommended Option 1 due to the lower initial capital investment of around \$110 million. However, this is contingent on receipt of around \$70 million in government grant funding.

Option 4 offers similar advantages to Option 1, and while the initial up front capital cost is marginally higher (around \$120 million), it does not rely on contingent grant funding for project delivery. It also delivers a highly positive Net Present Value (NPV) and benefit cost ratio (BCR).

Based on the overall analysis, Option 4 is preferred. This option is more likely to be fully deliverable, and also effectively mitigates the uncertainty and risk linked to contingent grant funding. This makes it a practical and sustainable choice for Power and Water's future success of project delivery outcomes.

Table 2 provides a summary of the comparative assessment metrics for the viable options.

Table 2. Summary of Overall NPV & Comparative Assessment Metrics

Assessment metrics	Option 1	Option 2	Option 3	Option 4
NPV	■	■	■	■
BCR	■	■	■	■
Capex	■	■	■	■
Meets customer expectations	◐	◐	◐	◐
Aligns with Asset Objectives	●	●	●	●
Technical Viability	●	●	●	●
Deliverability	◐	◐	◐	●
Preferred	✗	✗	✗	✓

● Fully addressed the issue    ◐ Adequately addressed the issue    ◑ Partially addressed the issue    ○ Did not address the issue

<sup>2</sup> This value includes the impact around \$70 million of grant funding.

<sup>3</sup> Includes land acquisition cost of ■

Table 3 summarises the forecast capital expenditure for the preferred option over the next regulatory period (2024-29).

Table 3. Forecast capital and operational expenditure by year, \$ million

Item	FY25	FY26	FY27	FY28	FY29	Total
Capex	█	█	█	█	█	█
Opex	█	█	█	█	█	█
Total	█	█	█	█	█	█

Notes:

- Financial values presented in this business case are expressed in real FY22 dollars unless otherwise stated. Values are total direct, un-escalated costs.
- Some numbers may not sum due to rounding.
- Some values in this business case have been redacted as the project will be part of a commercial tender process.

## 2. Identified Need

### 2.1.1 Strategic Context

Power and Water, a government-owned multi-utility operating under the *Government Owned Corporations Act 2001*, plays a vital role in providing essential services, including electricity, gas, system control, water and sewerage to a diverse and geographically dispersed customer base in the Northern Territory. These services are delivered in accordance with our 2023-2029 Strategic Plan and our requirements under the NT NER.

The current state of property assets across Power and Water presents a unique convergence of strategic opportunities and operational imperatives.

Aligned with the 2023-2029 Strategic Plan, our Property Strategy focuses on optimising the effective use of all our property assets. A key component of this strategy is the Single Site Consolidation project, an initiative which entails systematically relocating employees from Mitchell Centre and Jacana House to a newly constructed, purpose-built office at the Ben Hammond Complex.

### 2.1.2 Power and Water's Property Strategy

Property and infrastructure serve as fundamental pillars supporting Power and Water's operations, encompassing both field and office-based functions. These assets are integral to ensuring the efficiency, reliability and safety of our network, driving overall business performance.

Our Property Strategy addresses critical challenges and opportunities within our regulated business, including:

1. **Purpose-Built Facilities:** Providing secure, purpose-built offices and amenities to enable the effective pursuit of our strategic objectives and operational needs.
2. **Compliance:** Ensuring ongoing compliance with diverse legislative and regulatory requirements, including those related to construction codes, workplace safety and critical infrastructure security.
3. **Aging Infrastructure:** Tackling the aging condition of our property infrastructure.
4. **Operational Agility:** Adapting to the evolving operational demands of various business units tied to our properties, both owned and leased.
5. **Optimised Locations:** Leveraging property locations to maximise value, boost interoperability, engagement, productivity and responsiveness during core and non-core activities.

Our Property Strategy is inherently customer-centric, tailored to specific needs and anchored by strategic objectives.

In response to changing industry dynamics and elevated stakeholder expectations, our Property Strategy acknowledges the imperative for ongoing adaptation. Increasing service standards and community expectations require an agile response. Over the next decade, Power and Water is dedicated to investing in internal systems and capabilities to increase our service delivery. This includes accommodation master planning, upgrading outdated IT applications to purpose-built systems, strategic workforce planning, enhancing productivity and establishing a customer-centric approach. Additionally, we are proactively exploring initiatives to cultivate a positive workplace culture, foster staff collaboration, improve environmental outcomes, and minimise our property footprint.

### 2.1.3 The Rationale for Single Site Consolidation

Power and Water Corporation currently holds leases for office spaces at two locations in Darwin's Central Business District: Mitchell Centre and Jacana House. These properties accommodate a total of 334



employees and represent a significant portion of our uncontrollable costs within the corporate operating budget.

A summary of the existing corporate locations in Darwin are shown below in Table 4.

Table 4. Corporate Site Locations – Darwin

Property	Location	Capacity	Description
<b>Ben Hammond Complex</b> (owned)	Iliffe Street, Stuart Park	520 staff	The Ben Hammond Complex is a government owned urban corporate facility that serves as a hub for both personnel and essential utility service infrastructure. This site plays a pivotal role in overseeing the operational delivery of critical utility services, including power, water, and gas.
<b>Mitchell Centre</b> (leased)	55 Mitchell Street, Levels 1, 2, 6 & 7, Darwin	312 staff	The Mitchell Centre is a leased urban corporate facility that serves as a hub for both personnel and infrastructure, all of which play a crucial role in providing the strategic and corporate support necessary to facilitate the delivery of essential utility services.
<b>Jacana House</b> (leased)	39 Woods Street, Level 8 Darwin	109 staff	Jacana House is a leased urban corporate facility that serves as a hub for both personnel and infrastructure, all of which play a crucial role in providing the strategic and corporate support necessary to facilitate the delivery of essential utility services.

The current occupancy rate within the above-leased properties is at approximately 80% and comprises of 334 staff<sup>4</sup> and contingent labour resources (namely contractors). The total establishment within these properties is apportioned across each business unit and location within Table 5.

Table 5. Total Establishment by Business Unit (Leased Properties – Darwin)

Business Unit	Site	Level	Staff Count
<b>Core Operations</b>	Mitchell Centre	2	1
		7	5
<b>Gas Services</b>	Mitchell Centre	2	3
		7	5
<b>Customer, Strategy and Regulations</b>	Mitchell Centre	1	58
		2	10
		6	1
		7	6
<b>Finance and Business Services</b>	Mitchell Centre	2	1
		7	80
<b>Information, Communication and Technology</b>	Jacana House	6	59
	Mitchell Centre	6	46
<b>People, Culture and Safety</b>	Mitchell Centre	6	26
<b>Power Services</b>	Mitchell Centre	6	2
<b>Transformation</b>	Jacana House	6	13
	Mitchell Centre	6	14
		7	1
		<b>Total</b>	<b>334</b>

<sup>4</sup> Source data from PWC People, Culture & Safety

The profiles of both corporate and operational business units situated at the Ben Hammond Complex are presented in Table 6. This table highlights the diverse and fragmented composition of the corporate business units, contrasting with the more centralised nature of the leased accommodation.

Table 6. Corporate staff allocations at BHC with staffing numbers (Occupancy)

Business Unit	Site	Level	Staff Count
<b>Core Operations</b>	Complex 1 - Area 6	1	18
	Complex 7	G	11
<b>Customer, Strategy and Regulations</b>	Complex 6	G	12
<b>Finance and Business Services</b>	Complex 1 - Area 4	1	3
	Complex 1 - Area 7	1	5
	Complex 2	G	22
	Complex 5	G	18
	Complex 7	G	3
	Complex 6	G	3
<b>Information, Communication and Technology</b>	Complex 8	G	5
	Complex 6	G	5
<b>People, Culture and Safety</b>	Complex 1 - Area 1	G	1
	Complex 1 - Area 2	G	12
	Complex 1 - Area 8	1	1
	Complex 6	G	1
	Complex 7	G	1
	Complex 8	G	1
	Complex 9	G	1
<b>Power Services</b>	Complex 1 - Area 2	G	49
	Complex 1 - Area 3	G	33
	Complex 1 - Area 5	1	41
	Complex 1 - Area 9	1	2
	Complex 11	G	5
<b>Water Services</b>	Complex 6	G	93
	Complex 7	G	10
		<b>Total</b>	<b>356</b>

In 2022-23, Power and Water conducted a thorough evaluation of extending leases for both the Mitchell Centre and Jacana House while exploring alternative accommodation options. This was driven by our commitment to maximising value, improving engagement, enhancing operational efficiency, ensuring regulatory compliance and elevating the customer experience.

We plan to consolidate employees from both locations into a purpose-built office at the Ben Hammond Complex.

This plan provides as number of key benefits, including:

1. **Expenditure efficiencies:** Our CBA has identified a number of direct benefits<sup>5</sup> over the life of the new complex, including \$67 million of property lease costs, \$36 million of travel costs and \$10 million of general operating expenditure (e.g. electricity use and repairs and maintenance).The analysis shows there is also around \$90 million of indirect benefits attributed to productivity gains, and a significant boost to the NT economy, with the total benefits ranging from \$270 to \$380 million largely driven by construction activities.
2. **Strengthened safety, security and compliance:** The move to a new building enables us to modernise our infrastructure, guaranteeing that our facilities not only meet modern, industry standard safety standards but also provide enhanced security outcomes consistent with our operational role as the provider of essential services in the Territory.
3. **Advancing our renewables commitment:** Power and Water is taking proactive steps to actively support and further the NT Government's renewable energy targets. The project integrates solar generation and energy-efficient infrastructure into the project's design and construction. This project shows our commitment to environmental responsibility, aligns with the overarching renewables strategy, and provides tangible benefits in terms of sustainability and the corporation's clean energy transition.
4. **Operational efficiency and interoperability:** The consolidation of our staff into one location enhances operational efficiency and fosters enhanced interoperability among teams. By co-locating diverse functions, we are able to streamline workflows and communication, subsequently boosting the overall performance of the corporation.

Ultimately, this consolidation enhances our ability to deliver value to our customers. By concentrating our efforts and resources, we can respond more effectively to their needs and deliver improved services and solutions.

---

<sup>5</sup> In present value terms

### 3. Options analysis

This section provides an overview of each of the options considered. The evaluation considers the ability of each to address the identified business needs effectively, their financial and operational viability, commercial and technical feasibility, deliverability, associated benefits and associated risks.

#### 3.1 Reference Project (Base Case) – Business As Usual

The base case has been established to provide an assessment of the relative merits of the various alternatives to the status quo. In this scenario, Power and Water is assumed to maintain its existing office space leases at the Mitchell Centre and Jacana House properties in their current configurations.



Figure 1 - Mitchell Centre (Tower)



Figure 2 – Jacana House (Tower)

Power and Water currently maintains leases for office spaces across various floors in the Mitchell Centre (floors 1, 2, 6, and 7) and on Level 8 of Jacana House, providing a total seating capacity for 421 staff. As outlined in Table 5, these spaces are currently occupied by 334 staff members.

In the context of the base case, this fragmented workforce configuration has a significant negative impact on our business. The diversity and dispersion of corporate business units at the Ben Hammond Complex contrast with the centralised layout of leased accommodation. These differences contribute to immediate challenges in team communication, collaboration and knowledge sharing. Furthermore, they directly affect operational efficiency, potentially impeding Power and Water’s responsiveness to both challenges and opportunities. Additionally, the maintenance of multiple leased spaces results in higher uncontrolled operational costs and inefficiencies in resource allocation.

If the base case were to be maintained, we expect we would incur around \$120 million of direct costs<sup>6</sup> including \$67 million in lease costs, \$36 million in travel costs and \$10 million in general operational costs (electricity use, repairs and maintenance etc.) over the next 40 years.

This option would not resolve operational complexities and pose challenges in fostering collaboration and agility within the corporation.

<sup>6</sup> In preset value terms

## 3.2 Credible Options

To thoroughly assess the implications of the co-location of our staff in one office, Power and Water initiated a 25% design concept for the Ben Hammond Complex.

We also engaged an independent local advisory firm to undertake a CBA. The firm has an in-depth knowledge of the Northern Territory's economy and strategic dynamics.

The following sections offer an examination and comparison of the four viable options, considering their alignment with Power and Water's identified needs.

## 3.3 Option 1: IL4 Rated Multi-Storey Office and Multi-Storey Carpark with Grant Funding

### 3.3.1 Overview

Table 7. Option 1 (Summary)

Option 1	IL4 Rated Multi-Storey Office and Multi-Storey Carpark with Grant Funding
Location	Ben Hammond Complex - Darwin
Components	<ul style="list-style-type: none"><li>Construction of a multi-story office (IL4 rating)</li><li>Construction of a multi-story carpark (IL4 rated Public Cyclone Shelter)</li><li>Construction of a bridge connecting the office and carpark</li><li>Discontinuation of Mitchell Centre and Jacana House leases upon the commissioning of the new office</li></ul>
Key Assumptions	<ul style="list-style-type: none"><li>Total construction cost: <b>~\$180M</b></li><li>Estimated Standard Control Services Capex Component: <b>~\$60M</b></li><li>Contingent on grant funding for IL4 rated public cyclone shelter: <b>~\$70M</b></li></ul>

The concept design for the Ben Hammond Complex under this option focuses on augmenting the existing administration and operational facilities. It includes the addition of a new multi-storey office complex at the front of the property and the construction of a new above-ground multi-storey carpark. Notably, the carpark is designed to serve as an approved Importance Level 4 (IL4) public cyclone shelter for the community.

Figure 3. Existing Ben Hammond Complex Layout

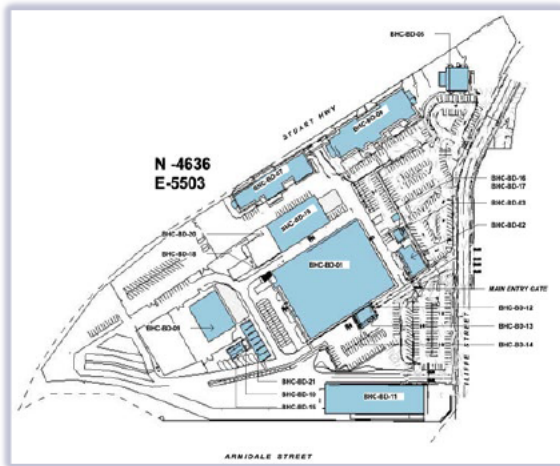


Figure 4. Option 1 – Proposed Ben Hammond Complex Layout

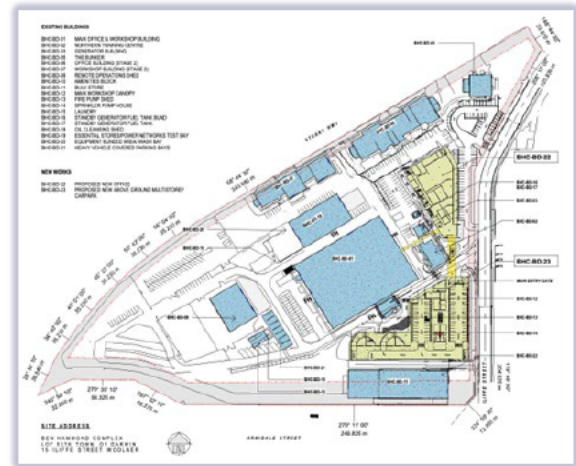


Figure 5. Option 1 – 3D render view of front elevation of new multi-storey office (right) and IL4 Carpark (left)



The 25% design plans<sup>7</sup> outline the functional area requirements for each facility, ensuring that the new office can comfortably house the anticipated staff relocation from Mitchell Centre and Jacana House, totalling 334 employees. Our design considerations are informed by lessons learned from other Power and Water facilities. We aim to provide our staff with functional amenities and a modern work environment to support improvements in workplace culture and employee engagement.

This option meets the requirements of Power and Water in relation to the continued provision of safe, reliable and secure network services in accordance with clause 6.5.6(a)(iii) of the NT NER, including in difficult and emergency situations. The new office building is specifically designed to meet IL4 standards, ensuring its suitability as a command centre capable of providing support during and after natural disasters and emergencies. Furthermore, the ground floor of the carpark is designed to accommodate light service vehicles, enabling us to operate during and after natural disasters and respond promptly with safety and repair services following such events.

The proposed design under this option also meets the physical security standards required of Power and Water under the *Security of Critical Infrastructure Act*.

<sup>7</sup> These plans allow for the provision of quantity surveyor estimates at the P25 level of accuracy.

The proposed design under this option is compliant with the standards specified in the National Construction Code.

Option 1, while showcasing several advantages, hinges on securing approximately \$70 million worth of grant funding. This reliance on contingent grant funding introduces a layer of uncertainty during the investment development phase, elevating the inherent risk associated with this option. The importance of successfully securing these funds necessitates a thorough examination of potential funding sources, application processes and competition for grant allocation. Moreover, the potential delay or fluctuations in the availability of such funding could impact the project timeline and overall viability.

Therefore, while Option 1 presents compelling benefits, its dependency on grant funding demands meticulous planning, a robust financial strategy and careful risk management to ensure a successful outcome aligning with Power and Water's objectives.

Table 8. Option 1 – Cost Estimate

Option 1 - Single Site Consolidation - IL4 Rated Multi-Storey Office and Carpark with Grant Funding	
Item	Estimate \$
<b>Construction Cost</b>	
3 Level Office Building including Ground Level Pedestrian Covered Link to BHC-BD01 Building	
+ Elevated Enclosed Pedestrian Bridge Linking Office Building to Carpark Building	
+ Office Building and Pedestrian Bridge to be IL4 Rated	
+ Office Building and Pedestrian Bridge to be NABERS 5-Star and Greenstar 5-Star Rated	
6 Level Carpark Building	
+ Carpark Building to be an IL4 Rated Cyclone Shelter	
Siteworks	
Site Services	
<b>Total Construction Cost</b>	
Consultant Fees	
Authority Fees	
Project Risk Allowance	
NT Build Levy	
<b>Total Project Cost (excluding GST)</b>	
<b>Estimated Standard Control Services Capex Component<sup>8</sup></b>	<b>~\$60M</b>

This above estimate was calculated on inclusion of the following design elements:

- Demolition of existing on grade carparking.
- Provisional allowance only for contamination remediation - extent and type of contamination to be confirmed.
- Relocation or demolition of existing in ground services.
- Excavation in rock.
- IL4 Rated construction to office and carpark buildings.
- NCC Section J energy efficiency compliance to office and carpark buildings.
- NABERS energy rating of office building.
- Greenstar sustainability rating of office building.
- Elevated enclosed and air-conditioned walkway Link Bridge between office and carpark buildings.
- On grade covered walkway link between office building and existing BHC-BD01 building.
- High level acoustics to office building.
- FF&E to office building.
- Carpark to serve as cyclone shelter.
- Fire sprinklers to office and carpark buildings.
- BMS to office and carpark buildings.
- Conduit in carpark slab for future provision of electric car charging.
- Solar panel power system to office and carpark building roofs.
- Landscaping and irrigation
- Outdoor furniture.
- Back up diesel power generator with fuel supply serving office and carpark buildings.
- Fire and potable water tanks with booster pumps located in carpark building.
- Design development tolerance of 10%.
- Escalation in costs to a construction start before 2026.
- Consultant and authority fees (project management, design, certification, planning, development application, (QS, NTFRS, and PWC).
- NCCP and WASSEP fees.
- NT Build Levy.

<sup>8</sup> This estimated standard control services capex component was calculated using the total project sum less the forecast sum of grant funding received for the use of the car park as a public cyclone shelter.

### 3.4 Option 2: IL4 Rated Multi-Storey Office and Multi-Storey Carpark (Excludes Grant Funding)

#### 3.4.1 Overview

Table 9. Option 2 (Summary)

Option 2	IL4 Rated Multi-Storey Office and Multi-Storey Carpark (Excludes Grant Funding)
Location	Ben Hammond Complex - Darwin
Components	<ul style="list-style-type: none"> <li>This design concept is the same as Option 1 but excludes grant funding</li> </ul>
Key Assumptions	<ul style="list-style-type: none"> <li>Total construction cost: ~\$180M</li> <li>Estimated Standard Control Services Capex Component: ~\$100M</li> <li>No grant funding</li> </ul>

The concept design Option 2 mirrors Option 1 in terms of design and facility inclusions, offering the same construction features and functionality. However, it presents a scenario in which the construction of the premises will receive no grant funding. This aspect introduces a heightened degree of financial responsibility and underscores the need for careful consideration of funding strategies and budget management. Despite the absence of grant funding, Option 2 maintains its potential to deliver substantial benefits, which should be evaluated in conjunction with its self-funded status to make an informed decision that aligns with Power and Water's strategic goals and financial prudence.

Table 10. Option 2 – Cost Estimate

Option 2 - Single Site Consolidation - IL4 Rated Multi-storey Office and Carpark (Excludes grant funding)	
Item	Estimate \$
<b>Construction Cost</b>	
3 Level Office Building including Ground Level Pedestrian Covered Link to BHC-BD01 Building	
+ Elevated Enclosed Pedestrian Bridge Linking Office Building to Carpark Building	
+ Office Building and Pedestrian Bridge to be IL4 Rated	
+ Office Building and Pedestrian Bridge to be NABERS 5-Star and Greenstar 5-Star Rated	
6 Level Carpark Building	
+ Carpark Building to be an IL4 Rated Cyclone Shelter	
Siteworks	
Site Services	
<b>Total Construction Cost</b>	
Consultant Fees	
Authority Fees	
Project Risk Allowance	
NT Build Levy	
<b>Total Project Cost (excluding GST)</b>	
<b>Estimated Standard Control Services Capex Component</b>	<b>~\$100M</b>

This estimate was calculated on inclusion of the following design elements:

- Demolition of existing on grade carparking.
- Provisional allowance only for contamination remediation - extent and type of contamination to be confirmed.
- Elevated enclosed and air-conditioned walkway Link Bridge between office and carpark buildings.
- Landscaping and irrigation
- Outdoor furniture
- Back up diesel power generator with fuel supply serving office and carpark buildings.



- Relocation or demolition of existing in ground services.
- Excavation in rock.
- IL4 Rated construction to office and carpark buildings.
- NCC Section J energy efficiency compliance to office and carpark buildings.
- NABERS energy rating of office building.
- Greenstar sustainability rating of office building.
- On grade covered walkway link between office building and existing BHC-BD01 building.
- High level acoustics to office building.
- FF&E to office building.
- Carpark to serve as cyclone shelter.
- Fire sprinklers to office and carpark buildings.
- BMS to office and carpark buildings.
- Conduit in carpark slab for future provision of electric car charging.
- Solar panel power system to office and carpark building roofs.
- Fire and potable water tanks with booster pumps located in carpark building.
- Design development tolerance of 10%.
- Escalation in costs to a construction start before 2026.
- Consultant and authority fees (project management, design, certification, planning, development application, (QS, NTFRS, and PWC).
- NCCP and WASSEP fees.
- NT Build Levy.

## 3.5 Option 3: Multi-Storey Office and Multi-Storey Carpark (Excludes IL4 Rating and Grant Funding)

### 3.5.1 Overview

Table 11. Option 3 (Summary)

Option 3	Multi-Storey Office and Multi-Storey Carpark (Excludes IL4 Rating and Grant Funding)
Location	Ben Hammond Complex - Darwin
Components	<ul style="list-style-type: none"> <li>▪ Construction of a multi-story office (not IL4 rated)</li> <li>▪ Construction of a multi-story carpark (not IL4 rated and not a Public Cyclone Shelter)</li> <li>▪ Link Bridge connecting the office and carpark</li> <li>▪ Discontinuation of Mitchell Centre and Jacana House leases upon the commissioning of the new complex</li> </ul>
Key Assumptions	<ul style="list-style-type: none"> <li>▪ Total construction cost: ~ \$165M</li> <li>▪ Estimated Standard Control Services Capex Component: ~\$90M</li> <li>▪ No IL4 elements within design</li> <li>▪ No grant funding</li> </ul>

The concept design (Option 3) closely mirrors Option 1 in most aspects, with a notable exception: neither the office complex nor the carpark facility in this option adhere to IL4 rating standards and the carpark is not designated as an approved public cyclone shelter.

In this scenario, the revised carpark building estimate accounts for the transformation of redundant enclosed rooms, such as offices, public toilets and storage rooms into additional parking spaces, while maintaining the overall building dimensions and floor area.

The quantity surveyor estimate totals around \$165 million, which is around \$15 million lower than Option 1. A detailed breakdown of these costs is provided in Table 12.

Table 12. Option 3 – QS Cost Estimate

Option 3 - Single Site Consolidation - Multi-storey Office and Carpark (Excludes IL4 Rating and Grant Funding)	
Item	Estimate \$
<b>Construction Cost</b>	
3 Level Office Building including Ground Level Pedestrian Covered Link to BHC-BD01 Building	
+ Elevated Enclosed Pedestrian Bridge Linking Office Building to Carpark Building	
+ Office Building and Pedestrian Bridge to be NABERS 5-Star and Greenstar 5-Star Rated	
6 Level Carpark Building	
Siteworks	
Site Services	
<b>Total Construction Cost</b>	
Consultant Fees	
Authority Fees	
Project Risk Allowance	
NT Build Levy	
<b>Total Project Cost (excluding GST)</b>	
<b>Estimated Standard Control Services Capex Component</b>	<b>~\$90M</b>

This estimate was calculated on inclusion of the following design elements:

- Demolition of existing on grade carparking.
- Provisional allowance only for contamination remediation - extent and type of contamination to be confirmed.
- Relocation or demolition of existing in ground services.
- Excavation in rock.
- NCC Section J energy efficiency compliance to office and carpark buildings.
- NABERS energy rating of office building.
- Greenstar sustainability rating of office building.
- Elevated enclosed and air-conditioned walkway Link Bridge between office and carpark buildings.
- On grade covered walkway link between office building and existing BHC-BD01 building.
- High level acoustics to office building.
- FF&E to office building.
- Carpark to serve as cyclone shelter.
- Fire sprinklers to office and carpark buildings.
- BMS to office and carpark buildings.
- Conduit in carpark slab for future provision of electric car charging.
- Solar panel power system to office and carpark building roofs.
- Landscaping and irrigation
- Outdoor furniture
- Back up diesel power generator with fuel supply serving office and carpark buildings.
- Fire and potable water tanks with booster pumps located in carpark building.
- Design development tolerance of 10%.
- Escalation in costs to a construction start before 2026.
- Consultant and authority fees (project management, design, certification, planning, development application, (QS, NTFRS, and PWC).
- NCCP and WASSEP fees.
- NT Build Levy.

## 3.6 Option 4: IL4 Rated Multi-Storey Office and Ground Level Carpark (Excludes Grant Funding)

### 3.6.1 Option 4 - Overview

Table 13. Option 4 (Summary)

Option 4	IL4 Rated Multi-Storey Office and Ground Level Carpark (Excludes Grant Funding)
<b>Location</b>	Ben Hammond Complex - Darwin
<b>Components</b>	<ul style="list-style-type: none"> <li>▪ Construction of a multi-story office (IL4 rating)</li> <li>▪ Purchase of [REDACTED] land and modification for use as a ground-level carpark</li> <li>▪ Discontinuation of Mitchell Centre and Jacana House leases upon the commissioning of the new complex</li> </ul>

Option 4	IL4 Rated Multi-Storey Office and Ground Level Carpark (Excludes Grant Funding)
Key Assumptions	<ul style="list-style-type: none"> <li>▪ Total construction cost: [REDACTED]</li> <li>▪ Land acquisition cost [REDACTED]</li> <li>▪ Overall cost: ~\$120M</li> <li>▪ Estimated Standard Control Services Capex Component: ~\$65M</li> <li>▪ No grant funding</li> </ul>

In response to the substantial capital expenditure associated with the construction of a multi-storey carpark, Power and Water has considered alternative design concepts. These designs maintain the IL4 multi-storey office building, as outlined in Options 1 and 2, while also incorporating a ground-level carpark on a neighbouring land parcel situated east of the Ben Hammond Complex.

We have developed P25 plans that adequately address the functional requirements of the proposed carpark while adhering to the National Construction Code's broad requirements. Quantity surveyor cost estimates have also been derived based on these plans.

This option represents a considerably reduced building construction scope compared to other project options. However, it does necessitate additional civil works and potential land acquisition costs.

The estimate for construction of this option is around \$120 million. This is approximately \$60 million less than Options 1 and 2 and approximately \$50 million less than Option 3.

Figure 6. - Existing BHC site layout

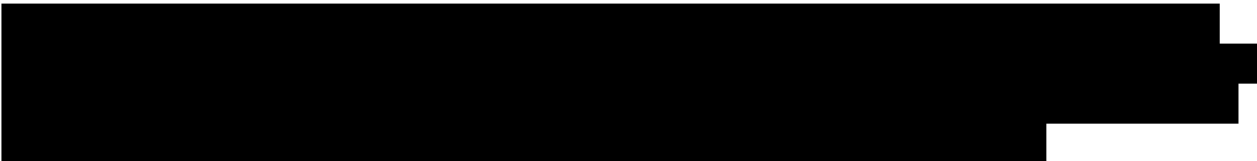
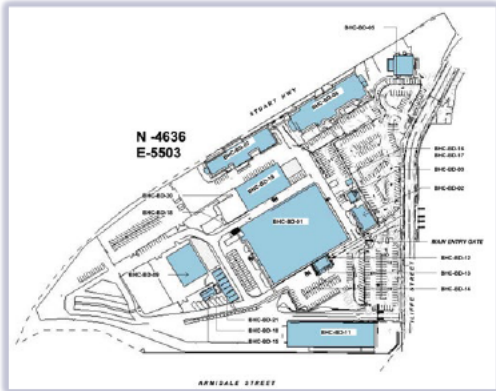


Table 14. Option 4 – Cost Estimate

Option 4 - Single Site Consolidation - IL4 Rated Multi-Storey Office and Ground Level Carpark (Excludes Grant Funding)	
Item	Estimate \$
<b>Construction Cost</b>	
3 Level Office Building including Ground Level Pedestrian Covered Link to BHC-BD01 Building	
+ Office Building to be IL4 Rated	
+ Office Building to be NABERS 5-Star and Greenstar 5-Star Rated	
Site Access/Egress Upgrades to suit Changed Pedestrian/Vehicular Traffic Flows	
Refurbishment of existing DIPL Warehouse Building	
Siteworks	
Site Services	
<b>Total Construction Cost</b>	
Consultant Fees	
Authority Fees	
Project Risk Allowance	
NT Build Levy	
Purchase	
<b>Total Project Cost (excluding GST)</b>	
<b>Estimated Standard Control Services Capex Component</b>	<b>~\$70M</b>

This estimate was calculated on inclusion of the following design elements:

- Demolition of existing on grade carparking.
- Demolition of 3 No. existing shed buildings on DIPL site.
- Provisional allowance only for contamination remediation - extent and type of contamination to be confirmed.
- Relocation or demolition of existing in ground services.
- Excavation in rock.
- IL4 Rated construction to office and tunnel buildings.
- NCC Section J energy efficiency compliance to office and tunnel buildings.
- NABERS energy rating of buildings.
- Greenstar sustainability rating of buildings.
- On grade covered walkway link between office building and existing BHC-BD01 building.
- High level acoustics to office building.
- FF&E to office building.
- Fire sprinklers to office and tunnel buildings.
- BMS to office and tunnel buildings.
- Solar panel power system to office building roof.
- Landscaping and irrigation.
- Outdoor furniture.
- NCCP and WASSEP fees.
- Back up diesel power generator with fuel supply serving office building.
- Fire and potable water tanks with booster pumps.
- Design development tolerance of 10%.
- Escalation in costs to a construction start within 24 months of the date of this estimate.
- Consultant and authority fees (project management, design, certification, planning, development application, QS, NTFRS, and PWC).
- NT Build Levy.

## 3.7 Comparison of Credible Options

### 3.7.1 Methodology

A comprehensive approach was undertaken to quantify costs and benefits within the CBA. The methodology involved leveraging high-confidence data and a series of inputs and assumptions collaboratively developed and approved by Power and Water.

Power and Water provided supplementary data on various inputs, including:

- Functional design criteria and regulatory requirements.
- Quantity Surveyor construction cost estimates.
- Staff numbers, accommodation arrangements and vehicle utilisation.
- Workplace Culture and Employee Engagement ratings.
- Operational expenses, including per FTE costs.

The costs assessed included:

- Gross financial expenses for project delivery.
- Capital costs.
- Lease termination expenses.
- Community engagement expenses.

The benefits identified included:

- Reduced leasing outlays.
- Lower operating costs, including maintenance and energy expenditure.
- Decreased recruitment expenses.
- Gains in productivity through enhanced staff utilisation and engagement.
- Staff parking benefits.
- Positive economic impact within the local community due to construction.
- Revenue generated for the NT Government through real estate sales.

These quantified costs and benefits were analysed over a 40-year timeframe, applying suitable inflation adjustments and discount rates. This enabled a comparative assessment of NPVs (both direct financial and broader indirect values) between the four credible options and the reference project as the status quo, base case.

Sensitivity analysis was also conducted on various input parameters, employing a Monte Carlo approach to gauge their influence on the direct and indirect NPV calculations. Additionally, time profiles of nominal and discounted cash flows, value flows and cumulative NPV were used to illustrate variations in payback between the scenarios.

Financial model outputs of the present value calculation (at year 40) of each quantified cost and benefit for each scenario are provided in Table 15.

Table 15. Cumulative Present Values of Costs and Benefits for each Option by Category

Impact Category	Impact Item	Option 1		Option 2		Option 3		Option 4	
		Partial Grant		No Grant		No Grant		No Grant	
Financing		Cost	Benefit	Cost	Benefit	Cost	Benefit	Cost	Benefit
Direct (Internal) Costs	Gross Project Cost	■		■		■		■	
	Community Engagement	■		■		■		■	
	Land Purchase Costs							■	
Direct (Internal) Benefits	Avoided Lease Costs		■		■		■		■
	Avoided Opex Costs		■		■		■		■
	Avoided Travel Costs		■		■		■		■
	Land Sale		■		■		■		■
Indirect (Internal)	Productivity Gains		■		■		■		■

Impact Category	Impact Item	Option 1		Option 2		Option 3		Option 4	
	Financing	Partial Grant		No Grant		No Grant		No Grant	
Benefit									
Indirect (External) Benefits	Avoided parking costs		■		■		■		■
	Local economic boost		■		■		■		■
	Avoided emissions		■		■		■		■
	Totals	■	■	■	■	■	■	■	■
	Net benefit/cost	■		■		■		■	

Option 1 yields the highest benefit return relative to the capital expenditure (excluding grant funding) with a benefit to cost ratio (BCR) approaching ■ to 1. Following closely, Option 4 provides the next highest return at approximately ■ to 1.

The findings demonstrate that if Power and Water decide to invest in the Single Site Consolidation project, along with government grant funding, the company would realise a positive direct financial net benefit. Additionally, there would be additional indirect benefit of \$90 million attributed to increased productivity within the company and a substantial \$281 million boost to the local NT economy.

In situations where grant funding is not factored in, Option 4 emerges as the next best alternative to Option 1. It would also generate a direct financial net benefit for Power and Water. Although the internal indirect benefit to Power and Water mirrors that of Option 1, the lower capital investment results in a \$100 million reduction in external indirect benefits. Consequently, Option 4 ranks lower when considering the total NPV.

### 3.7.2 Quantified Costs and Benefits

All direct financial implications impacting Power and Water due to the project have been thoroughly assessed. This analysis has revealed four quantifiable direct costs and four quantifiable direct benefits, which are detailed in Table 17 and Table 18. Additionally, the evaluation has recognised indirect consequences affecting both Power and Water (internally) and the broader community and local economy (externally). While no quantifiable indirect costs were identified, the quantified indirect benefits are outlined in Table 19 for reference.

Table 17. Summary of quantified direct costs

Cost	Description	Stakeholder Impacted
Gross financial cost of project delivery	Gross payments required to be made by Power and Water to deliver the project. Includes land-acquisition costs	Power and Water
Cost of Capital	Debt financing costs and cost of opportunity for equity portion of investment. Determined by the Weighted Average Cost of Capital (WACC)	Power and Water
Lease-end costs	Make-good provisions of lease contracts incur costs at end of lease	Power and Water
Community Engagement	Additional costs incurred in public communication and consultation during lead-up and delivery of project	Power and Water

Table 18. Summary of quantified direct benefits

Benefit	Description	Stakeholder Impacted
Avoided leasing costs	Avoided lease costs and outgoings, for the Mitchell Centre and Jacana House properties	Power and Water
Avoided operating expenses	Building energy-efficiencies, solar PV installation, and reduction in repair & maintenance expenses due to new-build	Power and Water
Avoided travel costs	Avoided costs of multi-site travel requirements, comprising staff productivity gain and vehicle use cost savings	Power and Water
Land parcel value	Benefit realised upon disposal of land	NT Government

Table 19. - Summary of quantified indirect (internal & external) benefits

Benefit	Description	Stakeholder Impacted
Employee Engagement Improvement	Improvement in workplace culture and employee engagement resulting in greater operational efficiency and staff productivity, including through reduced turnover and absenteeism	Power and Water
Free Parking	Avoidance of the parking fees currently paid by staff who are based at the Mitchell Centre and Jacana House properties in the Darwin CBD and who commute by private car	Power and Water Employees
Local economic boost	Injection of monies into NT economy via construction industry services engaged for delivery of the project and subsequent indirect flow-on multiplier effects	Community NT Government
Environmental Impact	Reduction in Carbon emissions as a consequence of solar PV, compliance with NCC Section J (GreenStar 5 and NABERS), and through reduced vehicle use	Community

### 3.7.3 Non-Quantified Costs and Benefits

We have also considered a range of qualitative costs and benefits that may be associated with this project. These have been evaluated based on our understanding of the project's impact on the local economy and community. Some of these benefits and costs are difficult to reliably quantify at this early stage of the analysis, while others are generally unquantifiable based on the information available.

Table 10. Summary of non-quantified costs and benefits

Cost	Benefit	Description	Stakeholder Impacted	Comment
Property value drop	-	Decrease in surrounding property values due to additional traffic volume and road congestion	Community	Modelling indicates impact of additional vehicle traffic will be minimal and confined to peak-hour periods <sup>9</sup>
Lost rental income	-	Reduction in rental receipts by owner upon cessation of leases over existing Mitchell Centre and Jacana House properties	Community	Anticipate that properties would be re-let following Power and Water exit and so impact would be negligible
Increased Utility Tariffs	-	Forecast SCS capital expenditure for the regulatory period that is approved by AER enables upward revenue cap adjustment and tariff price increases. The NT Government issues pricing orders that sets water and sewer tariffs that are binding on PWC	Customers	Customers benefit from an overall net positive project which will provide medium to long-term savings passed onto customers The pricing orders for water and sewer tariffs are linked to Darwin CPI increase
Environmental Impact	-	Cost of emissions due to consumption of building and construction resources	Community	Difficult to reliably quantify given the large number of unknown variables and the scope of the program

<sup>9</sup> Arcos Consulting, 2022: Ben Hammond Complex – New Building Works, Preliminary Traffic Impact Assessment

Cost	Benefit	Description	Stakeholder Impacted	Comment
Alternate Land Use	-	Opportunity cost to various stakeholders relating to provision of new housing, rents, fees and other charges if the land were to be re-zoned for residential use	Community	Alternate value unlikely to be recognised due to historic land-contamination issues that would likely preclude residential use
-	Public Safety during cyclonic event	Inherent value of a designated public cyclone shelter for the neighbouring community	Community	Difficult to reliably quantify given the scope of the program
-	Property value uplift	Increase in surrounding property values owing to proximity of new public cyclone shelter	Community	Considered to be negligible as house pricing is dominated by other factors. Difficult to reliably quantify given the scope of the program
-	Power restoration improvements	Value of improved make-safe and re-connection response times following a cyclone	Community	Difficult to reliably quantify given the scope of the program
-	Avoided cost of building an alternate cyclone shelter	Public buildings are preferred over privately owned ones for Public Cyclone Shelters to enable upkeep and compliance. No other public-works buildings are currently planned for the area that could provide the 11,000 surrounding residents with a suitable shelter	Government	Potentially substantial but difficult to reliably quantify given the scope of the program. No NT Government cyclone shelter framework exists to provide guidance on local area needs

### 3.7.4 Stakeholder Analysis

Table 21. Summary of Stakeholder Impact

Stakeholder	Commentary / Insights
NT Government & Regulators	As a utility services provider, Power and Water operates with significant oversight NT Government, specifically the Utilities Commission and national entities like the Australian Energy Regulator. These stakeholders maintain a keen interest in the initiative's adherence to regulations, alignment with regional economic development objectives and its potential environmental footprint.
PWC Board & Executive	The initiative carries significant financial implications for Power and Water, thereby influencing budget allocations and the corporation's long-term strategic planning. Management seeks to comprehend the extent to which consolidation yields cost efficiencies, heightened operational effectiveness, and broader economic advantages. It is important to note that Power and Water operates in accordance with the <i>Power and Water Corporation Act 2002</i> and the <i>Government Owned Corporations Act 2001</i> (GOC Act), where the Board of Directors holds responsibility to the shareholding Minister for the entity's operational and financial performance. According to the GOC Act, Power and Water's objectives encompass operating as efficiently as comparable businesses while maximising sustainable returns to the NT Government on its investments.
PWC Employees	This initiative directly impacts employees, necessitating adaptation to a new workplace environment and, potentially, alterations in their daily commutes. In exchange, they stand to benefit from enhanced facilities, streamlined workflows and increased collaborative opportunities.
Customers	Customers may observe changes in the quality, reliability, and efficiency of services. Ideally, this initiative should enhance customer service, expedite response times and elevate overall satisfaction.



Stakeholder	Commentary / Insights
Local community	The communities surrounding the Ben Hammond Complex, as well as those near the facilities being vacated, will witness shifts in traffic patterns, job prospects and local economic dynamics. This initiative could also exert influence on the local environment and public infrastructure.
Contractors & Suppliers	The project may impact on existing contracts and relationships with suppliers, potentially requiring contract renegotiations or terminations. Moreover, the development, upkeep, and operation of our facilities will necessitate new contractual agreements.
Environmental & Social Interest Groups	Stakeholders belonging to environmental and social interest groups are deeply concerned about the impact of the project on the environment and society. This includes potential alterations to the local ecosystem, energy consumption, waste management practices, and the broader carbon footprint of Power and Water's operations.

### 3.7.5 Sensitivity Analysis

To comprehensively assess how input uncertainties could have affected final NPV values, a sensitivity analysis was conducted using a Monte-Carlo approach. This analysis evaluated several key parameters, including the Darwin CPI inflation rate, the discount rate/WACC, CAPEX variation and the terminal value multiplier.

Additionally, it considered headcount (staff cost) sensitivity, aiming to provide valuable insights into the potential financial implications of enhancing workplace culture and employee engagement, which could lead to productivity efficiency gains.

It is worth noting that the wage price index (WPI) was excluded from the sensitivity analysis since none of the options considered variations in headcount compared to the reference project. As a result, WPI changes had no impact on any of the parameters.

#### CPI Sensitivity

CPI variations exhibit a non-linear impact on NPV outcomes, with more significant effects at higher CPI levels. Below are selected CPI values and their corresponding NPV results, presented in Table 22 to Table 25 and visualised in Figure 8 to Figure 11.

In Option 1, the direct NPV becomes neutral when the CPI is at 1.7%. For the other two scenarios, a positive direct NPV is achieved only when the CPI value surpasses approximately 4%.

Table 22. CPI Sensitivity Option 1

Table 23. CPI Sensitivity Option 2

Table 24. CPI Sensitivity Option 3

Table 25. CPI Sensitivity Option 4

CPI	Direct NPV	Indirect NPV	Total NPV
2%	Bar chart showing Direct NPV	Bar chart showing Indirect NPV	Bar chart showing Total NPV
2.5%	Bar chart showing Direct NPV	Bar chart showing Indirect NPV	Bar chart showing Total NPV
3%	Bar chart showing Direct NPV	Bar chart showing Indirect NPV	Bar chart showing Total NPV
4%	Bar chart showing Direct NPV	Bar chart showing Indirect NPV	Bar chart showing Total NPV
5%	Bar chart showing Direct NPV	Bar chart showing Indirect NPV	Bar chart showing Total NPV

CPI	Direct NPV	Indirect NPV	Total NPV
2%	Bar chart showing Direct NPV	Bar chart showing Indirect NPV	Bar chart showing Total NPV
2.5%	Bar chart showing Direct NPV	Bar chart showing Indirect NPV	Bar chart showing Total NPV
3%	Bar chart showing Direct NPV	Bar chart showing Indirect NPV	Bar chart showing Total NPV
4%	Bar chart showing Direct NPV	Bar chart showing Indirect NPV	Bar chart showing Total NPV
5%	Bar chart showing Direct NPV	Bar chart showing Indirect NPV	Bar chart showing Total NPV

CPI	Direct NPV	Indirect NPV	Total NPV
2%	Bar chart showing Direct NPV	Bar chart showing Indirect NPV	Bar chart showing Total NPV
2.5%	Bar chart showing Direct NPV	Bar chart showing Indirect NPV	Bar chart showing Total NPV
3%	Bar chart showing Direct NPV	Bar chart showing Indirect NPV	Bar chart showing Total NPV
4%	Bar chart showing Direct NPV	Bar chart showing Indirect NPV	Bar chart showing Total NPV
5%	Bar chart showing Direct NPV	Bar chart showing Indirect NPV	Bar chart showing Total NPV

CPI	Direct NPV	Indirect NPV	Total NPV
2%	Bar chart showing Direct NPV	Bar chart showing Indirect NPV	Bar chart showing Total NPV
2.5%	Bar chart showing Direct NPV	Bar chart showing Indirect NPV	Bar chart showing Total NPV
3%	Bar chart showing Direct NPV	Bar chart showing Indirect NPV	Bar chart showing Total NPV
4%	Bar chart showing Direct NPV	Bar chart showing Indirect NPV	Bar chart showing Total NPV
5%	Bar chart showing Direct NPV	Bar chart showing Indirect NPV	Bar chart showing Total NPV

## WACC Sensitivity

Variations in WACC likewise demonstrate a non-linear effect on NPV outcomes, with more pronounced impacts at lower values. In this analysis WACC values and their corresponding NPV results are presented in Table 26 to Table 29, complemented by visual representations in Figure 12 to Figure 15. In Option 1, the direct NPV becomes neutral when the WACC reaches 6.62%. Conversely, the other two options yield a positive direct NPV only when the WACC value falls below approximately 4.5%.

Table 26. WACC sensitivity Option 1

WACC	Direct NPV	Indirect NPV	Total NPV
4%	Positive	Positive	Positive
5%	Positive	Positive	Positive
5.8%	Positive	Positive	Positive
6%	Positive	Positive	Positive
7%	Positive	Positive	Positive

Table 27. WACC sensitivity – Option 2

WACC	Direct NPV	Indirect NPV	Total NPV
4%	Positive	Positive	Positive
5%	Positive	Positive	Positive
5.8%	Positive	Positive	Positive
6%	Positive	Positive	Positive
7%	Positive	Positive	Positive

Table 28. WACC sensitivity - Option 3

WACC	Direct NPV	Indirect NPV	Total NPV
4%	Positive	Positive	Positive
5%	Positive	Positive	Positive
5.8%	Positive	Positive	Positive
6%	Positive	Positive	Positive
7%	Positive	Positive	Positive

Table 29. WACC sensitivity – Option 4

WACC	Direct NPV	Indirect NPV	Total NPV
4%	Positive	Positive	Positive
5%	Positive	Positive	Positive
5.8%	Positive	Positive	Positive
6%	Positive	Positive	Positive
7%	Positive	Positive	Positive

## Capital Expenditure Sensitivity

Variations in capital expenditure have a direct linear impact on the direct NPV outcomes. A 10% increase in capital expenditure leads to a reduction of \$18 million in the direct NPV. In contrast, the indirect NPV experiences an increase of approximately \$25 million.

Table 30. CAPEX sensitivity Option 1

CAPEX	DIRECT NPV	INDIRECT NPV	TOTAL NPV
10%	Positive	Positive	Positive

Table 31. CAPEX sensitivity Option 2

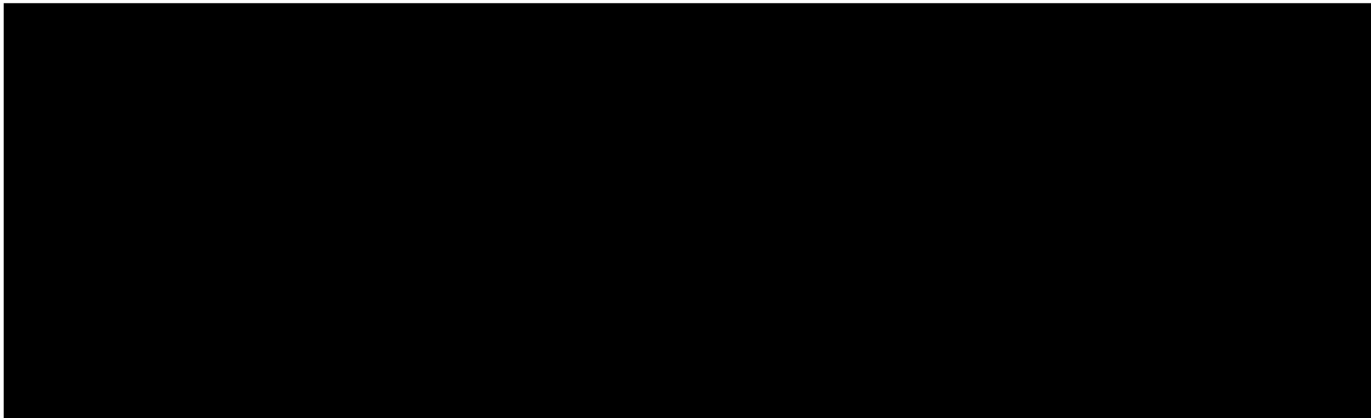
CAPEX	DIRECT NPV	INDIRECT NPV	TOTAL NPV
10%	Positive	Positive	Positive

Table 32. CAPEX sensitivity Option 3

CAPEX	DIRECT NPV	INDIRECT NPV	TOTAL NPV
10%	Positive	Positive	Positive

Table 33. CAPEX sensitivity Option 4

CAPEX	DIRECT NPV	INDIRECT NPV	TOTAL NPV
10%	Positive	Positive	Positive



### WPI, Operating Expenditure and Construction Flow-On Sensitivity

Variations in the WPI demonstrate a non-linear influence on the outcomes of Indirect (Internal) NPV, with a more pronounced impact evident at higher WPI values (see Table 34).

Changes in operating expenditure benefits directly impact the direct NPV outcome. A 10% increase in operating expenditure benefits results in a \$1 million NPV increment for Scenario 4 (see Table 35).

The build flow-on effect on the broader NT economy signifies a significant intangible indirect benefit, primarily contingent on the proportion of the initial capital expenditure amount that enters the NT economy (see Table 36).

Table 34. WPI sensitivity

WPI	Direct NPV	Indirect NPV
-1%	█	█
-0.5%	█	█
0.5%	█	█
1%	█	█

Table 35. OPEX sensitivity

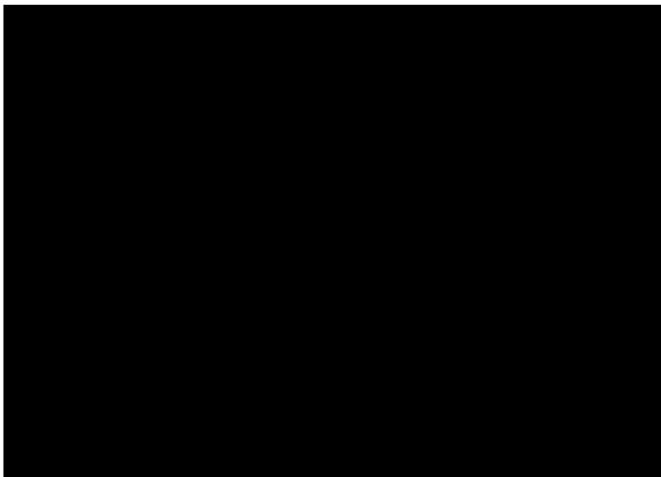
Scenario (@10% Opex )	Direct NPV █
1	█
2	█
3	█
4	█

Table 36. Build Flow-On sensitivity

Build Flow-on	Scenario 1&2 NPV	Scenario 3 NPV	Scenario 4 NPV
-20.0%	█	█	█
-10.0%	█	█	█
10.0%	█	█	█
20.0%	█	█	█

### Headcount Sensitivity

Headcount variations have a nearly linear inverse effect on the NPV outcomes.



## Time Profiles

The time profile plots displaying cumulative direct, indirect and total NPV for each scenario are presented in Figures 21, Figure 22 and Figure 23 respectively.

It is important to note the impact of the TVM in year 40 within the time profiles, leading to a noticeable increase in NPV at the end of the valuation period. The terminal value multiplier signifies the asset's enduring capacity to generate cash flows in addition to its residual capital value and broader community worth.

The time profile plots vividly illustrate the substantial influence of assumed grant funding in elevating Option 1's NPV when compared to Options 2 and 4.

Figure 21. Cumulative Direct NPV

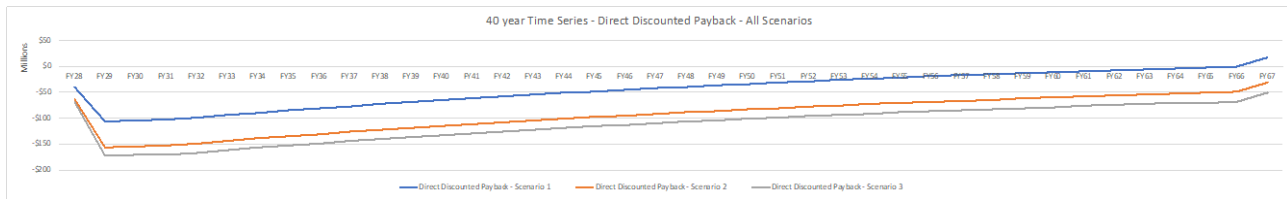


Figure 22. Cumulative Indirect NPV

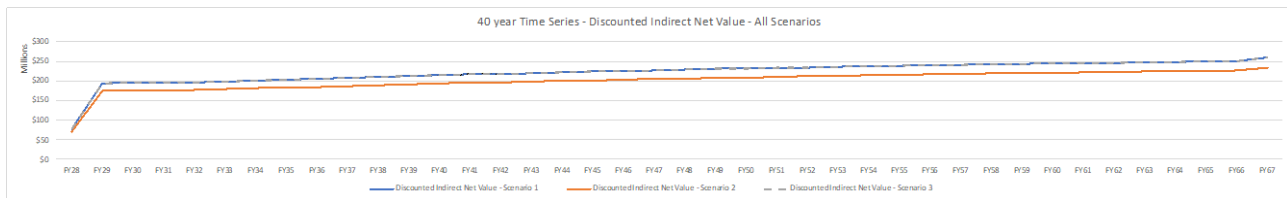
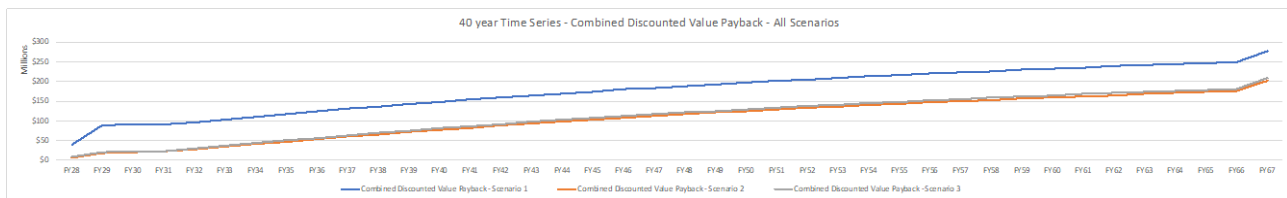


Figure 23. Cumulative Total NPV



### 3.7.6 Cost Benefit Summary

The CBA assessed four credible options for this project, compared with the Reference Project to discern their relative incremental value propositions. These scenarios have been evaluated from both a direct and indirect cost-benefit perspective.

Option 1 emerged as the recommended project in terms of both direct and overall NPV. The predominant factors underpinning this outcome were:

1. A more economical net capital outlay of \$108 million.
2. An assumed government grant of around \$70 million for the construction of the IL4-rated carpark/cyclone shelter.

The direct NPV sees payback occurring around year 39.

In the absence of grant funding (i.e. Option 2), Option 4 is the preferred option in terms of direct NPV. The capital outlay is slightly higher at around \$120 million, with a commensurate payback timeline. It is worth emphasising the substantial community and employee benefits arising from this construction, as employees are relieved of parking costs. When encompassing indirect benefits, all scenarios report positive total NPVs, however Options 1 and 3 stand out with the highest indirect benefits, of around \$280 million.

Furthermore, it's crucial to recognise the potential productivity efficiency dividend attributable to the cultivation of an enhanced workplace culture and elevated employee engagement.

The sensitivity analysis shows the cost of capital yields a slightly more pronounced influence on NPV than the inflation rate, although capital expenditure forecast variations and headcount adjustments can also significantly impact the outcomes.

The comparative results are presented in Table 37.

Table 37. Summary of Overall NPV & Comparative Assessment Metrics.

Assessment metrics	Option 1	Option 2	Option 3	Option 4
NPV	████	████	████	████
BCR	██	██	██	██
Capex	████	████	████	████
Meets customer expectations	○	○	○	○
Aligns with Asset Objectives	●	●	●	●
Technical Viability	●	●	●	●
Deliverability	○	○	○	●
Preferred	×	×	×	✓

● Fully addressed the issue    ○ Adequately addressed the issue    ○ Partially addressed the issue    ○ Did not address the issue

### 3.8 Non-Credible Options

In our analysis, several options were identified as non-credible and were excluded from detailed assessment. These options proposed development on sites other than the Ben Hammond Complex. Common characteristics shared among these non-credible options included:

- Opportunities for land divestment, with potential costs for environmental remediation.
- Significant expenses associated with replicating existing operational assets already in place at the Ben Hammond Complex.

An overview of each of the non-credible options and the reasons for exclusion are provided in the following sections.

#### 1. Brownfield Development – Former INPEX Accommodation Village (2019)

The NT Government initially sought parties to operate the former workers' accommodation village (approximately 84 hectares) used by INPEX during the Ichthys LNG project construction phase in Darwin.

This brownfield option was not pursued further due to the extensive infrastructure on-site, which would have exceeded Power and Water's requirements. Adapting the facility to meet our needs was estimated to cost approximately \$165 million. Subsequently, the site was repurposed as the National Resilience Centre

<sup>10</sup> This value includes the impact around \$70 million of grant funding.

<sup>11</sup> Includes land acquisition cost of █████

during the peak of the COVID-19 pandemic and has been leased to Commonwealth Defence for triaging and accommodation purposes.

## 2. Greenfield Development – Existing Owned Land, Berrimah (2020)

Consideration was given to a Greenfield development on existing Power and Water owned land in Berrimah to accommodate staff from office locations in the Darwin Central Business District and the system control office in Hudson Creek (Greater Darwin region). At the time, estimated capital costs for the development, including provisions for commercial requirements, earthworks, site remediation and contingencies were \$235 million, likely to be approximately 30% higher in the current market.

## 3. Foundation Lease – Darwin International Airport (2020)

Exploration of a foundation lease within the Darwin International Airport precinct was undertaken, with estimated annual lease costs ranging from \$4.9 million to \$5.4 million, escalating at 2.5% per annum. Assuming a minimum term of 20 years, the total costs were projected to reach around \$140 million. This site, however, presented more limitations compared to the former INPEX Accommodation Village and the existing owned land in Berrimah. It also offered limited independence and scalability options for Power and Water at the end of the lease term, posing a higher risk.

## 4. Recommendation

The CBA assessed four options, initially favouring Option 1. However, Option 4 presents similar advantages with a slightly higher capital investment and a total project cost of around \$120 million. Importantly, Option 4 does not rely on contingent grant funding for project delivery. It includes an IL4-rated office with a ground-level carpark and delivers a competitive direct NPV.

Selecting Option 4 secures substantial benefits and effectively mitigates the uncertainty and risk associated with contingent government grant funding, making it a pragmatic and sustainable choice for Power and Water's future project delivery success.

### 4.1 Strategic alignment

As Power and Water transitions into a market-driven government-owned corporation, the choice of Option 4 aligns strategically with our overarching goals and objectives:

- **Expenditure efficiencies:** Our CBA has identified a number of direct benefits over the life of the new complex, including \$67 million of property lease costs, \$36 million of travel costs and \$10 million of general operating expenditure (e.g. electricity use and repairs and maintenance). The analysis shows there is also around \$90 million of indirect benefits attributed to productivity gains, and a significant boost to the NT economy, with the total benefits ranging from \$270 to \$380 million largely driven by construction activities.
- **Strengthened safety, security and compliance:** The move to a new building enables us to modernise our infrastructure, guaranteeing that our facilities not only meet modern, industry standard safety standards but also provide enhanced security outcomes consistent with our operational role as the provider of essential services in the Territory.
- **Operational Efficiency and Interoperability:** The consolidation of our staff into one location enhances operational efficiency and fosters enhanced interoperability among teams. By co-locating diverse functions, we are able to streamline workflows and communication, subsequently boosting the overall performance of the corporation.

### 4.2 Dependent projects

There are no known projects or other network issues that are dependent on the resolution of this network issue.

### 4.3 Deliverability

#### 4.3.1 External Factors

The robust civil and building construction industry in Darwin and the NT instils confidence in the timely and budget-conscious delivery of this project. Currently, the NT construction sector is thriving, mirroring the national construction market's saturation, driven by substantial infrastructure initiatives from both the NT Government and Commonwealth Defence programs.

It is important to note that potential market saturation could arise during the next regulatory period, particularly if major projects like Sun-Cable or Beetaloo Basin gas extraction commence. Given our project's capital expenditure is slated for the later part of the next regulatory period, we will conduct a comprehensive assessment of local and national market conditions in late 2025-26. This assessment will inform our approach

to the market, considering options like Early Contractor Involvement, Public Private Partnerships, Design and Construction or turn-key development.

### 4.3.2 Internal Factors

Power and Water has efficiently managed this project within their existing operational structure up to this point. However, as the project advances and its demands increase, it becomes crucial for Power and Water to establish a dedicated project team. This strategic decision ensures that we have the specialised project resources needed to fulfil our responsibilities and meet our obligations within the Project Investment Delivery Framework, ultimately enhancing our overall project delivery capabilities.

## 4.4 Customer Considerations

In accordance with the AER's Better Resets Handbook, Power and Water has actively sought input from its customers during the development of this program.

### Residential Customer Engagement

We engaged with both our residential customers and small-medium business customers as outlined in our IRP. In May 2023, during our residential customer People's Panels in Darwin and Alice Springs, we introduced the project concept through an animation illustrating the benefits of consolidating operations into a single location, particularly reducing staff travel between sites. We asked residential customers to evaluate the costs and both economic and non-economic benefits of the project, seeking their feedback. Both panels expressed understanding and support for the plan but requested further details as the business case evolves, including a cost comparison between leasing and long-term ownership. The Darwin Panel emphasised the need for Power and Water to highlight economic and non-economic benefits when presenting the proposal to various stakeholder groups, including the AER. They also noted the challenge of reassuring the general public about avoiding significant short-term price increases.

### Small-Medium Business Customer Engagement

In June 2023, we conducted one-on-one engagement sessions with our small-medium business customers, discussing the proposed consolidation project. This group provided limited comments on the project at that time and we plan to revisit them with an updated proposal later in the year.

### Future Engagement Plans

We intend to return to our People's Panels and seek targeted feedback from a small group of large users during future large customer forums. This will take place once we have updated information on the costs and benefits associated with the proposal and in advance of any public development application processes.

## 4.5 Expenditure profile

Table 38 shows a summary of the expenditure requirements for the next regulatory period.

Table 38. Forecast capital and operational expenditure by year, \$ million

Item	FY25	FY26	FY27	FY28	FY29	Total
Capex	█	█	█	█	█	█
Opex	█	█	█	█	█	█
Total	█	█	█	█	█	█



## 4.6 High-level scope

The Single Site Consolidation project at the Ben Hammond Complex is a strategic initiative undertaken by Power and Water. Its primary aim is to streamline and enhance operational efficiency while optimising resources. The project encompasses several key components:

### **1. Construction of Multi-Story Office (IL4 Rating)**

One of the central elements of the project is the construction of a multi-story office facility with an IL4 rating. This rating signifies a high standard of construction, ensuring the facility meets stringent safety and regulatory requirements. The new office space is designed to provide a modern and conducive work environment for Power and Water staff.

### **2. Purchase of Land for Modification and Use as Ground-Level Carpark**

To support the consolidation efforts, Power and Water plans to acquire additional land. This land will be repurposed and modified to serve as a ground-level carpark. This addition addresses parking needs efficiently, enhancing accessibility for staff.

### **3. Discontinuation of Mitchell Centre and Jacana House Leases**

As the new complex at the Ben Hammond Complex becomes operational, Power and Water intends to discontinue its leases at the Mitchell Centre and Jacana House. This strategic move aligns with the goal of consolidating operations into a single, purpose-built location, thereby reducing operational costs and enhancing operational cohesion.

In summary, this project represents a pivotal step for Power and Water. It aims to optimise resources, improve operational efficiency, and create a modern and functional workspace for staff. This initiative underscores Power and Water's commitment to operational excellence and its ongoing efforts to meet evolving industry demands.

## **Appendix A. Cost estimation**

The estimate for Option 4 is based on the following documents:

- 25% Concept Architectural drawings prepared by Gabbert Design
- 25% Concept Structural drawings prepared by WSP Pty Ltd
- 25% Concept Civil drawings prepared by WSP Pty Ltd
- 25% Concept Mechanical drawings prepared by WSP Pty Ltd
- Electrical drawings prepared by Ashburner Francis
- Hydraulic drawings prepared by Architectural Water Solutions

# Appendix B. Assumptions

## B.1 Overarching Inputs and Assumptions

To complete the Cost Benefit Analysis, various inputs and assumptions were established. The following sections outline the overarching inputs and assumptions, along with the key ones employed to populate the CBA for assessing quantifiable costs and benefits.

Table 39. Summary Overarching Inputs and Assumptions

Input	Value	Source	Discussion	Assumption
Reporting type	Financial year	AHQ	To align with budget cycles and GOC statutory reporting cycle	-
Modelling type	Nominal terms	AHQ	To align with contemporary practice	-
Modelling period	40 years	PWC AER	Deemed a period long enough to capture all the potential benefits and costs and reflective of asset life  Aligns with the AER proposed standard asset life	-
Inflation (CPI)	2.5%	NTG	Aligned to NTTC forecast of mid-point of RBA target inflation band	Fixed for entire modelling period
Discount rate (WACC)	5.8%	PWC	As advised by Power and Water and aligned to AER	Fixed for entire modelling period
Population growth	1.0%	NTG	Long term population growth forecast in Budget 2023-24 Paper No. 2 - Budget strategy and outlook.	Fixed for entire modelling period
Wages growth - WPI	3%	NTG	WPI forecast in Budget 2023-24 Paper No. 2 - Budget strategy and outlook. (Note current EBA has WPI of 3%)	Fixed for entire modelling period
Staff growth	0%	PWC	Indexing value to inflate staff numbers over time	No growth index applied
Project Start	2028	PWC	Forecast in the Regulatory Proposal for the 2024-29 regulatory period	
\$ Real reference date	2022	PWC	To align with AER submission financial forecasts, escalated to real \$ 2024 in the revised proposal	
\$/FTE pa	█	PWC	An enterprise-wide average cost estimate	Base value adjusted annually for WPI
Headcount	785	PWC	Total PWC FTE staff cap number. SCI document staffing numbers forecast	Headcount remains constant at final forecast value for FY29
Staff Relocating	334	PWC	Number of staff residing in MC & JH leased accommodation that will relocate under SSC. Used as basis for calculating impact of employee parking cost changes	Staff vacancy rate remains constant

## B.2 Inputs and Assumptions for Quantified Costs



Table 40. Summary of Inputs and Assumptions for Quantified Costs

Input	Discussion	Assumption
Option 1 & 2 Capital Cost	Value obtained from QSNT revised cost estimate.	QS estimate valid to project start date
Option 3 Capital Cost	Value obtained from QSNT revised cost estimate.	QS estimate valid to project start date
Option 4 Capital Cost	Includes value obtained from QSNT cost estimate. Land acquisition cost [REDACTED]	QS estimate valid to project start date Full land acquisition cost at nominal value applied at yr. 1. No adjustment for potential contamination devaluing.
Lease Costs Mitchell Centre	Inclusive of carpark fees and outgoings.	Base value adjusted annually for CPI Lease ceases end yr. 3 except for BAU
Lease Costs Jacana House	Inclusive of carpark fees and outgoings	Base value adjusted annually for CPI Lease ceases end yr. 3 except for BAU
Lease end Costs	Make good costs estimated at [REDACTED] per occupied office floor	No break fees as leases will be run-out Make-good costs incurred in year 4
Community Engagement Costs	Allowance of additional expenses for targeted community consultation for approval of development	Required over initial 5 years period while project is being planned and delivered. CPI adjusted

## B.3 Inputs and Assumptions for Quantified Benefits

Table 41. Summary of Inputs and Assumptions for Quantified Benefits

Input	Source	Discussion	Assumption
Opex – Options 1 & 2	AHQ	Estimate based on following identified benefits:	Base value adjusted annually for CPI
	AHQ	Reduced energy consumption due to new solar PV installation	Maximum irradiance scenario used in model calcs
	AHQ	Avoided cost due to energy efficiency of 5-GreenStar rated building. Based on GreenStar finding of 50% avg reduction in electricity and water consumption vs standard building. No details available for PWC water consumption	Estimate 20% allocation of electricity opex budget of \$960k to Mitchell Centre and Jacana House properties
	PWC	Avoided cost of repairs and maintenance requirement at Mitchell Centre and Jacana House properties, partly offset by R&M requirements of new buildings	50% reduction in ~\$200k annual R&M requirements currently allocated to Mitchell Centre and Jacana House properties

Input	Source	Discussion	Assumption
	PWC	Avoided cost of time spend dealing with 3 <sup>rd</sup> parties in relation to leased properties	Ongoing annual requirement
Opex - Option 3	AHQ	Estimate based on following identified benefits:	Base value adjusted annually for CPI
	AHQ	Avoided costs same as for Option 1	
	AHQ	Avoided cost of electricity consumption and R&M for cyclone shelter requirement (deleted)	Estimated at \$10k pa for electricity use and \$30k pa for R&M needs
Opex - Option 4	AHQ	Estimate based on following identified benefits	Base value adjusted annually for CPI
	AHQ	Avoided costs same as for Option 1	
	AHQ	Avoided cost of electricity consumption and R&M for multilevel car-park component (deleted)	Estimated at \$20k pa for electricity use and \$50k pa for R&M needs
Avoided travel costs	PWC	Avoided costs of multi-site travel requirements, comprising staff productivity gain and vehicle use cost savings as follows:	
	AHQ		
	PWC	Avoided cost of staff time spent on daily travel requirements between city and BHC offices  Impacts 214 level 4+ staff	2way travel time allowance of 24mins for 150 employees daily@5% total work time pa x \$/FTE (\$185k)Starts yr 3  WPI Indexed
	AHQ	Avoided vehicle running cost due to reduction in light vehicle travel requirements	Assumes 9km round trip city to BHC x 100 trip/day x 250 work days x \$1.45/km  Assumes some carpooling  CPI indexed
Employee Engagement		Allocation of benefits from PWC transitioning to a top quartile company for employee engagement  Based on a study by Gallup quantifying various organisational benefits realised from an engaged workforce	Values moderated to reflect only the contribution of the project initiative to overall benefit  Moderation factor of 20% applied
	PWC	Avoided cost of recruitment for executive level staff due to higher engagement and longer retention times. Gallup study indicates expected range of 24%-50% turnover reduction	  Starts yr. 5, WPI indexed
	PWC AHQ	Avoided cost of recruitment for general PWC staff due to higher engagement and longer retention times  Gallup study indicates expected range of 24%-50% turnover reduction	  Starts yr. 5, WPI indexed

Input	Source	Discussion	Assumption
	AHQ	Based on Gallup study revealing average productivity gain of 17% for top-quartile organisations compared to lowest-quartile  Allowance (2%) made for reduced absenteeism sighted in study as being reduced by 41% (No PWC data on absence rate however APSC reports average of 4.4% across all agencies)	Conservatively limited to staff directly impacted by SSC (554) x \$/FTE x 19%  Starts yr. 5, WPI indexed
Staff Parking	PWC CoD AHQ	Avoided cost for staff currently utilising paid City of Darwin parking bays  Staff count limited to Mitchell Centre and Jacana House residents only (334). Private Car commute to work statistics (71.6%) from ABS Census data 2021	Avg \$8/day CoD parking. 250 work-days /yr  No parking fee for BHC  70% of Mitchell Centre and Jacana House staff impacted  10% of staff incur costs post-project  Assumes no car-pooling  CPI Indexed
Intangible Construction Benefit to community		Value of the contribution of construction activity to initial and 'flow-on' impacts (itemised below) on the activities of other industries	As per below:
Construction - Initial effects	AHQ	The initial effect of the additional construction based on the proportion of construction cost expected to flow directly into the NT economy  Based on PWC Procurement Sourcing Rules reflecting NT Government Buy-Local procurement requirements	Estimated 80% of construction cost will directly impact the NT economy  Simultaneous with capital outlay  Note: Option 3 construction cost reduced by █████ land purchase cost which is a cost-benefit transfer
Construction – Production induced effects	AHQ	Represents the amount of output and employment required from all industries that supply goods and services to the construction industry in order for the initial effects to be realised plus the induced extra output and employment from all industries to support the production of those suppliers	Conservative estimate of 60% of construction initial effects  Simultaneous with capital outlay
Construction – Consumer induced effects	AHQ	The subsequent inducement for extra output and employment due to increased spending by the wage and salary earners across all industries arising from the compensation received for their labour as part of the other effects above	Calculated as 2% of construction initial effects  Flow through effect lags by 5 yrs  CPI Indexed
Land Parcel Value	PWC	Value of land realised upon disposal of land	Nets to zero the land parcel purchase cost included in the project - Option 3 (as this is effectively a cost-benefit transfer)
Avoided CO <sub>2</sub> Emissions	AHQ	Combined effect of Solar PV, building energy efficiency (GreenStar), reduced staff travel	
	AHQ	Avoided CO <sub>2</sub> emissions due to installation of Solar PV system	72t/yr eCO <sub>2</sub> reduction (SunSpot calculation) x \$123/t emission cost (NSW treasury)

Input	Source	Discussion	Assumption
			CPI indexed
	AHQ	Avoided CO <sub>2</sub> emissions due to Greenstar – 5 rating of new building	154t/yr eCO <sub>2</sub> reduction (based on SunSpot \$/emission ratio x \$90k energy efficiency cost saving) x \$123/t emission cost. CPI indexed
	AHQ	Avoided CO <sub>2</sub> emissions due to reduction in light vehicle travel requirements	45t/yr eCO <sub>2</sub> avoided (based on 9km round trip city to BHC x 100 trip/day x 250 workdays x 200g/km) x \$123/t emission cost. Assumes some carpooling. CPI indexed

## Contact

[powerwater.com.au](http://powerwater.com.au)

**PowerWater** 