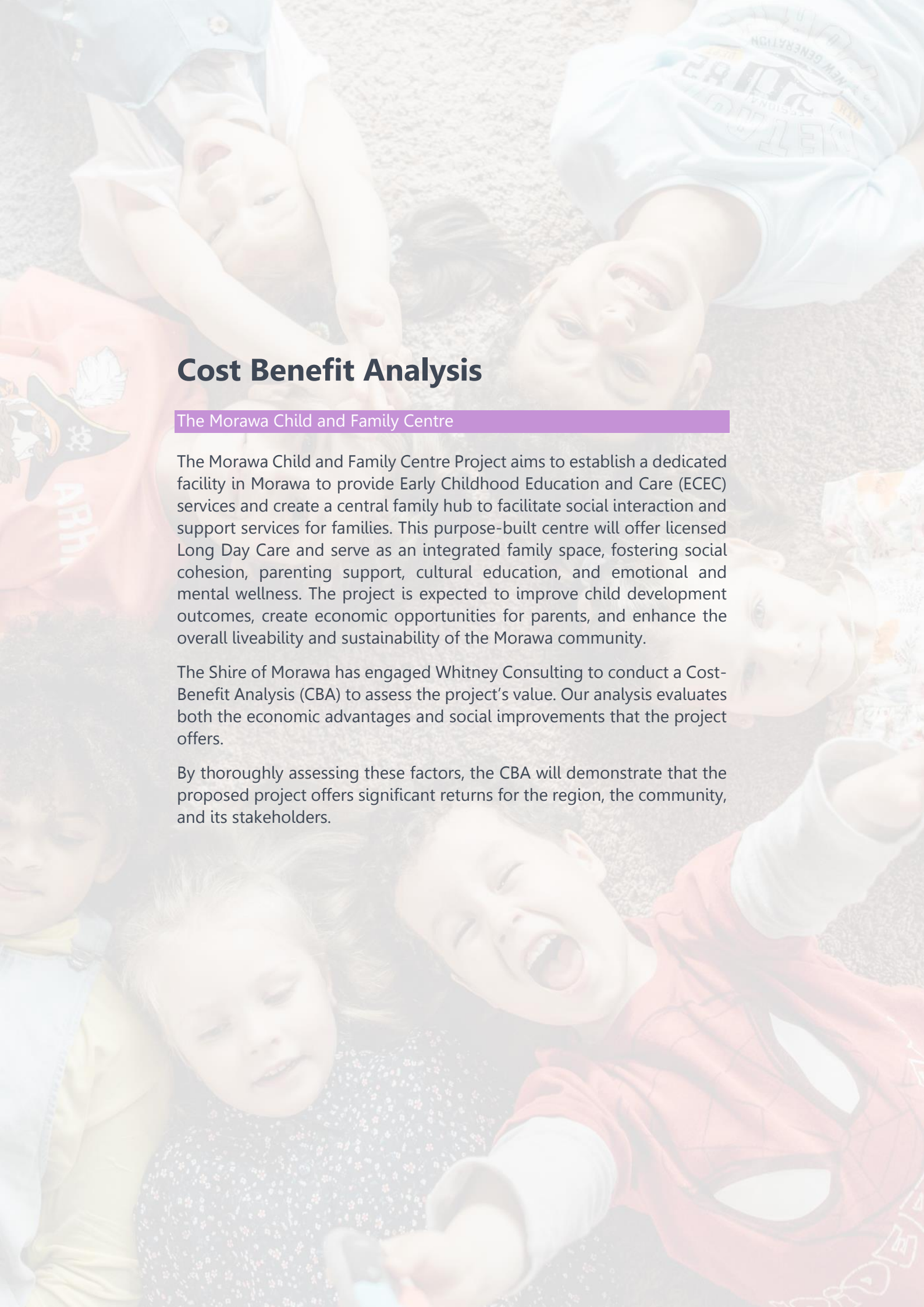


COST-BENEFIT ANALYSIS

THE MORAWA CHILD
AND FAMILY CENTRE

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Cost Benefit Analysis

The Morawa Child and Family Centre

The Morawa Child and Family Centre Project aims to establish a dedicated facility in Morawa to provide Early Childhood Education and Care (ECEC) services and create a central family hub to facilitate social interaction and support services for families. This purpose-built centre will offer licensed Long Day Care and serve as an integrated family space, fostering social cohesion, parenting support, cultural education, and emotional and mental wellness. The project is expected to improve child development outcomes, create economic opportunities for parents, and enhance the overall liveability and sustainability of the Morawa community.

The Shire of Morawa has engaged Whitney Consulting to conduct a Cost-Benefit Analysis (CBA) to assess the project's value. Our analysis evaluates both the economic advantages and social improvements that the project offers.

By thoroughly assessing these factors, the CBA will demonstrate that the proposed project offers significant returns for the region, the community, and its stakeholders.

Executive Summary

The Morawa Child and Family Centre Project aims to establish a dedicated facility in Morawa to provide Early Childhood Education and Care (ECEC) services and create a central family hub to facilitate social interaction and support services for families. This purpose-built centre will offer licensed Long Day Care and serve as an integrated family space, fostering social cohesion, parenting support, cultural education, and emotional and mental wellness. The project is expected to improve child development outcomes, create economic opportunities for parents, and enhance the overall liveability and sustainability of the Morawa community.

The Shire of Morawa engaged Whitney Consulting to conduct a Cost-Benefit Analysis (CBA) to evaluate the economic and social impact of the proposed project. Our assessment considered both the monetisable economic and social benefits and the non-monetisable benefits.

Monetisable benefits considered in this project include:

- Economic benefits from increased workforce participation
- Income increases through closing the gender pay gap
- Increased turnover for local businesses, increased Gross Regional Product and employment opportunities.
- Reduction in long-term social costs, associated with poor school outcomes, medical costs during childhood, child protection costs, and crime-related costs.
- Improved educational and employment outcomes, particularly for Aboriginal and disadvantaged children, improving their long-term prospects, and
- Improved long-term health outcomes.

Non-monetisable benefits considered in this project include:

Benefits from social inclusion and cohesion within a safe and supportive environment.

- Ability to attract and retain residents.
- Increase in property values
- Stronger community ties, cultural education and appreciation of Indigenous traditions.
- Further improved health outcomes in the long term due to social inclusion and cohesion.

The CBA of the Morawa Child and Family Centre Project revealed strong and significantly positive outcomes. The analysis estimates the present value (PV) of the total benefits of the project to be between \$20.69 million at a 4% discount rate and \$15.05 million at a 10% discount rate over a 20-year assessment period. The central PV estimate of benefits, at a 7% discount rate, is \$17.35 million.

The primary benefits, as assessed at a 7% discount rate, derive mainly from:

- Increased workforce participation (38% of the total benefits)
- Economic impact of capital works (22% of the total benefits)
- Improved long-term educational and employment outcomes (14% of the total benefits)
- Improved long term health outcomes (8.5% of the total benefits).

The analysis shows that the project is projected to yield net present values (NPVs) of \$17.10 million, \$13.96 million, and \$11.81 million at discount rates of 4%, 7% and 10% respectively. NPVs under all modelled discount rates are large and positive. This indicates that the project is expected to deliver substantial economic and social returns to the community.

What the Benefit Cost Ratios (BCR's) indicate is that the proposed Child and Family Centre will yield returns that far outweigh the costs. At discount rates of 4%, 7% and 10%, the estimated BCRs are 5.78, 5.12 and 4.65, respectively. As an example, this means that a \$1 investment will yield a return of \$5.12 at a discount rate of 7%. The outlay for this project is likely to be around \$3.39 in PV terms at a discount rate of 7%, including

some accommodation for ongoing maintenance costs. The project is therefore estimated to return benefits to the tune of \$7.35 million in PV terms over the 20-year analysis window.

Summary of results

Discount rate	Benefit (\$ mn)	Cost (\$ mn)	NPV (\$ mn)	BCR
4%	20.69	3.58	17.10	5.78
7%	17.35	3.39	13.96	5.12
10%	15.05	3.24	11.81	4.65

These results are in line with prior expectations derived from a review of domestic¹ and international literature² on the impact of early childhood education, as well as feedback from stakeholders.

Whitney Consulting's CBA indicates that the Project is a financially and socially sound investment, with a strong positive impact anticipated for the community and region. The findings strongly support the view of the Shire of Morawa, which has prioritised this project, recognising the project's potential to stimulate economic activity and enhance community well-being in the short- and long-run.

¹ <https://www.pc.gov.au/inquiries/completed/childhood/report>

² Elango, S., Garcia, J. L., Heckman, J. J., & Hojman, A. (2015). Early childhood education. SSRN Electronic Journal. <https://doi.org/10.2139/ssrn.2690725>

Introduction

This section provides an overview of the background, purpose, and organisation of the report. It also clarifies the statistical geography for the assessment of economic impact and introduces some of the terms and abbreviations used in the report.

Background and Context

The Morawa Child and Family Centre Project seeks to provide parents with access to reliable childcare services and create a central family hub to facilitate social interaction and support services for families. By offering licensed Early Childhood Education and Care (ECEC) services, including Long Day Care, the Centre will enable parents to return to work or pursue further education, contributing to increased workforce participation, bridge gender-based wage gap, and stimulate economic growth in the region.

In addition to childcare, the Centre will serve as a hub for family support, offering parenting classes, cultural education, and mental/emotional wellness programs, as well as a place for families to socialise indoors and host events such as birthday parties or casual gatherings. These services and activities will promote social cohesion, strengthen family units, and foster a nurturing environment where children can thrive. The Centre will also support vulnerable and disadvantaged families, particularly those from Indigenous backgrounds, helping to bridge gaps in educational readiness and contribute to long-term positive outcomes for both children and their families.

The Shire of Morawa has engaged Whitney Consulting to develop an *ex-ante* Cost-Benefit Analysis (CBA) to evaluate the project. By carefully weighing potential economic and social benefits, and the required outlay of investment, our CBA provides an understanding of the project's value, demonstrating that the proposed investment will yield tangible returns for the children, parents, Morawa community and other involved stakeholders.

Report Purpose and Organisation

This report presents the results of an *ex-ante* CBA for the Morawa Child and Family Centre Project, offering a comprehensive evaluation of its anticipated costs, benefits, and overall net impact. By calculating the project's Net Present Value (NPV) and Benefit-Cost Ratio (BCR), this analysis provides critical insights into the project's potential to contribute to Morawa (and the broader region) and value for money.

The NPV measures the project's expected profitability by comparing the present value of future benefits with the present value of costs. This metric helps determine whether the investment will deliver a positive return and represents a sound financial decision. The BCR, on the other hand, assesses the project's efficiency by illustrating the ratio of benefits generated for every dollar spent. This ratio is particularly valuable for prioritising investments when resources are limited, helping decision-makers allocate funds to projects with the highest potential return.

In addition to these financial metrics, the report also examines the potential economic impact of the project by presenting three key indicators:

- **Output:** A measure of the project's contribution to economic activity and turnover.
- **Value added:** The net economic value generated, reflecting its contribution to Gross State Product (GSP).
- **Employment:** The number of jobs expected to be created because of the project.

These indicators provide a broader understanding of the project's impact on the local Morawa economy, beyond just the financial returns.

The analysis was conducted through thorough desktop research, supplemented by a rapid literature review. While no primary data collection was undertaken, the analysis is grounded in established methodologies and assumptions. It is important to note that these assumptions are embedded in the analysis and should be carefully considered when interpreting the results.

This report is structured as follows:

- Introduction: An overview of the report's purpose, scope, and structure.
- Profile: A detailed look at the Shire of Morawa, including key economic indicators and a project overview.
- Cost-benefit analysis: A discussion of the CBA methodology, assumptions, and key findings.
- Economic impact assessment: A summary of the economic impact assessment methodology, assumptions, and results.
- Conclusions and findings: A synthesis of the analysis, highlighting the key outcomes and their implications.

This report aims to provide decision-makers with a robust basis to support decision making on the Project's funding, ensuring that public resources are allocated effectively to maximise economic and social returns.

Statistical Geography

For the purpose of this assessment, Morawa (SA2) has been used as the primary statistical geography (Image 1 below). This is a wider geography than the Shire of Morawa. This aligns with the expectation that the users of the proposed facility could be from the wider region. In Economic Impact Analysis, Mid West (SA3) is also used to better capture the impacts. Where required, statistics relevant to the Shire of Morawa are also presented.

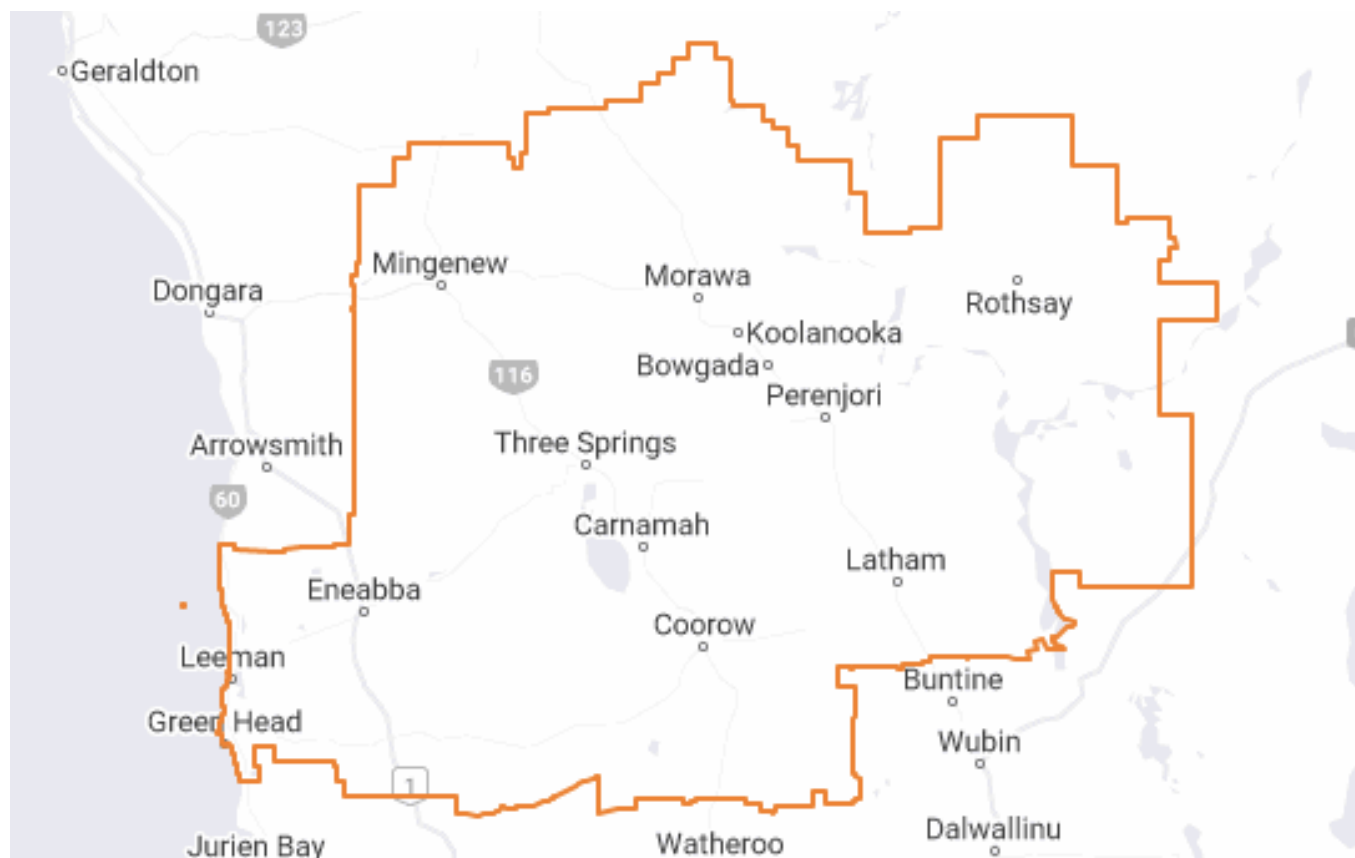


Image 1: Morawa (SA2)

The street address of the proposed site for the project is 26 Prater Street. The site's location within the Shire of Morawa is shown in image 2 below. The location of this project is a vacant block of land adjacent to the local Kindergarten and across the road from the District High School. This proximity will enhance the pre-school development of local children and create a conduit for the school to implement school ready programs as part of Centre activities.

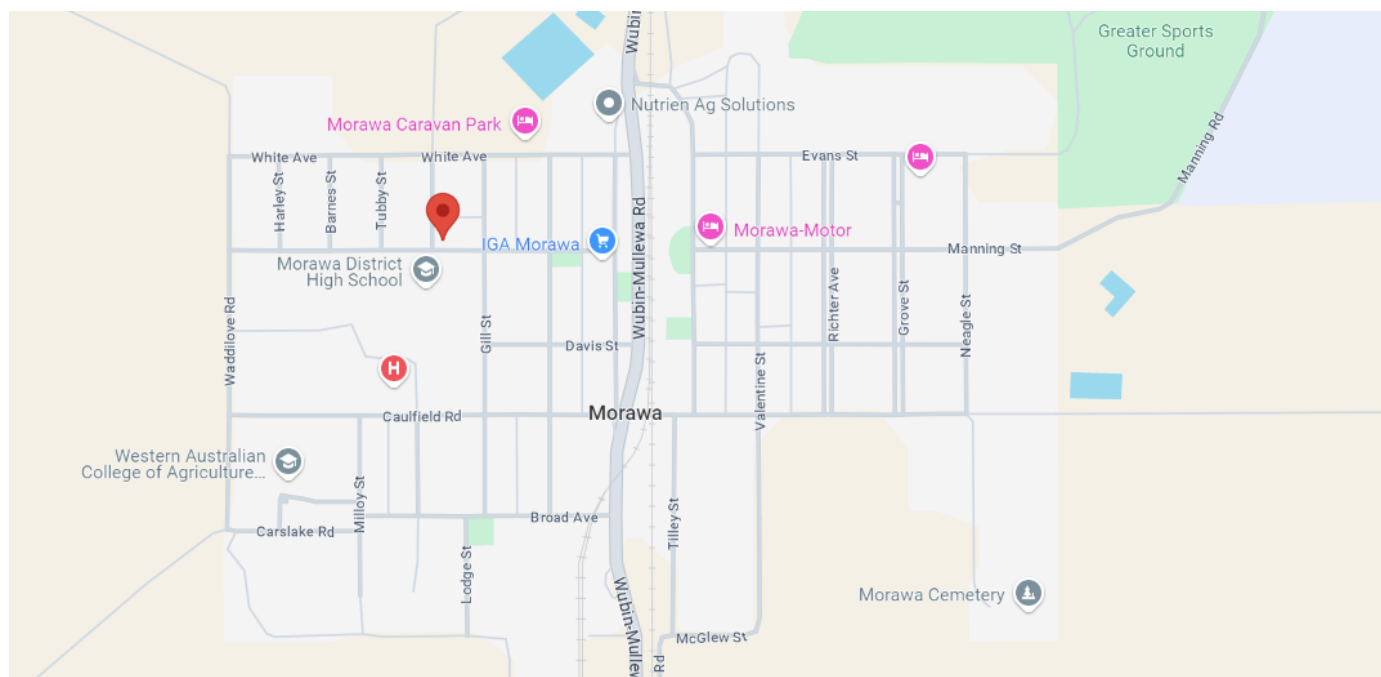


Image 2: Project site within the Shire of Morawa

Key Terms And Abbreviations

The following terms and abbreviations have been used in this report:

Table1: Key terms and abbreviations

Acronym	Full Term
ABS	Australian Bureau of Statistics
BCR	Benefit Cost Ratio
CBA	Cost Benefit Analysis
CPI	Consumer Price Index
EIA	Economic Impact Assessment
ERR	Economic Rate of Return
FTE	Full Time Equivalent
FY	Financial Year
GRP	Gross Regional Product
GSP	Gross State Product
GVA	Gross Value Added
IO	Input Output
LGA	Local Government Area
NPV	Net Present Value
PV	Present Value
SA	Statistical Area
WA	Western Australia
\$Mn	Millions of dollars

Project Profile

This section gives an overview of the context of the Project, including a profile of the Shire of Morawa, Morawa region (SA2), key economic indicators, and details of the elements of the Business Case as it relates to potential economic and social benefits from the Project.

Project Description

The Shire of Morawa is in Western Australia, approximately 170 kilometres southeast of Geraldton and 390 kilometres north of Perth. Spanning 3,538 square kilometres, the Shire includes agricultural, pastoral, mining, and Crown land, as well as reserves, and townsites. It is bordered by Mullewa to the North, Perenjori to the South, Mingenew and Three Springs to the West and Yalgoo to the East, all of which fall within the Morawa SA2 region.³

Historically, Morawa's economy has been driven by cereal and legume crops, as well as wool production. The Shire of Morawa has also identified a range of future business opportunities such as stock feed manufacture, chilled lamb exports, jojoba oil production and pistachio processing and packaging. The Shire has an incentive scheme to attract new business, including provision of ready to occupy Small Business Units most suited for new light industrial businesses.⁴ Morawa seeks to support regional industry's needs, and offers quality housing and amenities to attract workers seeking a better lifestyle, whether it is reduced travel time, a relaxed rural lifestyle or the ability to spend more time with their families.⁵ The Shire also benefits from tourism, particularly during the wildflower season, and astro-tourism is gaining popularity due to the region's dark skies.⁶

Morawa SA2 has an estimated residential population of 4,024⁷, with around 950 residents in the townsite.⁸ Population growth is expected to more than double in the coming decades⁹, with a Growth and Implementation Plan aiming to position Morawa as a future regional centre for the North Midlands and a primary industry hub for the Midwest.¹⁰ The region's employment opportunities, investment potential, and lifestyle make it an attractive place to live and work.

The Morawa Shire Council is committed to supporting this growth by providing essential infrastructure.¹¹ One key project planned by the Council is the construction of a new Child and Family Centre, which will address a critical gap in Morawa's social infrastructure. Currently, family day care services are offered from an aging, retrofitted house that is inadequate for providing long day care services. The community also lacks a central hub for essential services such as child health, parenting support, and family wellness programs. Presently, the local school's library is used for some child health services, but it is not designed to support early childhood or family-focused needs.

The proposed Centre will help address these challenges by offering licensed Early Childhood Education and Care (ECEC) services, with a focus on supporting children from disadvantaged and Indigenous backgrounds. As context, the local school's student population includes 42% Aboriginal students¹², and investment in early education will support Federal efforts to close the gap in educational and social outcomes. Located at 26 Prater Street, adjacent to the local Kindergarten and across from the District High School, the Centre will include 511sqm of space, with 381sqm enclosed. This proximity of the Centre to the local school will enhance the pre-school development of local children and create a conduit for the school to implement school ready programs as part of Centre activities. The Centre will also provide the much-needed facility for family education, health services, and community cohesion.

³ <https://www.morawa.wa.gov.au/shire/overview.aspx>

⁴ https://www.morawa.wa.gov.au/profiles/morawa/assets/clientdata/shire_of_morawa_prospectus_land0726.pdf

⁵ https://www.morawa.wa.gov.au/profiles/morawa/assets/clientdata/shire_of_morawa_prospectus_land0726.pdf

⁶ <https://www.morawa.wa.gov.au/community/about-your-community/liveability-in-morawa.aspx>

⁷ <https://www.remplan.com.au/> (based on ABS, 2023).

⁸ https://www.morawa.wa.gov.au/profiles/morawa/assets/clientdata/shire_of_morawa_prospectus_land0726.pdf

⁹ This expectation is stated in https://www.morawa.wa.gov.au/profiles/morawa/assets/clientdata/shire_of_morawa_prospectus_land0726.pdf, has been independently verified using population modelling tools in ABS stat data explorer.

See, <https://explore.data.abs.gov.au/>

¹⁰ https://www.morawa.wa.gov.au/profiles/morawa/assets/clientdata/shire_of_morawa_prospectus_land0726.pdf

¹¹ Ibid.

¹² Information provided by the local school in their letter of support (included as an attachment to the business case).

The absence of quality ECEC services in Morawa has been a barrier to attracting and retaining families and professionals, particularly in essential sectors such as education, healthcare, and law enforcement. By establishing a modern Child and Family Centre, Morawa will better meet the needs of its current residents while becoming more attractive to newcomers. This project will strengthen both the social fabric and economic sustainability of the region.

Key Economic And Demographic Profile

Economic Profile

Morawa plays an important role in the Mid West economy of Western Australia, via its mining industry and other service sectors, including education and training. The region's Gross Regional Product (GRP) is \$1.57 billion, with a per capita GRP of \$403,858 and a GRP per worker¹³ of \$657,988. These figures are extraordinary and highlight Morawa's strong economic importance to the Mid West region and Western Australia. For context, the Mid West region's GRP stands at \$9.81 billion, with a per capita GRP of \$178,460 and a GRP per worker of \$345,600. The GRP, GRP per capita and GRP per worker of Greater Perth is \$290.39 billion, \$137,193 and \$285,831 respectively. The comparator figures for WA are \$445.35 billion, \$167,422 and \$340,272 respectively. The data above clearly illustrates that Morawa significantly outperforms the rest of the Mid West in per capita terms, and its per capita GRP surpasses Greater Perth by almost three times and Western Australia (WA) by 2.4 times. With an annual population growth rate of 1.89% since 2021¹⁴ and a projected population increase of more than 100% in the coming decades¹⁵, Morawa has substantial economic potential to become one of the engines of growth for WA subject to adequate investments in physical and social infrastructure. The Shire of Morawa, where the project is located, is a Local Government Area (LGA) (ABS defined) within the Morawa region. The Shire accounted for a GRP of \$110 million and the per capita GRP and per worker GRP of the town stood at \$164,671 and \$267,640 respectively. These numbers closely align with the WA averages and are impressive for a townsite.

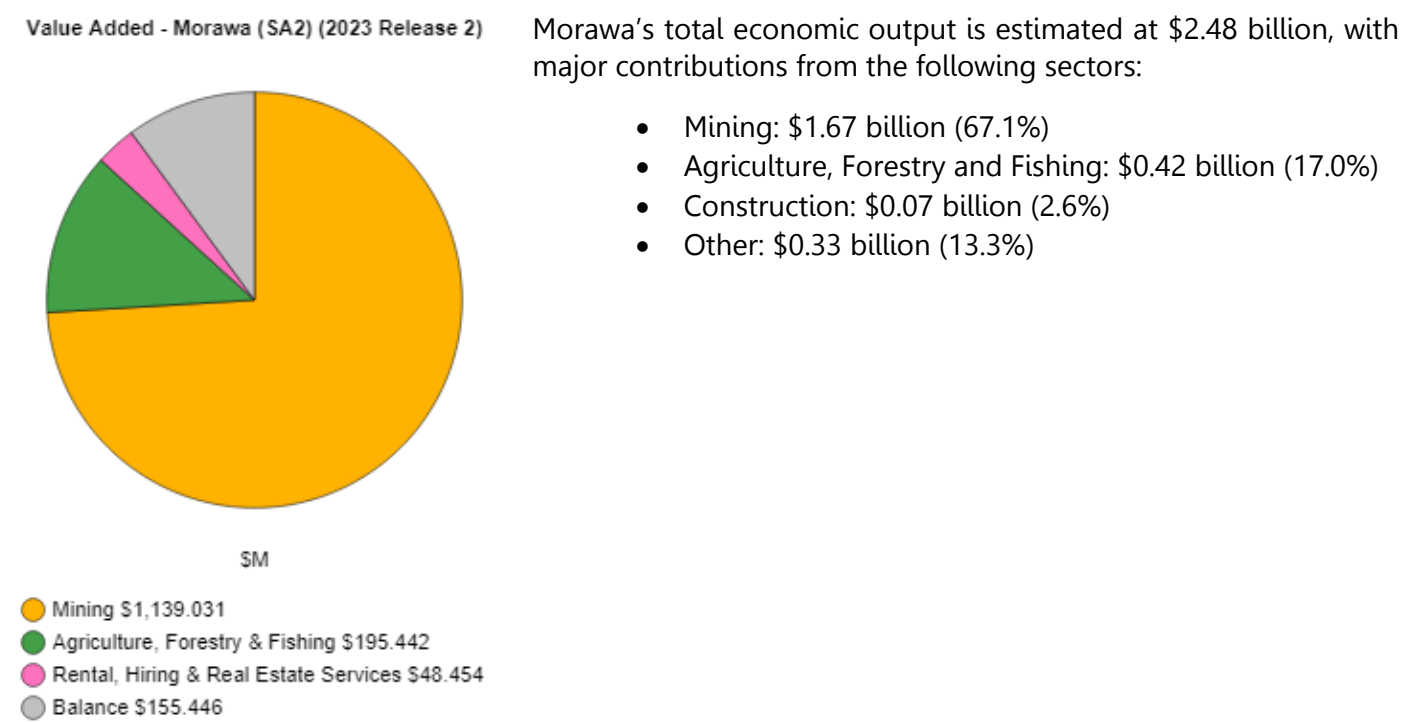


Figure 1: Gross Output of Morawa, by sectors (source: REMPLAN)

¹³ Per worker GRP can be loosely interpreted as a measure of productivity.
¹⁴ Calculated using REMPLAN data (see, <https://www.remplan.com.au/>)
¹⁵ https://www.morawa.wa.gov.au/profiles/morawa/assets/clientdata/shire_of_morawa_prospectus_land0726.pdf

Output - Morawa (SA2) (2023 Release 2)

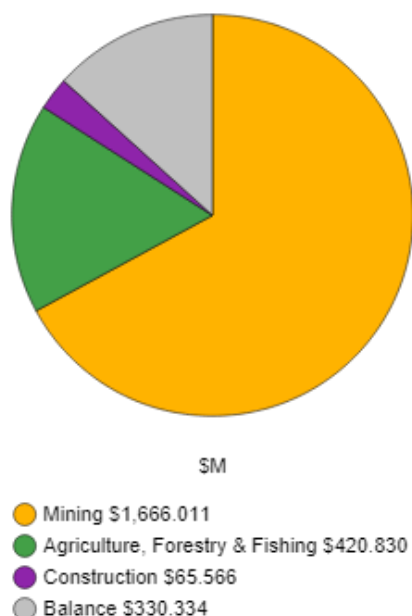


Figure 2: Value Added of Morawa, by sectors (source: REMPLAN)

Mining is, by a large margin, the region's largest sector in terms of revenue generated. This reflects the impact of iron ore mining on Morawa, and the role Morawa plays in Mid West's and WA's resource-driven economy.

The value added (GRP)¹⁶ of Morawa is \$1.57 billion, with significant contributions from:

- Mining: \$1.14 billion (74.0%)
- Agriculture, Forestry and Fishing: \$0.19 billion (12.7%)
- Rental, Hiring and Real Estate Services: \$0.05 billion (3.1%)
- Other: \$0.16 billion (10.1%)

Employment - Morawa (SA2) (2023 Release 2)

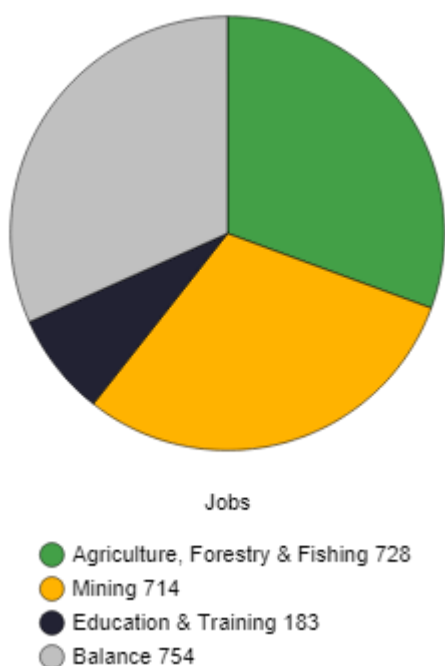


Figure 3: Employment in Morawa, by sectors (source: REMPLAN)

As expected, the value-added figures are also dominated by the mining sector. However, when looking at the GRP numbers, one finds that the services sector (Education and Training (jobs) and Rental, Hiring and Real Estate Services) also have a significant role to play in the economy. This reiterates the city's role as a potential industry and logistical hub, supporting both regional and state-level economic activities.

Morawa supports 2,379 jobs, with key sectors including:

- Agriculture, Forestry and Fishing: 728 jobs (30.6%)
- Mining: 714 jobs (30.0%)
- Education and Training: 183 jobs (7.7%)
- Others: 754 jobs (31.7%)

The employment figures show how the mining and agriculture and allied activities sectors are holding up the region. The importance of the education and training sector as a critical service provider is also evidenced.

The industry sectors which are the key drivers of the Morawa (SA2) region's economy in terms of regional exports, employment, value-added and local expenditure on goods and services (backward linkages) are detailed in Table 2 below.

¹⁶ Value added represents the marginal economic value that is added by each industry sector in a defined region. Value added is calculated by subtracting local expenditure and expenditure on regional imports from the output generated by an industry sector. Value added by industry sector is the major element in the calculation of GRP, and it is, therefore, common to use value added to represent GRP.

Table 2: Key sectors in Morawa

Industry Sectors	Backward Linkages	Exports	Employment	Value-Added
Agriculture, Forestry & Fishing	✓	✓	✓	✓
Mining		✓	✓	✓
Manufacturing		✓		
Electricity, Gas, Water & Waste Services	✓			
Construction	✓		✓	
Rental, Hiring & Real Estate Services				✓
Public Administration & Safety		✓	✓	✓
Education & Training		✓	✓	✓
Arts & Recreation Services	✓			
Other Services	✓			

Demographic Profile

The population of Morawa (SA2) is estimated at 4,204, with a notable proportion of residents in the 0-4 age group (256), accounting for 6.36% of the population.¹⁷ This cohort is one of the largest alongside the 35-39 age group, apart from retirees and near-retirees, indicating a strong presence of young families in the area, and pointing to a latent demand for services catering to young families and children. The Indigenous population represents 8% of the region's residents, significantly higher than the state (3.3%) and national (3.2%) averages, underscoring the need for services that address the specific challenges faced by this community.¹⁸ Notably, indigenous children account for 42% of the enrolment in the local school.¹⁹

Family composition in Morawa reveals that 34% of families are couples with dependent children, and 9% are single-parent families.²⁰ Among couple families, only 23% have both partners working full-time, with many relying on part-time or single-income arrangements.²¹ This suggests that a considerable number of parents, likely women, are not fully participating in the workforce. Supporting this, Morawa's labour force participation rate is only 53.6%, compared to state and national averages above 60%.²² Additionally, 38.4% of the population reported providing unpaid childcare²³, limiting economic participation and career opportunities. This is particularly worrisome as the region has a high level of educational attainment, with 9.6% of residents holding a Bachelor degree or higher and 37.5% of the population over 15 having completed Year 12 or higher.

As of the 2021 Census, only four children were enrolled in preschool programs within centre-based daycare, underscoring a significant gap in early childhood education services. The lack of adequate family support services is likely a contributing factor to the town's difficulty in attracting and retaining skilled professionals in critical sectors such as mining, education, healthcare, and agriculture. With the population expected to double in the coming decades²⁴, the need for investment in Early Childhood Education and Care (ECEC) is clear.

¹⁷ <https://www.remplan.com.au/> (based on ABS 2023).

¹⁸ *ibid.*

¹⁹ Information provided by the local school in their letter of support (included as an attachment to the business case).

²⁰ <https://www.abs.gov.au/census/find-census-data/quickstats/2021/511041291>

²¹ *ibid.*

²² *ibid.*

²³ *ibid.*

²⁴ https://www.morawa.wa.gov.au/profiles/morawa/assets/clientdata/shire_of_morawa_prospectus_land0726.pdf

Project Drivers and Potential Benefits

The core drivers of the project as identified in the business case is presented below:

Economic Impacts: The project is expected to generate a range of economic benefits, including:

- Increased workforce participation.
- Increased local wages through closing of the gender-based pay gap.
- Creation of new employment opportunities.
- Ability to attract and retain residents.
- Increased turnover for local businesses and increased Gross Regional Product (GRP).
- Reduction in long-term social costs, including costs associated with education, medical expenses, child protection and crime.
- Increase in property values.
- Residual value of the building.

Social Benefits: The Centre is anticipated to contribute to several positive social outcomes:

- Improved long-term educational and employment outcomes, particularly for Aboriginal and disadvantaged children, improving their long-term prospects.
- Benefits from social inclusion and cohesion within a safe and supportive environment.
- Stronger community ties, cultural education and appreciation of Indigenous traditions.
- Further improved health outcomes in the long term.

Potential Benefits Based on the Business Case

As per the prepared business case, the project offers a range of economic and social benefits. Identified benefits are presented and discussed in table 3 below:

Table 3: Potential benefits from the project

Potential Benefits	Rationale For Consideration
Economic	
Increased workforce participation of parents (predominantly mothers) with children in the new childcare facility	There is a substantial level of Australian and international evidence to suggest that workforce participation by parents and carers is influenced by the availability of affordable early childhood education and care (Elango et. al., (2015) ²⁵ ; PWC, 2019 ²⁶ ; Doiron & Kalb, 2005 ²⁷ ; Gong & Breunig, 2012 ²⁸ ; Rammohan & Whelan, 2007 ²⁹ ; Productivity Commission, 2014 ³⁰). Our CBA model determines the number of additional hours parents or carers may work due to access to childcare.
Increases in wages of mothers, through reduction of gender-based pay gap	KPMG (2022) ³¹ , in a rigorous econometric study, found that Gender discrimination; care, family responsibilities and workforce participation; and gender segregation by job type continue to be the three main contributors to the gender pay gap in Australia.

²⁵ Elango, S., Garcia, J. L., Heckman, J. J., & Hojman, A. (2015). Early childhood education. SSRN Electronic Journal. <https://doi.org/10.2139/ssrn.2690725>

²⁶ https://www.thefrontproject.org.au/images/downloads/ECO_ANALYSIS_Full_Report.pdf

²⁷ Doiron, D., & Kalb, G. (2005). Child Care and Mothers' Employment Decisions. The Economic Record, Volume 1, No. 254, 228

²⁸ Gong, X., & Breunig, R. (2012). Child care assistance: Are subsidies or tax credits better? Institute for the Study of Labor, Discussion paper no. 6606

²⁹ Rammohan, A., & Whelan, S. (2007). The impact of childcare costs on the full-time/part-time employment decisions of Australian mothers. Australian Economic Papers, Volume 46, Issue 2, 152-169.

³⁰ Productivity Commission. (2014). Modelling the effects of childcare policy changes. Technical supplement to the draft report: Childcare and early childhood learning. Commonwealth Government, 3.

³¹ KPMG, She's Price(d)less: The Economics of the Gender Pay Gap, Prepared with Diversity Council Australia (DCA) and the Workplace Gender Equality Agency (WGEA), Sydney, KPMG, 2022

	Childcare accounted for 33% of the pay gap. Our CBA model determines the number of additional income that mothers would be able to generate with adequate access to childcare.
Creation of new employment opportunities	The childcare facility will create new employment opportunities, but it's important to distinguish between two types of job creation: a) direct employment generated during the construction phase, b) ongoing employment in the childcare centre for educators and c) employment resulting from families potentially relocating to Morawa due to the availability of childcare services. According to our model, the construction phase of the childcare facility is expected to directly create seven new jobs in the region. The economic impact of these jobs has been factored into the analysis through projected increases in gross output. Two additional educator jobs are expected to be generated. This would be ongoing.³² While the availability of childcare may encourage families to relocate to Morawa, we are taking a conservative approach and do not assume that migrating families will move solely because of childcare. Additionally, the absence of suitable childcare services could currently be deterring families from staying in the region, particularly those motivated by the caregiving parent's desire or need to pursue a job or career. We cannot precisely predict how many families the new Centre may stop from leaving Morawa due to this. As such, these benefits have not been quantified.
Economic impact of capital works	To estimate the economic impact of the construction project, we applied REMPLAN's Input-Output (IO) multipliers. First, we calculated the direct impact by multiplying the budgeted cost by the relevant output multiplier, capturing the immediate economic output from spending on materials, labour, and services. Then, we calculated the indirect impact, which reflects additional economic activity in the supply chain due to increased demand for these inputs. By summing the direct and indirect impacts, we derived a conservative estimate of the project's economic benefits. We deliberately excluded the induced impact (like consumption effects), which is consistent with the conservative approach applied through this analysis. The attribution of first and second order of economic activity from the capital works to this project is 100%. This is appropriate as the project is about the capital works.
Reduction in long-term social costs	These are cost savings from resources freed for alternative uses. These arise from reduced education costs, child protection cost savings, medical cost savings and justice cost savings.³³ Potential cost savings are included in the CBA.

³² Estimation based on data in <https://www.acecqa.gov.au/nqf/educator-to-child-ratios>.

³³ For a discussion of these factors and associated literature review, see Daly, A., Barrett, G. & Williams, R (2019) Cost Benefit Analysis of Community Playgroup, Playgroup Australia, Canberra.

	Reduced education costs: This is a key benefit of early childhood education. Research shows that early childhood education can lead to reduced absenteeism, better academic performance, and improved behaviour, all of which decrease the likelihood of students repeating grades or requiring remedial education. Child protection cost savings: Early childhood education has been shown to reduce the need for child protection services, which in turn lowers the costs to society. Early childhood education services help parents maintain stable families, reducing reliance on more expensive child protection processes. Medical cost savings: Association with early childhood education has been shown to help disadvantaged families access appropriate healthcare, reducing the need for general practice visits. Justice cost savings: Justice cost savings are achieved by reducing the likelihood of disadvantaged children interacting with the justice system. Research evidence shows that early childhood education can reduce such interactions, allowing public resources to be redirected to other uses, thus resulting in cost savings.
Increase in property values	While childcare availability may attract families to relocate to Morawa, potentially increasing demand for housing and raising property values, we are taking a conservative approach and do not assume that all relocating families will move solely due to the presence of childcare services. So, property value increases driven by family relocation and childcare availability are not directly modelled. However, it is likely that the presence of such a facility will contribute to making Morawa more attractive for families, indirectly supporting housing demand.
Residual value of the asset (constructed facility)	Including the residual value of assets in a CBA is essential because it accounts for the remaining economic value of an asset at the end of the evaluation period. This ensures a more accurate representation of the long-term benefits, as the asset continues to provide value beyond the analysis timeframe. By considering residual value, the CBA reflects the full financial efficiency of the investment and supports more informed decision-making. Excluding it would underestimate the total benefits and fail to capture the ongoing contribution of the asset, particularly in long-term infrastructure or public projects.
SOCIAL	
Improved outcomes for children	One of the key benefits of early childhood education and family support services are the positive impacts on children's cognitive development. This is extensively documented, including by the Nobel Laureate James Heckman in the Heckman equation. ³⁴ Enhanced cognitive abilities in early years lead to stronger academic performance throughout schooling, reducing the likelihood of early school dropout and increasing the chances of pursuing higher education. Educational attainment is a critical

³⁴ <https://heckmanequation.org/>

	factor in determining future income levels and improving various social outcomes, providing broad, long-term benefits to individuals.
Social inclusion and cohesion	NVEAC defines social inclusion as “ensuring people have the opportunity and support they need to develop their potential and participate fully in economic and community life.”³⁵ Manca (2014) defines social cohesion as “the extent of connectedness and solidarity among groups in society. It identifies two main aspects: the sense of belonging of a community and the relationships among members within the community itself.”³⁶ The economic and social benefit of social inclusion and cohesion are likely to be significant. However, as observed in Deloitte Access Economics and National VET Equity Advisory Council (2011), these phenomena are difficult to quantify. To that extent, the BCRs in this report are likely to be underestimated. This is consistent with our preference towards conservative estimates of BCRs.
Stronger community ties, and a hub for cultural education	The proposed facility is expected to provide significant qualitative benefits, including enhancing community connectivity, fostering cultural growth, and creating safer communities. Similar projects have been shown to enhance community connectedness, foster cultural growth by reinforcing ties to land, language, and traditions, and improve perceptions of safety by reducing threats like theft and violence (see, ACIL Allen (2021) ³⁷ . Although these outcomes are highly valuable, they are difficult to quantify in monetary terms (ACIL Allen, 2021). We recognise the importance of these benefits but have not included them in the cost-benefit analysis.
Improved health outcomes in the long term	Low educational attainment is a major risk factor for a variety of health metrics such as smoking, and obesity, as well as involvement in crime, and mental health problems (Australian Institute of Health and Welfare, 2016)³⁸. PWC (2019) demonstrates the link between early childhood education attendance and increased educational attainment.³⁹ There is substantial Australian evidence on the relationship between education and lifetime health and wellbeing.⁴⁰ Previous studies, primarily from the United States, have established a more direct connection between early childhood education and various social and health benefits.⁴¹ The evidence suggests that early childhood education can improve health behaviour in the long run, lowering the risk factors that lead to the prevalence of diseases, particular those associated with later life disadvantage such as obesity and smoking-related disease.⁴²

³⁵ Deloitte Access Economics & National VET Equity Advisory Council 2011, The economic and social benefit of increased participation by disadvantaged students in VET, [NVEAC], [Melbourne].

³⁶ Manca, A.R. (2014). Social Cohesion. In: Michalos, A.C. (eds) Encyclopedia of Quality of Life and Well-Being Research. Springer, Dordrecht. https://doi.org/10.1007/978-94-007-0753-5_2739

³⁷ ACIL Allen (2021), Social and Economic Impact Assessment of Community First Development, Report commissioned by Community First Development. See, <https://www.communityfirstdevelopment.org.au/impactstatement>

³⁸ Australian Institute of Health and Welfare. (2016). Australia's Health. Commonwealth Government.

³⁹ https://www.thefrontproject.org.au/images/downloads/ECO_ANALYSIS_Full_Report.pdf

⁴⁰ <https://www.education.gov.au/integrated-data-research/benefits-educational-attainment/healthy-behaviour#:~:text=Using%20the%202014%2D15%20National,income%20and%20country%20of%20birth.>

⁴¹ For a meta-analysis, see, Elango, S., Garcia, J. L., Heckman, J. J., & Hojman, A. (2015). Early childhood education. SSRN Electronic Journal. <https://doi.org/10.2139/ssrn.2690725>

⁴² Kamerman, S.B., Gatenio-Gabel, S. Early Childhood Education and Care in the United States: An Overview of the Current Policy Picture. ICEP 1, 23–34 (2007).

Cost-Benefit Analysis

This section presents a Cost-Benefit Analysis (CBA) for the Morawa Child and Family Centre Project. The purpose of the CBA is to determine to what extent the proposed project offers sufficient economic, social, and environmental benefits to justify the investment.

Methodology

The Australian Government promotes the use of CBA to assess policy proposals and support informed decision-making.

A CBA systematically evaluates the impacts of a proposal, considering all effects on the community and economy, beyond immediate or direct effects, financial outcomes, or impacts on specific groups. The analysis seeks to quantify the gains and losses in monetary terms to the greatest extent possible.

The primary goal of a CBA is to provide decision-makers with comprehensive information relevant to their decisions. It offers an objective framework for evaluating different impacts, including those that occur over varying timeframes. This objectivity is enhanced by converting all impacts into present value terms. Even when full quantification is challenging, CBA remains valuable in offering a clear decision-making framework.

A critical aspect of CBA is conducting the analysis relative to a counterfactual scenario. In this report, the modelled scenario (construction of the facility) is evaluated based solely on the incremental, or additional, benefits and costs compared to a base case, which is the status quo, i.e., the current not-fit-for purpose facility, with a much lower intake capacity, continues to be used.⁴³ This approach is most suitable for assessing the net economic benefits directly attributable to the selected intervention, in this case the construction of the proposed facility.

Steps In The CBA

The CBA process involves the following steps:

1. Obtain estimates of budgeted costs.
2. Monetise the identified benefits to the extent possible.
3. Calculate the monetary value of the quantified incremental costs and benefits in net present value (NPV) terms using appropriate discount rates.
4. Determine the benefit-cost ratio (BCR) by comparing the total present value of net benefits to the present value of costs, assessing the extent to which incremental net benefits exceed (or fall short of) incremental costs associated with the chosen scenario.
5. Conduct a sensitivity analysis. Sensitivity analysis provides information about how changes in different variables will affect the overall costs and benefits of the proposed regulation. It shows how sensitive predicted net benefits are to different values of uncertain variables and to changes in assumptions.

Choice Of Discount Rates

Discounting is the process of adjusting the value of future costs and benefits to reflect their present value at a common time dimension—the base date. In this case, FY ending 2023-24 is used as the base date given that it reflects the most recent FY. Discounting accounts for the social time preference, which is the tendency to prefer immediate benefits over future ones, and considers the opportunity cost of capital, ensuring that the value of money is appropriately reflected over time.

⁴³ It is possible to use any of the other considered scenarios as the base case. However, such an exercise would be relevant only where the focus is on the decision on which option to pursue (this decision has already been made).

Analysts conducting a CBA have the choice of whether to include future cash flows in terms of their actual monetary value at the future date (the ‘nominal’ value) or in terms of their current dollar value (the ‘real’ value). However, since all cash flows need to be converted to current dollar terms to be comparable in a CBA, it is usually simplest to adopt the latter approach. That is the approach taken in this report.

Recognising the diverse audiences for business cases, we have applied real discount rates of 4%, 7%, and 10%, in line with recommendations from the Office of Best Practice Regulation (OBPR) at the Federal Government level⁴⁴ and WA Treasury Project Evaluation Guidelines and Standard Business Case template.⁴⁵

The timeframe over which the benefits and costs of an infrastructure proposal are assessed in a CBA is typically 30 operational years plus the construction period.⁴⁶ However, due to the inherent uncertainty in forecasting costs and benefits over extended periods, caution is advised when using an evaluation period longer than 20 years.⁴⁷ Therefore, in this CBA, quantifiable benefits and costs are modeled over a 20-year period following the completion of the development phase.

Cost Of Capital Approach

The CBA conducted in this report represents a “cost of capital” assessment, focusing primarily on the up-front capital costs of the project while giving limited consideration to ongoing operational costs (beyond whole-of-lifecycle maintenance cost impacts at 1% of capital cost per year).

This approach is used for two main reasons:

- It aligns with the stage of the project and concept being tested—the early-stage concepts typically have capital cost estimates but may lack detailed cash flow or maintenance cost projections.
- The economic business case specifically aims to validate the potential capital investment in the project. The CBA provides evidence of the potential return on investment (in the form of economic and social benefits) to inform this capital decision.

Comparison With The Base Case (Status Quo)

For these assessments, we have conducted a cost-benefit analysis of the project’s net additional benefits and costs relative to the status quo. The NPVs and BCRs generated from the CBA reflect the net increase in economic and social benefits beyond the current state of the precinct.

Costs

The probable costs associated with the design and delivery for the project during the set-up and implementation phases are presented in table 4 below⁴⁸:

Table 4: Budgeted Costs Of The Project

Costs (\$m)	Total
Professional /Consulting Fees	\$0.378
Headworks and Construction	\$2.857
Furniture and Play Equipment	\$0.050
Total Cost	\$3.285

⁴⁴ <https://oia.pmc.gov.au/sites/default/files/2021-09/cost-benefit-analysis.pdf>
⁴⁵ OBPR requires the calculation of net present values (NPVs) using an annual real discount rate of 7%. In addition to this central rate, NPVs should also be calculated using real discount rates of 3% and 10% to test sensitivity. The appropriateness of the 7% central rate has been debated. In March 2018, the Grattan Institute suggested a 3.5% discount rate for low-risk infrastructure projects. Similarly, the Building Up and Moving Out report (2018) recommended that the Australian Government adopt a 4% discount rate, with the suggestion that Infrastructure Australia could also apply this rate in its analyses. These recommendations were made during a period of historically low interest rates. Given the current economic conditions, using 7% as the central rate, with 4% and 10% for sensitivity tests, appears to be a reasonable approach.
⁴⁶ <https://www.infrastructureaustralia.gov.au/sites/default/files/2021-07/Assessment%20Framework%202021%20Guide%20to%20economic%20appraisal.pdf>
⁴⁷ <https://oia.pmc.gov.au/sites/default/files/2021-09/cost-benefit-analysis.pdf>
⁴⁸ Government funding for childcare is not modelled as a cost of the project as it is not a part of the project outlay.

This table outlines the probable costs associated with consultancy and construction over the duration of the projects, culminating in a project cost of \$3,284,775.⁴⁹ We have included a further annual maintenance cost of 1% of the headworks and construction, which amounts to \$32,350 per year (consulting and professional fees are capitalised, whereas furniture and equipment costs are not).

Benefits

The drivers of the project and its potential benefits have been identified in table 2 of the report. However, given the results of the analysis are significantly influenced by the data and underpinning assumptions relating to the benefits, the quantification (monetising) of the benefits is discussed below.⁵⁰

Increased workforce participation of parents with children in the new childcare facility:

The establishment of this childcare facility is expected to provide 15 additional childcare places⁵¹, enabling parents (expected to be predominantly mothers) to either return to the workforce full-time or increase their working hours.

Among couple families in Morawa, the ratio of families with one partner working full-time and the other working part-time, compared to those with one partner working full-time and the other not working, is approximately 1.28:1. Based on this, it is assumed that 8 parents were previously working part-time and will now transition to full-time work, while 7 parents will enter the workforce after not working previously. Given the Shire of Morawa advises that, anecdotally, the parents returning to full time work will be mothers, the assessment has been based on women being enabled to return to work.

Using the average wages in Morawa⁵², \$65,613 (adjusted for inflation⁵³), and applying the ratio of women's wages in Western Australia (0.869 of the overall average)⁵⁴, it is estimated that the 7 women entering full-time work will earn \$57,047 annually. For the 8 mothers increasing their work hours from part-time to full-time, it is assumed they will earn an additional \$28,524 annually, based on the difference between half-time and full-time wages.

The additional income over the time frame of analysis (20 years is aggregated) and included in the CBA in PV terms.

Increases in wages of mothers, through reduction of gender-based pay gap:

WA's gender pay gap stands at 19.4%⁵⁵, with women earning significantly less than men. In Morawa, where the average wage is \$65,612⁵⁶ (adjusted for inflation⁵⁷), the wage gap between men and women is approximately \$11,608.

Of this gap, 33% (or \$3,831) is attributed to unpaid childcare responsibilities. This is based on a rigorous econometric study undertaken by KPMG in 2022.⁵⁸ With the establishment of a new childcare centre, it is anticipated that 15 mothers will increase their annual earnings by an average of \$3,831 due to enhanced workforce participation. The additional income over the time frame of analysis (20 years is aggregated) and included in the CBA in PV terms.

Increases employment and wages through ongoing employment in childcare:

It is assumed that currently one educator is in employment. As per the recommended ratio of ACECQA (1 educator: 7 children)⁵⁹, there will be a need for two more educators on an ongoing basis. It is assumed that

⁴⁹ It is assumed that the budgeted amounts do not have an anticipated inflation built into them. Accommodation for escalation is assumed to be different than inflation.

⁵⁰ There are always multiple approaches to monetise benefits, each with its own set of advantages and disadvantages. We have chosen methods that, in our opinion, appear to be the most logical and fitting for this analysis. It is acknowledged that economists sometimes argue that certain benefits, while important, cannot be monetized. Arguably, monetisation is inherently speculative to some extent, but it can sometimes be more useful to arrive at a reasonable estimate rather than relying solely on qualitative assessments of significance. This is the approach we have adopted in this report.

⁵¹ The centre is being designed for 19 places, census data records that 4 children access daycare in Morawa.

⁵² <https://dbr.abs.gov.au/region.html?lyr=sa2&rgn=511041291>

⁵³ <https://www.abs.gov.au/statistics/economy/price-indexes-and-inflation/consumer-price-index-australia/latest-release>

⁵⁴ <https://www.forbes.com/advisor/au/personal-finance/average-salary-by-state-australia/>

⁵⁵ <https://www.wgea.gov.au/data-statistics/ABS-gender-pay-gap-data#:~:text=The%20national%20gender%20pay%20gap,men%20and%20%241782.8%20for%20women.>

⁵⁶ <https://dbr.abs.gov.au/region.html?lyr=sa2&rgn=511041291>

⁵⁷ <https://www.abs.gov.au/statistics/economy/price-indexes-and-inflation/consumer-price-index-australia/latest-release>

⁵⁸ KPMG, She's Price(d)less: The Economics of the Gender Pay Gap, Prepared with Diversity Council Australia (DCA) and the Workplace Gender Equality Agency (WGEA), Sydney, KPMG, 2022.

⁵⁹ See, <https://www.acecqa.gov.au/nqt/educator-to-child-ratios>.

the salary of the workers in 2024 is \$65,000.⁶⁰ Conservatively, we assume that the wages of the educators increase by 3% annually in real (inflation adjusted) terms.

Economic impact of capital works:

To estimate the economic impact of the construction project, we applied REMPLAN's Input-Output (IO) multipliers. First, we calculated the direct impact by multiplying the budgeted cost by the relevant output multiplier, capturing the immediate economic output from spending on materials, labour, and services. Then, we calculated the indirect impact, which reflects additional economic activity in the supply chain due to increased demand for these inputs. By summing the direct and indirect impacts, we derived a conservative estimate of the project's economic benefits.

We deliberately excluded the induced impact (like consumption effects), which is consistent with the conservative approach applied through this analysis.

The attribution of first and second order of economic activity from the capital works to this project is 100%. This is appropriate as the project is about the capital works.

Reduction in long-term social costs:

- Reduced education costs: Based on the work of PWC (2019)⁶¹, it is estimated that the cost of grade retention is \$20,898 (adjusted for inflation⁶²) per year repeated. We assume that 10% of students avoid grade retention during their schooling years because of exposure to early childhood education.⁶³ It is not possible to predict at what point a student may repeat a year. To be conservative, we assume grade retention in year 10.
- Child protection cost savings: Based on the work of Daly, Barret & Williams (2019)⁶⁴, we conservatively estimate a net cost saving of \$3,629 per annum (adjusted for inflation⁶⁵) for each child that avoids child protection services. We assume that 2 children per year (around 10% of children who are enrolled in the childcare) avoid requiring child protection services, during the enrolment in early childhood education.
- Medical cost savings: Based on the work of Daly, Barret & Williams (2019)⁶⁶, each avoided general practice doctor visit is valued at \$121, adjusted for inflation⁶⁷. It is assumed that around 50% of the children attending the childcare, along with one of their parents, will each avoid one doctor visit annually, when enrolled in childcare.⁶⁸ Long term health benefits are modelled separately.
- Justice cost savings: PWC (2019)⁶⁹ estimated the savings from avoided crime costs to be \$48,390⁷⁰ per person (adjusted for inflation⁷¹). We assume that 10% of students could be averted from adverse engagement with the justice system.⁷² It is not possible to predict at what point a student may repeat a year. To be conservative, we assume engagement with crime at age 18.

Residual value of the asset (constructed facility):

With a \$3.235 million investment (includes consulting fees but excludes furniture and equipment) depreciating at a rate of 2.5% annually⁷³, the residual value of the asset after 20 years can be estimated using straight-line depreciation. Over this period, the investment would lose 50% of its value, leaving a residual value of \$1.62 million. This assumes no other factors affecting depreciation, such as wear and tear beyond the normal rate. The PV of the residual value of the building will be included in the model as a benefit.

Improved outcomes for children:

⁶⁰ <https://www.seek.com.au/career-advice/role/early-childhood-educator/salary>

⁶¹ https://www.thefrontproject.org.au/images/downloads/ECO_ANALYSIS_Full_Report.pdf

⁶² <https://www.abs.gov.au/statistics/economy/price-indexes-and-inflation/consumer-price-index-australia/latest-release>

⁶³ While 10% is a higher end estimate for the overall population, this is considered reasonable in this case given the high proportion of indigenous children in the region.

⁶⁴ Daly, A., Barrett, G. & Williams, R (2019) Cost Benefit Analysis of Community Playgroup, Playgroup Australia, Canberra.

⁶⁵ <https://www.abs.gov.au/statistics/economy/price-indexes-and-inflation/consumer-price-index-australia/latest-release>

⁶⁶ Daly, A., Barrett, G. & Williams, R (2019) Cost Benefit Analysis of Community Playgroup, Playgroup Australia, Canberra.

⁶⁷ <https://www.abs.gov.au/statistics/economy/price-indexes-and-inflation/consumer-price-index-australia/latest-release>

⁶⁸ While 50% is a higher end estimate for the overall population, this is considered reasonable in this case given the high proportion of indigenous children in the region.

⁶⁹ https://www.thefrontproject.org.au/images/downloads/ECO_ANALYSIS_Full_Report.pdf

⁷⁰ The number was derived from eyeballing the graphical image.

⁷¹ <https://www.abs.gov.au/statistics/economy/price-indexes-and-inflation/consumer-price-index-australia/latest-release>

⁷² While 10% is a higher end estimate for the overall population, this is considered reasonable in this case given the high proportion of indigenous children in the region.

⁷³ <https://www.ato.gov.au/businesses-and-organisations/income-deductions-and-concessions/depreciation-and-capital-expenses-and-allowances/capital-works-deductions>

PWC (2019)⁷⁴ estimated the benefit-cost ratio of investments in early childhood education, showing an average total annual cost per child of \$10,683 for the whole of Australia. However, for Western Australia, the annual cost per child is estimated to be higher, at approximately \$13,912⁷⁵ (adjusted for inflation⁷⁶). The PWC report indicated that 48% of the investment (amounting to \$33,354 in 4% discounted PV terms) is recouped through higher earnings. Using this estimate, the cumulative benefit for 76 children is calculated (\$2,534,904 in 4% discounted PV terms) and included in the CBA. 76 is a very conservative estimate based on 19 children staying in childcare for 5 years each over a 20 year time period. The actual number is expected to be much higher.

Improved health outcomes in the long term:

PWC (2019)⁷⁷ estimated the benefit-cost ratio of investments in early childhood education, showing an average total annual cost per child of \$10,683 for the whole of Australia. However, for Western Australia, the annual cost per child is estimated to be higher, at approximately \$13,912⁷⁸ (adjusted for inflation⁷⁹). The PWC report indicated that 29% of the investment (amounting to \$19,818 in 4% discounted PV terms) is recouped through improved health outcomes. Using this estimate, the cumulative benefit for 76 children is calculated (\$1,506,168 in 4% discounted PV terms) and included in the CBA.

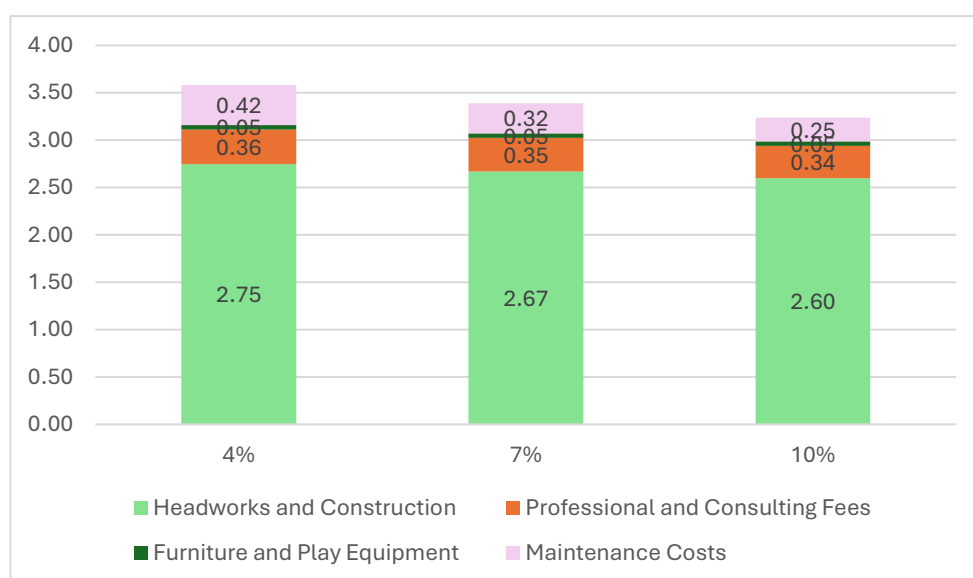
CBA Results

This section presents an overview of the present value and breakdown of costs and benefits for the Project, including a summary of the Benefit-Cost Ratios (BCRs) and Net Present Value (NPV) outcomes. This part of the report provides a financial snapshot of the project, allowing stakeholders to make informed decisions about the project's viability and prioritisation. It illustrates whether the project is expected to deliver value for money and helps in comparing it with any expectations funders might have as regards return on investment.

Costs

Considering the probable costings of building the facility and an assumed 1% average annual maintenance cost (to capture whole of lifecycle costs), the present value of the costs (FY 2023-24, in constant 2023-24 dollars) is estimated to range between 3.24 million and 3.58 million, depending on the discount rate applied. This is illustrated in figure 4 below.

Figure 4 Present Value of Costs (in \$ millions), Professional/Consulting Fees , Headworks and Construction, Furniture and Play Equipment and Maintenance, at alternative discount rates of 4, 7 and 10%



⁷⁴ https://www.thefrontproject.org.au/images/downloads/ECO_ANALYSIS_Full_Report.pdf

⁷⁵ The number was derived from eyeballing the graphical image.

⁷⁶ <https://www.abs.gov.au/statistics/economy/price-indexes-and-inflation/consumer-price-index-australia/latest-release>

⁷⁷ https://www.thefrontproject.org.au/images/downloads/ECO_ANALYSIS_Full_Report.pdf

⁷⁸ The number was derived from eyeballing the graphical image.

⁷⁹ <https://www.abs.gov.au/statistics/economy/price-indexes-and-inflation/consumer-price-index-australia/latest-release>

Unsurprisingly, the main expenditure associated with this project is capital works. Most of this is scheduled in 2025 and construction related, while the balance relates to headworks charges.

Benefits

A review of the benefits of the Project indicates a benefit value at between \$20.69 m at the 4% discount rate and \$15.05 m at the 10% discount rate. This is illustrated in Figure 5 below.

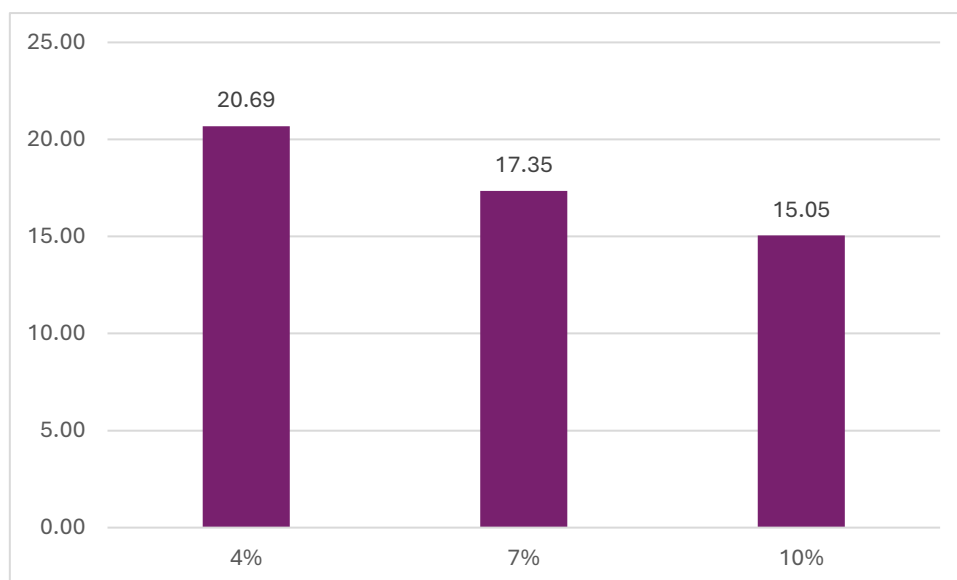


Figure 5 Present Value of Benefits

Table 6 lists the different sources of benefits accruing from the project, each monetised and discounted at a 7% rate. It also shows the proportion that each benefit category contributes to the total value of the benefits.

Source of Benefit	Mn \$ (discounted at 7%)	%
Workforce participation	6,647,966	38.32
Closing of pay gap	434,055	2.50
Educator's employment and wages	1,785,110	10.29
Economic impact of capital works	3,849,634	22.19
Reduced education costs	63,436	0.37
Child protection cost savings	76,891	0.44
Medical cost savings	25,638	0.15
Justice cost savings	119,904	0.69
Residual value of asset	417,993	2.41
Improved outcomes for children	2,463,832	14.20
Improved health outcomes	1,463,939	8.44
Total	17,348,398	100.00

Table 6: List of monetised benefits

As illustrated in Table 6, the most substantial benefits expected over the 20-year project assessment period (at a 7% discount rate) are predominantly economic, deriving chiefly from enhanced workforce participation, which accounts for 38% of the total benefits. This aligns with existing literature, which strongly emphasises that the gains from increased workforce participation generally surpass governmental investments in areas

such as childcare⁸⁰, with the investment in this facility being only a fraction of what is typically expended by the government.

The second largest source of benefits stems from the trickle-down effects associated with capital works, which contribute 22% to the total benefits and are expected to significantly propel economic growth in the region. The impact of capital works—encompassing construction and infrastructure development—is a critical driver of economic activity. These investments stimulate demand across various sectors, thereby creating employment and income opportunities for local residents. The economic influence of such activities extends throughout the local economy due to distinct supply chain linkages, which enhances the overall economic benefits derived from the project.

Two other important economic benefits are:

- Residual value of the asset: Representing 2.4% of the total benefits, the residual value of the asset (the building/facility) quantifies the lasting economic value of the capital works (after the 20-year period).⁸¹
- Additional employment and wages for two educators over the 20-year period: Representing 10% of the total benefits, educator wages are modelled to increase at 3% in real terms annually, which is a conservative estimate.

Alongside the major economic impacts outlined previously, the project also forecasts significant benefits from the Improved Outcomes for Children, and Improved Health Outcomes.

- Improved outcomes for children: Accounting for 14% of total benefits, this category specifically pertains to the long-term economic benefits stemming from enhanced educational attainment among children. Participation in early care education improves educational outcomes that, in turn, lead to higher wage earnings as these children enter adulthood. The benefit calculation reflects the increased lifetime earnings of the children in their adult life.
- Improved health outcomes: Making up 8.5% of the total benefits, improved health outcomes focus on the long-term health benefits that children will enjoy as they grow up. These outcomes likely include reduced incidence of chronic diseases, lower healthcare costs, and improved quality of life, which translate into economic benefits through decreased medical expenses and good health.

The project's impact is therefore anticipated to be predominantly economic, but social benefits are also extremely significant. In fact, even the social benefits in themselves outweigh the project cost.

Results

As illustrated in Figure 6, the project has an NPVs of \$17.10 million, \$13.96 million and \$11.81 million at discount rates of 4%, 7% and 10% respectively. The fact that NPVs remain consistently remarkably large and positive across various discount rates underscores the project's ability to deliver a strong economic and social return to the community, with outcomes that are robust to different assumptions. Importantly, the potential benefits have been modeled conservatively, evidencing that even with cautious estimates, the project presents a compelling case as an extremely sound investment.

⁸⁰ <https://www.vu.edu.au/mitchell-institute/early-learning/landmark-report-a-third-of-australians-living-in-childcare-deserts>

⁸¹ For example, if the childcare is discontinued or relocated after 20 years, the building will still have an alternative use and can be potentially sold. It is known that the sale price will be in excess of the residual value in most cases. But our approach is deliberately conservative.

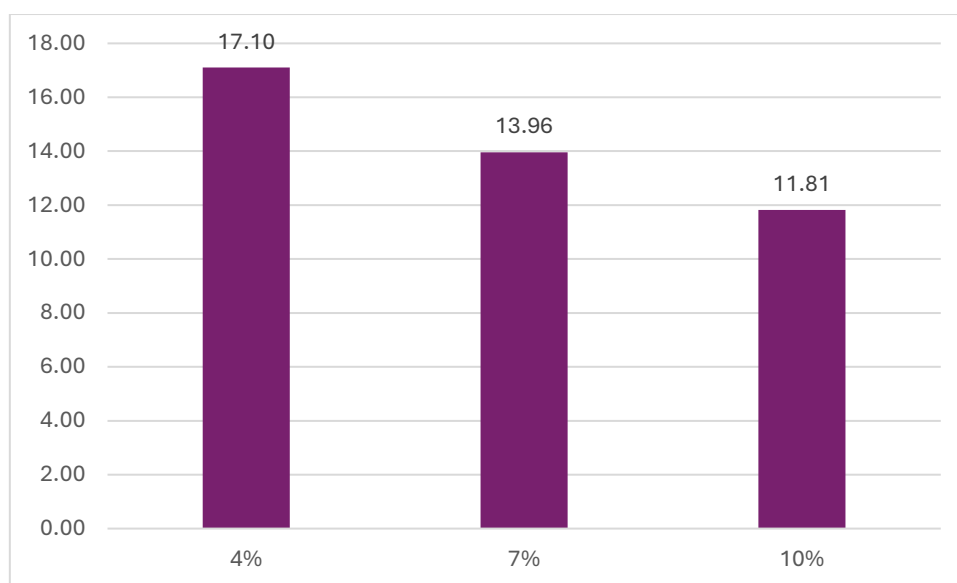


Figure 6 Present Value of Net Benefits

Table 7 summarises the results of the CBA. It includes the calculated Benefit Cost Ratios (BCRs). With a 7% discount rate as the central case, the BCR for the project is 5.12, indicating that for every dollar invested, \$5.12 in benefits are expected. At the lower discount rate of 4%, the BCR is even higher at 5.78, reflecting an even greater return on investment. At the higher discount rate of 10%, the BCR remains strong at 4.65, showing that the project's benefits still significantly outweigh its costs. These figures across different discount rates underscore the project's robust economic viability.

Table 7 shows the summary of results for the project.

Table 7: Summary of Results, CBA for the Morawa Child and Family Centre project:

Discount rate	Benefit (\$ mn)	Cost (\$ mn)	NPV (\$ mn)	BCR
4%	20.69	3.58	17.10	5.78
7%	17.35	3.39	13.96	5.12
10%	15.05	3.24	11.81	4.65

The high BCRs resulting from the Cost-Benefit Analysis (CBA) underscore the tangible and significant returns expected from this project. These quantitative findings are consistent with qualitative insights from literature reviews and stakeholder interviews, reinforcing the critical importance of the Early Childhood Education and Family Centre to the Morawa region. The alignment between these results and the Morawa Shire's strategic priorities highlights the project's vital role in the community's/region's development.

Economic Impact Analysis

In the CBA, we modeled benefits related to increased business turnover and capital work activity. These benefits were derived from an Economic Impact Assessment (EIA), which provided the foundation for quantifying the expected economic gains from the project. This section now presents the EIA in detail, focusing on the effects on sales, Gross Regional Product, and employment.

Scope

The costs associated with professional/consulting fees, furniture and play equipment, and construction over the project duration has been budgeted at \$3,284,775 (excluding GST). In addition, we have allowed for an annual maintenance cost of 1% of the capital works, which amounts to \$32,350 per year. For the EIA, we exclude the annual maintenance cost, as it is standard practice in the literature to model EIAs as a one-off stimulus.

Model And Methodology

Whitney Consulting developed an economic model to provide an ex-ante estimation of the economic contribution of the Morawa Child and Family Centre project. This analysis measures the project's impact on output, value added, and employment within the local economy, reflecting both direct expenditures from the capital works and the subsequent flow-on effects throughout Morawa and the broader Mid West economies.

The applied model bases its analytical approach on input-output (IO) analysis. The IO analysis, as conceptualised in its theoretical form by Leontief (1985), is a quantitative economic technique that models the relationships between different sectors of an economy. It illustrates how the output from one sector can become an input to another, revealing the complex web of economic activities and their interdependencies. At the core of this methodology are the IO tables, which detail the supply and demand connections between industries within an economy. Multipliers, a pivotal component of the IO analysis, are derived from these tables. They quantify the ripple effects of initial expenditures across the economy, demonstrating how spending in one area can lead to increased output, earnings, and employment in various other sectors. The IO method has been identified as being relatively reliable for tracing the multiplier effects of initial spending within an economy. This methodology is often preferred over alternatives such as ad-hoc multipliers for its ability to operate within the broader general equilibrium framework and accommodate economic interdependencies between industries and regions.

Our model integrates data from the probable costing schedule and ABS to quantify the direct expenditures associated with the project, such as construction costs, and estimates their ripple effects across the local economy. The analysis focuses on transactions triggered by capital works, including those benefiting sectors like construction, mining, manufacturing, wholesale, transport, and services within the Morawa region.

The model incorporates a range of industries expected to be impacted by the project, including:

- Construction
- Wholesale Trade
- Mining
- Manufacturing
- Transport
- Professional Services

Multipliers derived from the REMPLAN IO modelling software enable the estimation of direct value added, employment, and the flow-on economic effects generated by the project.

Model Limitations

While IO analysis is a valuable tool for estimating economic contributions, it has limitations that require careful consideration:

- **Lack of supply-side constraints:** The most significant limitation of economic impact analysis using multipliers is the implicit assumption that the economy has no supply-side constraints. That is, it is assumed that extra output can be produced in one area without taking resources away from other activities, thus overstating economic impacts. The actual impact is likely to be dependent on the extent to which the economy is operating at or if it is near capacity. In the case of the City of Belmont, it is observed that the unemployment rate is consistently higher than that of Greater Perth and WA.
- **Fixed prices:** Constraints on the availability of inputs, such as skilled labour, require prices to act as a rationing device. In assessments using multipliers, where factors of production are assumed to be limitless, this rationing response is assumed not to occur. Prices are assumed to be unaffected by policy and any crowding out effects are not captured.
- **Fixed ratios for intermediate inputs and production:** EIAs using multipliers implicitly assumes that there is a fixed input structure in each industry and fixed ratios for production. As such, impact analysis using multipliers can be seen to describe average effects, not marginal effects. For example, increased demand for a product is assumed to imply an equal increase in production for that product. However, it may be more efficient to increase imports or divert some exports to local consumption rather than increasing local production by the full amount.
- **No allowance for purchasers' marginal responses to change:** EIAs using multipliers assumes that households consume goods and services in exact proportions to their initial budget shares. For example, the household budget share of some goods might increase as household income increases. This equally applies to industrial consumption of intermediate inputs and factors of production.
- **Absence of budget constraints:** Assessments of economic impacts using multipliers that consider consumption induced effects (type two multipliers) implicitly assume that household and government consumption is not subject to budget constraints. Notably, we have excluded induced effects from our economic model, lending it greater credibility.
- **Not applicable for small regions:** Multipliers that have been calculated from the national IO table are not appropriate for use in economic impact analysis of Projects in small regions. For small regions multipliers tend to be smaller than national multipliers since the inter-industry linkages are normally relatively shallow. Inter-industry linkages tend to be shallow in small regions as they usually do not have the capacity to produce the wide range of goods used for inputs and consumption, instead importing a sizable proportion of these goods from other regions. For this reason, we have modelled the impacts on the City of Belmont, rather than the smaller BAR area.

Despite these limitations, IO analysis remains a reasonable choice for this project, providing a consistent methodological approach that aligns with previous assessments undertaken for establishing the viability of development projects in WA. This consistency enhances the credibility of the findings and supports informed decision-making.

Results

The Morawa Child and Family Centre Project is projected to generate significant economic contributions across Morawa, Mid West, and the wider Western Australia (WA) economy. Our ex-ante model estimates that the project's initial investment of \$3.61 million (including GST, as per standard practice) could multiply by a factor of 1.14, leading to substantial economic benefits for the Morawa region. This section presents the detailed economic impact analysis, focusing on the effects on output, Gross Regional Product (GRP), and employment within Morawa, Mid West, and WA.

Table 8 shows the impact of the project on the region's output (overall economic activity).

Table 8: Economic Impact on Output

Region	Output (\$Mn's)
Morawa	4.12
Mid West	5.11
Western Australia	6.36

The projected increase in economic output reflects the initial investment and the resulting activities. In Morawa, output is expected to rise to \$4.12 million, driven by direct economic activities related to the project. The ripple effects extend to Mid West, with an increase in output reflecting the SA3 region's broader economic base. Across WA, the total output gain of \$6.36 million highlights the broader economic benefits, as the project's influence spreads through various industries and supply chains. Our estimates exclude second-order induced effects, which are projected to increase economic activity by an additional \$0.41 million in Morawa.

Table 9 shows the impact on value added (Gross Regional Product).

Table 9: Economic Impact on Value Added

Region	Value added (\$Mn's)
Morawa	1.51
Mid West	1.69
Western Australia	2.15

Value added represents the project's contribution to the GRP of each area. In Morawa, the project is expected to add \$1.51 million to the local GRP, reflecting the value generated through increased business activities and capital works. Mid West sees a slightly larger increase in value added, amounting to \$1.69 million. Across WA, the value-added impact reaches \$2.15 million, underscoring the project's small but relevant contribution to the state's overall economic growth. Our estimates exclude second-order induced effects, which are projected to increase GRP by an additional \$0.27 million in Morawa.

Table 10 shows the extent of job creation because of the proposed development.

Table 10: Economic Impact on Employment

Region	Employment (jobs)
Morawa	7
Mid West	9
Western Australia	11

The employment impact of the project is a key indicator of its social and economic benefits. In Morawa, the project is expected to create 7 new jobs, directly supporting local employment and income generation. The employment impact extends to Mid West, with 9 jobs projected. Across WA, the total employment impact is estimated at 11 jobs. Our estimates exclude second-order induced effects, which are projected to add an additional job in Morawa.

Tables 8 through 10 collectively illustrate the broad and substantial economic impact that the Morawa Child and Family Centre Project is expected to have across Morawa, Mid West, and Western Australia. By driving increases in output, value added, and employment, the project is poised to play a small but relevant role in fostering economic growth and prosperity in the region.

Conclusion

The Morawa Child and Family Centre Project represents a crucial investment in the future of Morawa and the broader Mid West region.

Morawa has an estimated residential population of 4,024, with around 950 residents in the townsite. Population growth is projected to more than double in the coming decades, supported by a Growth and Implementation Plan that aims to position Morawa as a future regional centre for the North Midlands and a primary industry hub for the Midwest. The Morawa Council is committed to facilitating this development by providing essential infrastructure. One key initiative is the construction of the new Child and Family Centre, addressing a critical gap in social services. Currently, family day care services operate from an aging, retrofitted house inadequate for long day care, and there's a lack of centralised facilities for child health, parenting support, and family wellness programs.

The detailed CBA reveals that the project is expected to generate substantial economic and social returns, with benefits far outweighing the initial investment.

The economic analysis provides a clear summary of the project's financial viability under different discount rates. At a 4% discount rate, the project has a total cost of \$3.58 million, generating \$20.69 million in benefits, resulting in a Net Present Value (NPV) of \$17.10 million and a Benefit-Cost Ratio (BCR) of 5.78. At a 7% discount rate, the cost is \$3.39 million with \$17.35 million in benefits, yielding an NPV of \$13.96 million and a BCR of 5.12. Even at a higher discount rate of 10%, the project remains viable with a cost of \$3.24 million, benefits of \$15.05 million, an NPV of \$11.81 million, and a BCR of 4.65. These figures underscore the strong economic case for proceeding with the project.

The economic impact analysis undertaken further demonstrates the project's significant benefits. The projected increase in economic output reflects the initial investment and the subsequent activities it stimulates. In Morawa, output is expected to rise to \$4.12 million, driven by direct economic activities related to the project. The ripple effects extend to Mid West, where output is projected to increase to \$5.11 million, reflecting the region's larger economic base. Across Western Australia, the total output gain is estimated at \$6.36 million, highlighting the broader economic benefits as the project's influence spreads through various industries and supply chains. These estimates exclude second-order induced effects, which are projected to increase economic activity by an additional \$0.41 million in Morawa.

In terms of value added (Gross Regional Product), the project is expected to contribute \$1.51 million to Morawa's GRP, \$1.69 million to Mid West's GRP, and \$2.15 million to Western Australia's GRP. These figures underscore the project's role in generating economic growth across different regions, with significant contributions from increased business activities and capital works. The estimates exclude second-order induced effects, which could further increase GRP by an additional \$0.27 million in Morawa.

Regarding employment, the capital works associated with the project is anticipated to create 7 new jobs in Morawa and 9 and 11 jobs across Mid West and Western Australia, respectively. There will also be 2 new continuing jobs for educators in line with the increased capacity of the facility. This job creation highlights the project's importance in supporting local employment and income generation, further contributing to the social and economic well-being of the community.

In conclusion, the Morawa Child and Family Centre Project is a sound financial and social investment. The findings of this report strongly support the Shire's prioritisation of this project and the advancement of the project to realise substantial benefits for the community and region.

