



A Cost-Benefit Analysis of the Remote Laundries Project

Aboriginal Investment Group (AIG) March 2021

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Executive Summary

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- A simple, innovative, social enterprise model focused on upstream prevention not downstream reactive measures
- Providing free and reliable access to laundry facilities in remote communities via a fully automated and purpose-built container
- Social Cost-Benefit Analysis (S-CBA) by design, the Remote Laundries Project produces exceptional near term social returns with:
 - 6.01 dollars of accrued benefit for every 1 dollar invested in the remote laundry over a 5-year period for the Barunga site alone, comprising \$757,491 worth of costs and \$4,554,833 worth of benefits; and
 - o 14.7 dollars accrued for every 1 dollar invested over a 5-year period across seven communities, comprising \$5,302,438 worth of costs and \$77,953,191 worth of benefits





Executive Summary (1/2)

A Social Cost-benefit Analysis (S-CBA) of the Remote Laundry Project

Remote Laundry Project Background

Established as a pilot site in the Barunga Aboriginal community in 2019, the remote laundry comprises a laundromat design-concept on a 20-foot secure container with four commercial washers and four dryers. In a setting where many households do not own a washing machine or have money to purchase detergents - or have access to a functional laundry, water and electricity - the remote laundry provides a practical solution to washing clothes, bedding and linen. The remote laundry seeks to reduce the prevalence of skin infections and subsequently improve the health, wellbeing and quality of life of the Indigenous Australians through regular washing leading to a reduction in skin infections and more serious secondary medical conditions.

S-CBA Overview

KPMG conducted a Social Cost-Benefit Analysis (S-CBA) of the Remote Laundries Pilot Project in Barunga. The S-CBA demonstrates the laundry's return on investment (ROI) by examining the following elements associated with the Project in the Barunga community where a pilot project has been operational for 12-months:

- Capital and operational costs;
- · Health and quality of life benefits; and
- Avoided social costs.

This analysis is extrapolated to include an additional six communities across the Northern Territory. The cost analysis of the Project is split into two categories: those costs related to the **capital build** of the laundry, and those annual **operational costs** relating to ongoing wages, utilities, amenities, repairs and

administration. The benefits and social returns analysis of the Project is based on the quantification of three primary elements for individuals and the Government. These include:

- **Healthcare treatment cost savings** from a reduction in the incidence of primary and secondary medical conditions associated with bacterial infections;
- Improved quality of life associated with reduced disability and additional medical complications; and
- Social benefits from the direct employment of local staff at each laundry.

S-CBA Key Findings

Our analysis shows that the Barunga remote laundry will produce \$4,554,833 worth of benefits for \$757,491 worth of costs, producing a total net benefit of \$3,797,342 over a five-year period. It demonstrates that the benefits accruing from the Remote Laundry Project significantly outweigh the costs, with 6.01 dollars of accrued benefit for every 1 dollar invested in the remote laundry. Disaggregated benefits include \$247,087 in treatment cost savings from medical conditions avoided, \$339,503 from avoided unemployment, and an improved quality of life benefit of \$3,968,244 attributable to health and wellbeing improvements the avoidance of debilitating secondary medical conditions.

Following extrapolation to include all seven proposed communities, the analysis forecasts \$77,953,191 worth of benefits for costs of \$5,302,438 over a five-year period following implementation. It demonstrates that the benefits accruing from the Remote Laundry Project significantly outweigh the costs with a return of 14.7 dollars accrued for every 1 dollar invested.



Executive Summary (2/2)

A Social Cost-benefit Analysis (S-CBA) of the Remote Laundry Project

Accounting for uncertainty

The remote laundry's impact on the annual reduction in the incidence of primary medical conditions, which includes skin infections, scabies, boils, tonsillitis, trachoma, and otitis media, is the S-CBA model's most sensitive element. This input:

- 1) interacts directly with all other inputs of the model, and
- 2) has higher levels of uncertainty due to the unavailability of existing healthcare data.

To account for the uncertainty around this input, three different scenario models are applied to account for high (75%), medium (50%), and low (25%) rates of disease reduction in primary illnesses associated with bacterial infection. In the absence of primary data being available, the use of these three models provides the estimated range of net cost-benefit and social returns associated with the remote laundry. Key findings are taken from the medium rate of disease reduction, which we assume to be closest to the 'true' scenario. A summary of the Barunga remote laundry's costs and benefits for each model can be seen at table 1.

While based on conservative and defensible inputs, application of alternative assumptions to test this result proves the enduring value of the Project. Varying the assumed rate of disease reduction for primary illnesses to 25% continues to deliver a positive rate of return, with **3.59 dollars accrued for every 1 dollar** invested for the Barunga remote laundry alone, and **8.5 dollars accrued for every 1 dollar** invested when extrapolation for all seven proposed communities.

Varying the rate of disease reduction to the point at which the remote laundry 'breaks-even' is also revealing, noting the laundry effectively pays for itself at an approximate rate of disease reduction of just **4**% for Barunga and **1.5**% for the seven locations combined.

Finally, it is also important to note that under all three scenarios the full scope of benefits are likely to be under-estimated, particularly the flow-on social benefits. Additional positive outcomes such as improved educational, employment and criminality outcomes are also likely to result from the freedom from disease and opportunities for employment the laundry provides, and which have not be quantified here.

Table 1. Summary of Barunga remote laundry's costs, benefits and social returns by rate of disease reduction

	Item	Value
	Approximate value of costs	\$757,491
Utale to state on a	Approximate value of benefits derived	\$5,931,813
High Incidence Reduction (75%)	Net quantitative benefit	\$5,174,322
Neduction (75%)	Benefit cost ratio	7.83
Medium Incidence	Approximate value of benefits derived	\$4,554,833
	Net quantitative benefit	\$3,797,342
Reduction (50%)	Benefit cost ratio	6.01
	Approximate value of benefits derived	\$2,716,015
Low Incidence Reduction (25%)	Net quantitative benefit	\$1,958,524
Reduction (25%)	Benefit cost ratio	3.59

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- This report quantifies all costs vs benefits to demonstrate the Remote Laundry Project's return on investment (ROI)
- The goal of the Remote Laundry Project is to reduce the prevalence of skin infections to improve:
 - o Health
 - o Quality of Life, and
 - o Social & Economic Returns.





A Social Cost-Benefit Analysis (S-CBA) of the Barunga Remote Laundries Project

S-CBA Purpose and Scope

KPMG has been engaged by the Aboriginal Investment Group (AIG) on behalf of Northern Australian Aboriginal Charitable Trust (NAACT) to prepare a Social Cost-Benefit Analysis (S-CBA) of the Remote Laundries Pilot Project in Barunga; a community laundromat intended to improve health and social outcomes for the community and broader society through a reduction in the burden of disease, improved quality of life, and increased community employment. a

The Remote Laundries Project has the goal to achieve substantial social and economic impacts, which can be summarised in terms of:

- Health outcomes: reduced rates of scabies, trachoma and rheumatic heart disease within communities, resulting in both avoided treatment costs due to reduced incidence of diseases in the community as well as improvements in the health and wellbeing of individuals;
- Improved quality of life: due to a reduction the incidence of primary and secondary illnesses within the community; and
- Economic participation: derived from direct employment at the laundry.

The Remote Laundries Project requires substantial funding, awareness and support to achieve its goals and deliver on the fundamental outcomes identified. This comprehensive S-CBA and quantification of the project's benefits will assist in this endeavour to demonstrate in monetary terms the level of return to society for the investment made by AIG and funders.

The purpose of this analysis will be for AIG to articulate and quantify with a large degree of certainty what the return on investment (ROI) of the remote laundry is in

terms of health, quality of life and social benefits to society and enable them to communicate and distribute these finding to relevant third parties, including prospective philanthropic and government partners.

Extrapolation to six additional communities

The S-CBA is extrapolated to six additional communities where future site roll outs have been proposed:

- Borroloola
- Yarralin
- Wadeye
- Gunbalanya
- Ngukurr, and
- · Ramingining.

Basis of the Analysis

The S-CBA is predictive in nature and does not use primary data regarding the current burden of disease for the population of interest. As described in Section 3 of this report, the model inputs are based on assumptions designed to provide AIG with indicative performance targets, to be tested once health data becomes available.

The Evaluation Framework provides AIG with the opportunity to update the output with primary data, as this becomes available from primary health clinics, subject to ethics approval from a Human Research Ethics Committee.



A Social Cost-Benefit Analysis (S-CBA) of the Barunga remote laundry

Evaluation Methodology

KPMG completed the evaluation in three phases; the stages, activities and deliverables for which are outlined in Figure 1 below.

Stage 1 – Project inception and preparation: In which a Project Plan, including tasks and timing, and ongoing reporting requirements was prepared, along with an agreed Program Logic (defining the relationship between the Remote Laundries Project inputs and expected outcomes) and an Evaluation Framework (defining the indicators of change and their associated units of measurement, as inputs to the S-CBA model).

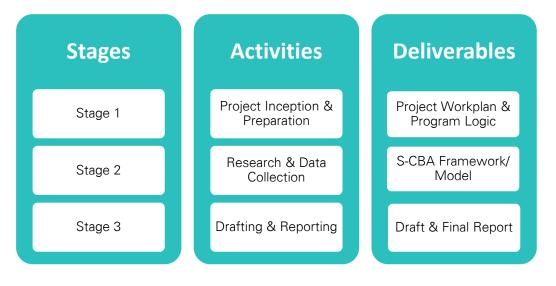
Stage 2 – Research and data collection: The S-CBA model builds upon initial work undertaken by Melbourne University Business School (MBS), and refined by KPMG to align with the agreed Program Logic and Evaluation Framework. This included refinements following a literature review and collation of available data regarding disease treatment costs and rates of conversion from primary to secondary illnesses, as well as incidence rates of disease within the community.

For this health data, a range of sources were used including the peer-reviewed published literature, grey literature reports and specific databases (i.e. ABS, AIHW). Where data was not available in the public domain, consultation with health experts in the relevant health fields, including those with NT or remote Aboriginal health experience, was undertaken.

Stage 3 – Analysis and Reporting: In which KPMG amended the S-CBA model created by MBS to reflect additional information obtained in our literature search and consultation with health experts. Modelling of quantifiable impacts over a 5-year period was conducted. KPMG has drafted and finalised this report following feedback from AIG.

Further details of the analytical framework used and the assumptions applied in undertaking the S-CBA are provided in Section 3 of this report.

Overview of evaluation stages, activities and deliverables





A Cost-Benefit and Social Returns Analysis (S-CBA) of the Barunga remote laundry

Structure of this report is as follows:

1.	Introduction	Outlines the purpose, scope and approach for the S-CBA.
2.	Project Background	Provides an overview of the Remote Laundries Project, it's theoretical underpinnings and a brief description of the relevant literature.
3.	Framework and Assumptions	An overview of the S-CBA's analytical framework and detailed assumptions.
3.	S-CBA Findings	Details the findings of the S-CBA, including a program cost-analysis and program benefits-analysis.
4.	Conclusion	Overall conclusion for the analysis including a summary of quantified results.
App	pendix A	List of consultees.

Disclaimer regarding predictive modelling:

The services provided in connection with this engagement comprise an advisory engagement.

- KPMG have indicated within this report the sources of third party data provided, but has not performed an audit or review of this information; and
- It is not possible to accurately predict future events or anticipate all potential circumstances within the modelled communities, as such, future events may not unfold as expected and actual results achieved for the forecast period may vary from the information presented.

KPMG is under no obligation in any circumstance to update this report, in either oral or written form, for events occurring after this report and once it has been issued in final form.

• Why?

- 8 of 10 children are diagnosed with skin sores before their 1st birthday
- o If left untreated or poorly treated, scabies can lead to more serious health complications such as kidney disease, ARF and RHD
- o Causes of skin infections include overcrowding in homes, limited access to washing machines, power and hot water.

• What?

- o Free, fully automated community access laundries
- Reliable access to hot water and power
- o Durable machines, plus constant supply of medical grade sanitiser, detergent and softener
- o Machines and chemicals purposefully selected to target the scabies mite and other skin bacteria





A Social Cost-Benefit Analysis (S-CBA) of the Barunga remote laundry

The Remote Laundries Project Background

The Remote Laundries Project was established in February 2019 at a pilot site in Barunga; an Aboriginal community 80km southeast of Katherine in the Northern Territory (NT).

The Remote Laundries Project is co-funded by AIG, the Aboriginal Benefits Account (ABA) and Bagala Aboriginal Corporation (BAC). Developed as a social enterprise, the laundries project is not designed to generate commercial profits and does not charge user fees. To sustain wages and operating costs and to achieve their goals of expansion, further funding, donations, awareness and support is required.

Based on the outcomes achieved at Barunga there is an expectation that the project will expand in future years to include six additional remote Aboriginal communities across the NT. The approximate capital infrastructure of a new laundry is \$224,660 with additional wages and operating costs of \$55,104 and \$48,727, respectively per annum.

The Remote Laundries Project provides remote Aboriginal communities with fully-automated community-access laundries. Each laundry is equipped with commercial washing machines, reliable access to hot water and power, and a constant supply of medical-grade laundry detergent, sanitiser, and softener. The chemical composition of the detergents is specifically designed to kill the scabies causing mite and other skin bacteria.

In a setting where many households do not own a washing machine, do not have access to a functional laundry, or do not have the finances to purchase detergents, the remote laundry provides a practical solution for areas where few households own a washing machine or have the funds to purchase a machine, detergent, hot water, and electricity. The laundry is remotely controlled which enables real-time insights into the usage and chemical dosage.

The laundromat design-concept centres on a 20-foot secure container with 4 commercial washers and 4 dryers, provided free to users, using chemicals that are automatically fed to the machines, so that users do not need to bring or dose detergent.





A Social Cost-Benefit Analysis (S-CBA) of the Barunga remote laundry

Project Need

Overcrowding in homes, limited access to working washing machines and unreliable access to power and hot water present daily difficulties for the people of Barunga, which can lead to infestations of commonly preventable bacteria that cause skin and other diseases such as trachoma and otitis media.

Skin sores - a generic term used to describe a clinical diagnosis of superficial bacterial skin infection - are caused by Group-A Streptococcus pyogenes (GAS) and S aureus bacteria, and are a major public health concern in remote Aboriginal communities. GAS infections are associated with inadequate hygiene and overcrowding, which are driven by insufficient access to good sanitation and adequate quality housing. If left untreated or treated poorly, skin scores can lead to more serious health complications such as kidney disease, acute rhematic fever (ARF) and rheumatic heart disease (RHD).

Remote Aboriginal communities in Northern Australia have the world's highest prevalence of skin sores with data for 2013 indicating more than 80% of children are diagnosed with sores before their first birthday¹.

Research also highlights a causal pathway and significant association between skin sores and scabies.

A recently published study found that among children diagnosed with scabies in the East Arnhem Health Skin Project (EAHSP), during periods of scabies exposure they had an increased incidence of skin sores by a factor of 11.9 when compared with periods of no scabies exposure.

Scabies is a contagious skin infection characterised by a severe and itchy rash caused by a mite which burrows into the top layer of the skin. Persistent itching of scabies with bacteria found underneath fingernails leads to the development of skin scores. Transmission of scabies requires skin-to-skin contact or contact with contaminated materials such as clothes, bedding or towelling.





A Social Cost-Benefit Analysis (S-CBA) of the Barunga remote laundry

Project Need continued

Trachoma, which is a keratoconjunctivitis caused by Chlamydia trachomatis, is associated with poor environmental health conditions, inadequate hygiene, overcrowding, low socio-economic status and an arid environment. In Australia, trachoma is now almost exclusively a disease experienced by Aboriginal people.

Recurrent chronic trachoma infection in childhood can lead to conjunctival scarring, trichiasis (in-turned eyelashes which damage the cornea) and ultimately blindness through corneal opacification later in life. Similarly, Aboriginal children are five times more likely to contract otitis media (or middle-ear infection) than their non-Aboriginal peers, which can lead to hearing loss and deafness when left untreated.

Despite being eradicated in most parts of the world, otitis media persists in Australian Aboriginal communities. In light of the interrelationships between overcrowding, inadequate hygiene, and the high prevalence of skin scores and other primary and secondary illnesses among Aboriginal children living in remote communities, intervention efforts to improve hygiene to stop the spread of disease within these settings is strongly indicated.

Setting the context – Barunga

Barunga is home to 328 people who identify as Aboriginal & Torres Strait Islander, accounting for 93% of Barunga's total population. 62% of the population are adults and 38% are children. 50% of households in Barunga are inhabited by four or less people, 15% have five people and 32% have six or more people.²

For the population of people no longer of attending school, 9% completed year 12, 36% completed year 11, 21% completed year 10 and 29% completed year 9 or below. The unemployment rate is 37% and the median income for people aged 15 years or older is \$300-399 per week.²





Mechanism via which the remote laundry interacts with health outcomes

The remote laundry improves health

The following diagram provides a visualisation of the mechanisms via which the remote laundry reduces the incidence of primary and secondary illnesses.

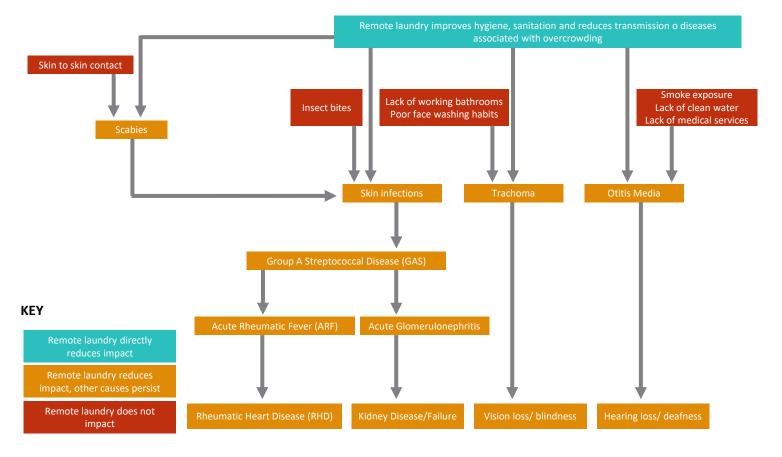
Firstly, regular washing of bedding linen and clothing reduces the opportunity for transmission of skin diseases such as scabies mites, boils and other fungal infections to other members of the household. A reduction in the prevalence of skin infections results in a reduced number of people acquiring the associated secondary illnesses such as Rheumatic Heart Disease (RHD) and Acute Glomerulonephritis or Kidney disease.

Similarly, the improved sanitation and hygiene associated with regular washing of bedding and clothes reduces the likelihood of contracting trachoma and otitis media and vision loss and hearing loss, respectively.

Whilst the remote laundry does not eliminate all risk factors for these primary and secondary illnesses, the elimination of some of the associated factors reduces the likelihood of disease.

Theoretical basis

The underlying theory of change and program logic of the remote laundry is explained in the next section. These conceptual models have been developed using relevant academic literature and help to visually demonstrate the mechanism via which the laundry interacts with health and social outcomes.



Framework & Assumptions

- Framework:
 - o Improved Health Outcomes Avoided Medical Conditions
 - o Improved Quality of Life Improved wellbeing from absence of disease
 - o Improved Social Outcomes Direct Employment of local staff
- Incidence Reduction Models assume a 75%, 50%, and 25% reduction in primary illnesses:
 - o High (75%)
 - o Medium (50%)
 - o Low (25%)
- Key Assumptions:
 - o Incidence of Infection
 - Cost of Treatment
 - o Conversion Rates of Primary to Secondary Illnesses
 - Quality of Life Assumptions: Disability Weights and Value of a Statistical Life





Theory of Change

The remote laundry leads to societal benefits

The remote laundry mechanism

The Theory of Change demonstrates visually an overview of how the remote laundry achieves its intended outcomes.

The remote laundry contributes to improved health outcomes due to reduced transmission of skin infections among users and their families.

A reduction in skin infections and a subsequent decrease in medical conditions leads to improved overall wellbeing and quality of life of individuals.

The Project also has positive social outcomes due to the direct employment of people living within the community where the laundry is located.

The Theory of Change is broken down further into a detailed program logic in the next section of the report.





Through Avoided Medical Conditions



Improved Quality of Life

Improved wellbeing from absence of disease



Improved Social Outcomes

For example, employment for individuals

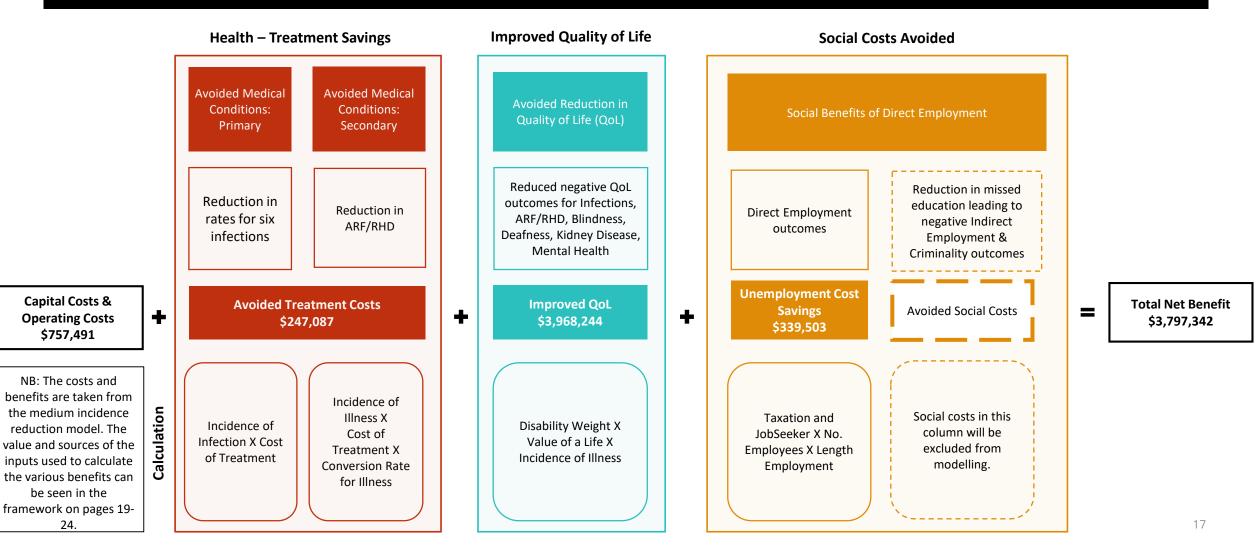


\$757,491

24.

S-CBA Assumptions: Program Logic

The Barunga remote laundry societal benefits following five years of implementation





S-CBA Assumptions: Model inputs

An overview of the key assumptions and estimates that have been built into the model. A detailed description of the evaluation framework and assumptions built into the model can be seen on pages **19-24**.

Incidence of Infection

The estimated incidence of infection for the primary illnesses have been built into the model.

These estimates have been obtained from the following sources: peer-reviewed, published academic literature, grey literature reports, specific databases (ABS, AIHW), and through consultation with experts in relevant fields.

Where possible, these incidence rates reflect the local context, for example, the incidence of disease in remote Aboriginal communities in the Northern Territory.

Cost of Treatment

The cost of medical treatment forms a key assumption of the model. These costs are used to determine the treatment savings due to a reduction in the development of primary and secondary medical conditions.

We have obtained these estimates from the peer-reviewed academic literature, as well as from the Australian Pharmaceutical Benefits Scheme (PBS) from the Department of Health.

Conversion Rates of Illness

The estimated conversion rates of illnesses were more difficult to obtain in the published literature. Therefore, we have used a combination approach to estimate these rates:

- Use of literature regarding the number of repeated exposures to a primary medical condition that is required to develop the associated secondary medical condition;
- Consultation with academics and health service provider; and
- Literature relating to the prevalence of the secondary medical conditions in the remote Indigenous community setting.

Quality of Life Assumptions and Disability Weights

To determine the Program's quality of life benefit, the following assumptions were built into the model:

- Disability weights,
- The statistical value of a life, and
- Life expectancy in remote communities.

The estimated disability weights came from the Global Burden of Disease 2004 survey.³

It should be noted that these estimates are not specific to the remote Indigenous community context within Australia and were the only estimates able to be sourced for the relevant secondary medical conditions.



General, Demographics, Primary Medical Conditions Avoided

Indicator	Measure	Source	Note			
General Assumptions – macro data requirements						
Inflation (Consumer Price Index)	Weighted median 1.3% as at June 2020	Reserve Bank of Australia	Recommend RBA rates and not NT specific rates given sources of data for treatment costs			
Discount Rate	A discount rate of 3% was applied to costs and benefits	PMC				
Demographics						
Population Profile	Age-Sex and Total of the Estimated Resident Indigenous Population (ERIP)	ABS Census 2016 Code ILOC70500301 (ILOC)	368 people – 62% adults, 38% children.			
	. , ,	· ·	*Census may underestimate resident Indigenous population. Next Census release Sept. 2021			
Medical Conditions Avoided - Incidence rate primary illu	nesses					
Scabies	Adult – 50%; Children 25%	NT Gov. https://nt.gov.au/wellbeing/health-conditions-treatments/parasites/scabies				
Boils	Adult – 10%; Children 50%		Estimate based on consult with CDC Public Health Unit			
Throat Infections (Tonsillitis)	Adult – 8%; Children 8%	McDonald et al., (2006) doi:10.1016/j.hlc.2007.02.87				
Trachoma	Adult – 1%; Children 1%	Roadmap to Close the Gap for Vision, Vision 2020.				
Other fungal skin Infections	Adult – 10%; Children 10%		Estimate based on prevalence of all skin conditions			
Otitis Media	Adult – 5%; Children 15%	Jervis-Brady et al., (2014), doi:10.1017/S0022215113003083				
Primary Medical Conditions Avoided – Rate of reduction for primary illnesses						

Three models representing a low, medium and high rate of reduction will be generated where the rate of reduction for the primary illnesses will be 25%, 50%, and 75%, respectively.



Primary Medical Conditions Treatment Costs Avoided

Indicator	Measure	Source	Note
Treatment Costs Avoided – Per incident	ce per year for primary illnesses		
Scabies	Cost of a single course of first line treatment \$24.64	Pharmaceutical Benefits Scheme item 3054R	Based on the cost of a single course of first line treatment; no consideration for the cost of associated medical appointments.
Boils	Cost of a single course of first line treatment \$41.00	Pharmaceutical Benefits Scheme item 10605E-10609J- 10788T-11728G-11733M-11737R-11738T-11746F- 1525G-1526H-1527J-5090X-5091Y-5095E-5257Q-5258R- 9149M-9150N	Based on the cost of a single course of first line treatment; no consideration for the cost of associated medical appointments.
Throat Infections (Tonsillitis)	Cost of a single course of first line treatment \$41.00	Pharmaceutical Benefits Scheme item 4204G	Based on the cost of a single course of first line treatment; no consideration for the cost of associated medical appointments.
Trachoma	Cost of a single course of first line treatment \$33.00	Pharmaceutical Benefits Scheme item 8200N-8336R	Considers only the treatment of the affected individual, when recommended first-line treatment also involves the treatment of 85% of close contacts
Other fungal skin Infections	Cost of a single course of first line treatment \$30.00	Pharmaceutical Benefits Scheme item 4010C	Based on the cost of a single course of first line treatment; no consideration for the cost of associated medical appointments.
Crusted Scabies	Costs per incidence associated with diagnosis, treatment and follow-up care (\$31,209)	Centre for Health Economics Research and Evaluation, University of Technology Sydney	Estimate drawn from 2018 NT study, to which inflation must be applied (in the absence of subsequent study).
Middle Ear Infection (Otitis Media)	Cost of a single course of first line treatment \$41.00	Pharmaceutical Benefits Scheme item 2480M	



Conversion Rates

Indicator	Measure	Measure Source N					
Annual conversion rates from primary to secondary illness							
Probability of blindness as secondary condition to Trachoma	0.14%	It is not possible to source conversion rates, especially for the local context, for these diseases.	As a consequence of untreated trachoma				
Probability of acquiring ARF/ RHD as secondary condition	0.33%	Therefore, conversion rates were estimated based on a combination approach. This included	As a consequence of untreated scabies				
Probability of acquiring glomerulonephritis / kidney disease as secondary condition	0.11%	the incidence of the secondary medical condition in the local context, the number of repeated exposures to the primary medical condition	As a consequence of untreated scabies				
Probability of hearing loss as secondary condition to chronic/ recurrent otitis media	0.11%	generally required to develop the secondary medical conditions, and opinion from consultees listed in Appendix B were sought.	As a consequence of untreated otitis media				



Secondary Illnesses Treatment Costs Avoided

Indicator	Measure Source		Note			
Treatment Costs Avoided – Per person for secondary illnesses						
Acute Rheumatic Fever & Rheumatic Heart Disease	Cost per person associated with diagnosis, treatment and follow-up care (\$31,042 per incidence)	Centre of Research Excellence – TelethonKids Institute	Estimate drawn from 2018 study, to which inflation must be applied (in the absence of subsequent study).			
Vision loss and Blindness	\$30,000 per year		Estimate as discussed with external consultees (Appendix A)			
Glomerulonephritis / kidney disease	Cost per person per year associated with maintenance dialysis (\$81,009 per incidence)	Menzies School of Health Research published in BMC Nephrology (2019)	Payer perspective (DoH and Purple House). 10% of patients haemodialysis self-care, majority receive care in a staffed facility, micro-costing approach,			
Hearing loss / deafness	\$30,000 per year		Estimate as discussed with external consultees (Appendix A)			
Mental Health	\$4,000	АРН				



Quality of Life

Indicator	Measure	Source	Note		
Quality of Life Assumptions – Per incidence per year	ır				
Reduction in QoL – skin infections	Factor of reduction in QoL from acute episodes of mild infectious diseases - 0.006.	Lancet Journal, Measures of Disability Weights. Disability weights - measured on a scale of $0-1$ -	Sourced from a global study and not specific to remote Indigenous health settings.		
Reduction in QoL – mental health	Average factor of reduction in QoL across a wide range of conditions - 0.327.	 with one representing perfect health and 1 representing death, are used to calculate health losses associated with particular conditions. They 			
Reduction in QoL – ARF/RHD	Factor of reduction in QoL for cardiac conduction and cardiac dysrhythmic disorders - 0.224	are used to calculate disability-adjusted life-years, which are a measure of premature mortality and non-fatal health losses.			
Reduction in QoL – Vision loss / Blindness	Weighted -0.38 (Blindness -0.581 ; Low vision -0.170)	WHO GBD 2004, https://www.who.int/healthinfo/global_burden_ disease/GBD2004 DisabilityWeights.pdf	Sourced from a global study and not specific to remote Indigenous health settings.		
Reduction in QoL – Hearing loss / Deafness	tion in QoL – Hearing loss / Deafness Weighted – 0.17 (Mild – 0.000; Moderate, treated – 0.040; Moderate, untreated – 0.120; Severe or profound, treated – 0.120; Severe or profound, untreated – 0.333)				
Reduction in QoL – Glomerulonephritis / kidney disease	Weighted – 0.10 ((Acute glomerulonephritis – 0.091 (0.082 – 0.104); End-stage renal disease – 0.098 (0.87 – 0.107))				
Life Expectancy at Birth	Male - 66.6 Years Female – 69.9 Years	ABS Life Tables for Aboriginal and Torres Strait Islander Australians	Released 2018 for 2015-17 reference period		
Value of a Single Life	Statistical value of a life \$4.9 million. Value of statistical life year is \$213,000 in 2019 dollars	Office of Best Practice Regulation -Guidance Note: Value of statistical life	Estimate drawn from 2018 study, to which inflation must be applied (in the absence of subsequent study)		



Employment Benefits and Laundry Cost inputs

Indicator	Measure	Source	Note
Employment - Per number of persons employed			
Taxation Paid	Quantum of taxation paid per employee for a given period and gross income	ATO estimate	Assumes income from laundry employment is main source of income
Welfare Payments Avoided	JobSeeker allowance payments per fortnight (\$565.70 to \$612)	Australian Government, Services Australia	Excludes COVID-19 Supplement
Age and family status of Employee	<22 years	AIG Project Officer	Necessary to understand eligibility requirements for JobSeeker payment
Laundry Cost Inputs – Capital and Operational			
Capital Costs	\$224,660 per laundry	Katherine Laundry and Speed Clean STENXA, Aboriginal Investment Group.	
Operating Costs – excluding direct employment	\$48,727 per laundry per annum	Detergent, power and water, cleaning materials, maintenance.	
Direct Employment	Five new positions, 38 hours/week. (\$55,104 worth of wages per laundry unit per annum)	Dry Cleaning and Laundry Industry Award 2010	

Social Cost-Benefit Analysis Findings

• The analysis predicted that over the five year period, assuming the medium incidence reduction model:

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- o The Barunga remote laundry deliver \$4,554,833 worth of benefits for costs of \$757,491, with a net benefit of \$3,797,342; and
- o All seven communities will deliver \$77,953,191 worth of benefits for costs of \$5,302,438, with a net benefit of \$72,650,753.





Quantitative S-CBA Findings

S-CBA Results

Overview

This section shows the results of the S-CBA. It identifies each element of 'cost' and 'benefit' derived from the Remote Laundry Project according to the analytical framework described in the previous section, noting that the focus of the analysis here is on the measurement of the Program's costs and benefit to society in terms of the:

- **Treatment savings** or avoided treatment costs due to reduced primary and secondary medical conditions;
- Improved quality of life (QoL) due to reduced incidence of secondary medical conditions within Barunga;
- Social costs avoided and defined as the unemployment cost savings due to the direct employment of people at the remote laundry; and
- The capital costs of constructing the remote laundry as well as the ongoing annual operational costs of the remote laundry.

Whilst other social benefits are likely to result from the Barunga remote laundry, including reduction in missed education, negative indirect employment and criminality outcomes, quantifying these benefits is beyond the scope of this S-CBA. Therefore the approach was conservative to the extent that not all anticipated benefits are being quantified.

Modelling - Barunga

To account for the uncertainty regarding the exact impact of the remote laundry on the reduction of the incidence of the primary illnesses in the Barunga community, three scenario models were generated and can be seen below:

- **Low** incidence reduction model, where the annual reduction in primary medical conditions due to the remote laundry was assumed to be 25%;
- **Medium** incidence reduction model, where the annual reduction in primary medical conditions due to the remote laundry was assumed to be 50%; and
- **High** incidence reduction model, where the annual reduction in primary medical conditions due to the remote laundry was assumed to be 75%.

Given the strength of the associations between regular washing of bedding and clothing, the transmission of scabies and developing skin infections uncovered in our review of the relevant literature, we estimate that the annual incidence reduction of primary illnesses due to the remote laundry is closest to the medium incidence reduction model.

We also modelled the S-CBA break-even point, which can be defined as the point at which the Barunga remote laundry 'pays for itself' or where the annual reduction in primary illnesses is such that the cost of the Barunga remote laundry over five years is equal to the benefit of the remote laundry.



Quantitative S-CBA Findings

S-CBA Findings in Baraunga

Value gain from the Remote Laundries Project - Barunga

The total value gain of the Barunga remote laundry over five years was deduced from the combined capital and operational costs with the benefit from the total treatment savings, unemployment savings, and improved quality of life.

The total benefit for each year individually and five-years following program implementation for the low, medium and high incidence reduction models can be seen in table 2 below. These figures demonstrate that the total benefit of the remote laundry at five years exceeds the capital and operational costs by \$1.96 million, \$3.8 million, and \$5.2 million for the low, medium and high incidence reduction models, respectively. It demonstrates the benefits accruing from the

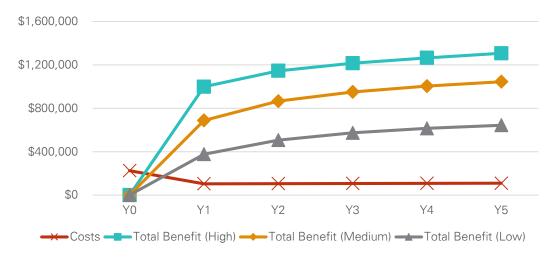
Table 2. Annual and total cost and benefit and for the Barunga laundry over five years

Year	Total Cost	Total Benefit (High)	Total Benefit (Medium)	Total Benefit (Low)
Y0	\$224,660	\$0	\$0	\$0
Y1	\$103,831	\$998,722	\$687,868	\$377,013
Y2	\$105,181	\$1,145,733	\$866,066	\$506,495
Y3	\$106,548	\$1,215,530	\$951,085	\$573,673
Y4	\$107,934	\$1,264,857	\$1,004,588	\$614,802
Y5	\$109,337	\$1,306,970	\$1,045,226	\$644,033
Total	\$757,491	\$5,931,813	\$4,554,833	\$2,716,015
Benefit : C	Cost	7.83	6.01	3.59

Remote Laundry Project significantly outweigh the costs, with 7.83, 6.01, and 3.59 dollars of accrued benefit for every 1 dollar invested in the remote laundry, for the high medium and low incidence reduction models, respectively. These benefits will be broken down by each element across the following slides.

Figure 2 below illustrates graphically the information in table 2. The operational costs increase only fractionally across Y1 to Y5 because the only driver in increasing costs between years is inflation. However, the benefits accruing across Y1 to Y5 increase at a higher rate due to the cumulative impact of the: medical conditions avoided, treatment savings, and quality of life improvements.

Figure 2. Annual Costs and benefits from the Barunga Laundry





Quantitative Cost Analysis Findings

Capital and Operational Costs of the Barunga Laundry

Total Cost analysis

The total cost of the remote laundry over the period is calculated by adding the Total Capital (\$224,660) and the Total Operational Costs (\$532,831) over the five year period. When this is calculated, the total cost for the remote laundry is \$757,491.

Table 3. Total cost analysis of the Barunga remote laundry

		2019	2020	2021	2022	2023	2024	Total
Capital Costs	Project Management	14,000						14,000
	Construction	159,000						159,000
	Delivery to Community	10,000						10,000
	Installation on site	23,000						23,000
	Travel	16,020						16,020
	Signage	2,640						2,640
	Total Capital	224,660						224,660
Operational Costs	Insurance - Business Pack		2,838	2,838	2,838	2,838	2,838	14,188
	Bank fees & charges		120	120	120	120	120	600
	CM2W + Merchant Fees		2,114	2,114	2,114	2,114	2,114	10,570
	Cleaning		5,000	5,000	5,000	5,000	5,000	25,000
	Detergent		1,921	1,921	1,921	1,921	1,921	9,604
	Uniforms		280	280	280	280	280	1,400
	Internet		420	420	420	420	420	2,100
	Electricity		1,000	1,000	1,000	1,000	1,000	5,000
	Repairs & Maintenance		2,450	2,450	2,450	2,450	2,450	12,250
	Water & Sewerage		650	650	650	650	650	3,250
	Staff amenities		300	300	300	300	300	1,500
	Project Management Fees		26,400	26,400	26,400	26,400	26,400	132,000
	Wages		55,104	55,104	55,104	55,104	55,104	275,520
	Superannuation		5,235	5,235	5,235	5,235	5,235	26,174
	Total operational per annum		103,831	103,831	103,831	103,831	103,831	519,156
	Total operational (inflation)		103,831	105,181	106,548	107,934	109,337	532,831
	Total Operational and Capital Costs	\$224,660	\$103,831	\$105,181	\$106,548	\$107,934	\$109,337	\$757,491



Primary Medical Conditions Avoided

Key findings

The primary medical conditions avoided are directly determined by the value of the annual reduction in primary medical condition incidence rate input into the model (i.e. the low, medium or high incidence reduction model). As previously discussed, this is the most sensitive element of the model because it: 1) interacts with all other inputs of the model, and 2) has the most uncertainty due to the absence of primary data.

Table 4 and Figure 3 help to both demonstrate the basis for the low, medium and high incidence reduction models and quantify the primary medical conditions avoided within each model.

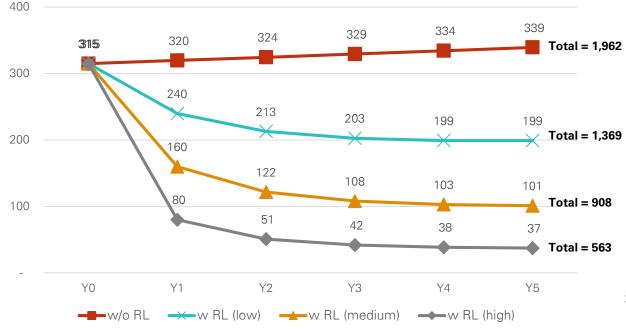
Table 4 indicates the total number of individual primary medical conditions, as well as the combined total, following five years of implementation of the Barunga laundry. After five years, the cumulative total number of primary medical conditions would reduce from 1,962 to 1,369, 908, and 563 assuming the low, medium and high incidence reduction models, respectively. Due to the cumulative impact of rounding the number of primary conditions from year to year to the nearest whole value, the true incidence reduction at the end of the five year period for the same models is 30%, 54% and 71%, respectively.

Figure 3 visually depicts the annual difference in primary medical conditions for each of the three models.

Table 4. Predicted total cumulative incidence of primary medical conditions in Barunga across five years

	Scabies	Boils	Tonsillit is	Trachom a	Other skin	Otitis Media	Total	% reductio n
Without the remote laundry	822	512	162	20	203	242	1,962	
With the remote laundry (low)	574	357	113	14	142	169	1,369	30%
With the remote laundry (medium)	381	237	75	9	94	112	908	54%
With the remote laundry (high)	236	147	47	6	58	69	563	71%

Figure 3. Annual cases of primary medical conditions in Barunga over five years





Secondary Medical Conditions Avoided

Key findings

To quantify this benefit, the disease incidence rates for the secondary medical conditions – acute rheumatic fever (ARF), rheumatic heart disease (RHD), vision loss (blindness), hearing loss (deafness), and glomerulonephritis (kidney disease) – were calculated using the incidence rates of the associated primary medical condition and estimated conversion rates from primary to secondary medical condition. The incidence rates were calculated using four models – the first without the remote laundry, and the remainder with the low, medium and high incidence reduction assumptions. These findings are presented in figure 4.

Figure 4 illustrates that the annual incidence of secondary medical conditions in Barunga at five years following implementation of the remote laundry, decreases from 0.006% without the remote laundry to 0.004%, 0.002% and 0.001% when the low, medium and high incidence reduction assumptions are applied, respectively.

Table 5 indicates the annual incidence of secondary medical conditions. At five years following Project implementation the estimated number of secondary medical conditions without the remote laundry is 9.0, and with the presence of the remote laundry the number is predicted to decrease to 6.5, 4.6 and 3.2 assuming the low, medium and high incidence reduction models.

It is important to note that the onset of the secondary medical conditions require repeated exposure to the associated primary medical condition over a duration that may exceed the five year timeframe. Therefore, the tangible benefits of the remote laundry in relation to reductions in secondary medical conditions will become increasingly evident over a longer duration of time.

Figure 4. Annual incidence (%) of secondary medical conditions in Barunga over five years

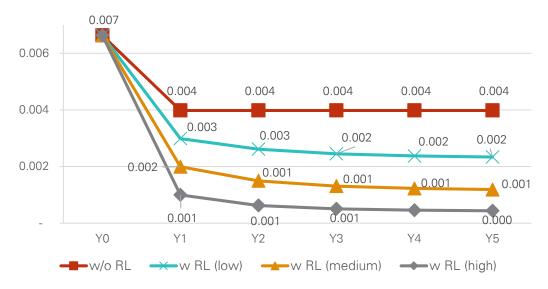


Table 5. Annual incidence of secondary medical conditions in Barunga over five years

	Y0 (n = 328)	Y1 (n = 333)	Y2 (n = 338)	Y3 (n = 343)	Y4 (n = 348)	Y5 (n = 348)	Total
Without the remote laundry	2.2	1.3	1.3	1.4	1.4	1.4	9.0
With the remote laundry (low)	2.2	1.0	0.9	0.8	0.8	0.8	6.5
with the remote laundry (medium)	2.2	0.7	0.5	0.4	0.4	0.4	4.6
With the remote laundry (high)	2.2	0.3	0.2	0.2	0.2	0.2	3.2



Avoided Treatment Costs for Primary and Secondary Medical Conditions

Key findings

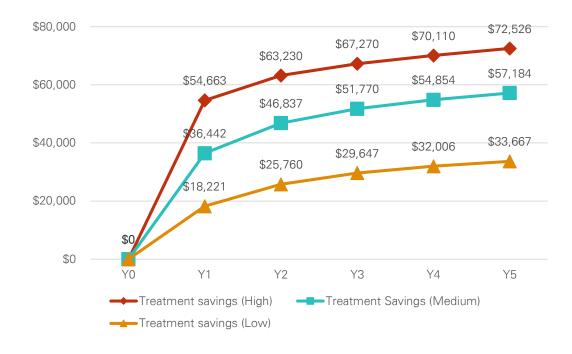
To quantify this benefit, the difference between the treatment cost of primary and secondary medical conditions without the remote laundry and with the remote laundry assuming the low, medium and high incidence reduction models were calculated. Treatment costs are generated using a combination of the incidence of the primary and secondary medical condition, percentage of the population seeking treatment for that condition and the cost of the treatment.

Combined treatment savings for the avoided treatment costs for primary and secondary medical conditions annually and in total across the five years following implementation of the Remote Laundry Project can be seen in table 6 below for each model. Figure 5 presents graphically the information in table 6.

Table 6. Treatment savings from avoided medical conditions

Year	Treatment savings (High)	Treatment Savings (Medium)	Treatment savings (Low)
Y0	\$0	\$0	\$0
Y1	\$54,663	\$36,442	\$18,221
Y2	\$63,230	\$46,837	\$25,760
Y3	\$67,270	\$51,770	\$29,647
Y4	\$70,110	\$54,854	\$32,006
Y5	\$72,526	\$57,184	\$33,667
Total	\$327,800	\$247,087	\$139,302

Figure 5. Avoided treatment costs for medical conditions over five years





Health and Quality of life

Key findings

To quantify this benefit, quality of life assumptions which included, the value of a statistical life, life expectancy in remote communities, and disability weights denoting the reduction in quality of life with: skin infections; mental health reductions; ARF/RHD; vision loss/ blindness; glomerulonephritis/ kidney disease, and hearing loss/ deafness were combined to determine the monetary value of improved quality of life. A table outlining these assumptions can be seen below. Three models reflecting the low, medium and high incidence reduction in primary health conditions were generated.

At five years after the implementation of the Remote Laundry Project in Barunga, the combined improved quality of life benefit is predicted to be \$5.26 million, \$3.97 million, and \$2.24 million for the high, medium, and low incidence reduction models, respectively (see figure 6 and table 8).

Table 7. Quality of life assumptions in Barunga

Metric	Value	Source
Value of Single Life	\$ 5,000,000	Office of Prime Minister and Cabinet
Life Expectancy in remote communities (ABS)	65.9	ABS
Reduction in QoL with skin infection	1%	Lancet journal
Mental health reduction in QoL	33%	Lancet journal
Rheumatic Fever/RHD Reduction in QoL	22%	Lancet journal
Vision loss / blindness reduction in QoL	38%	WHO GBD, 2004
Glomerulonephritis/ kidney disease reduction in QoL	10%	WHO GBD, 2004
Hearing loss/deafness reduction in QoL	17%	WHO GBD, 2004

Figure 6. Improved quality of life with the Barunga remote laundry



Table 8. Improved quality of life with the Barunga remote laundry

Year	Improved QoL (Low)	Improved QoL (Medium)	Improved QoL (High)
Y0	\$0	\$0	\$0
Y1	\$292,634	\$585,267	\$877,901
Y2	\$413,716	\$752,211	\$1,015,485
Y3	\$476,137	\$831,426	\$1,080,371
Y4	\$514,024	\$880,962	\$1,125,975
Y5	\$540,700	\$918,377	\$1,164,778
Total	\$2,237,210	\$3,968,244	\$5,264,510



Social Costs Avoided

Key findings

Social costs avoided refers to the avoided costs to the government due to the direct employment of five staff through the Remote Laundry Project in Barunga annually which reduces the unemployment benefits paid by the Government to Barunga.

To quantify this benefit, the number of employees employed by the remote laundry, the unemployed population of Barunga, and unemployment benefit amount are combined. The results of this can be seen in table 9. Across the first five years of implementation of the remote laundry in Barunga, the unemployment costs saving is \$339,503.

It is important to note that the social costs avoided due to the direct employment of staff at the community also does not consider other social benefits that are more difficult to quantify and beyond the scope of this S-CBA. They also do not include the reduction in any administrative costs experienced by government to facilitate unemployment payments.

Table 9. Unemployment cost to government with and without the remote laundry (5 employees at 0.2 FTE)

	Y0	Y1	Y2	Y3	Y4	Y5	Total
Without the remote laundry	\$1,051,565	\$1,081,21 4	\$1,111,69 9	\$1,143,04 3	\$1,175,27 1	\$1,208,40 8	\$6,771,20 1
With the remote laundry	\$1,051,565	\$1,015,05 6	\$1,044,68 1	\$1,075,15 4	\$1,106,50 0	\$1,138,74 2	\$6,431,69 8
Savings with the remote laundry	\$0	\$66,158	\$67,018	\$67,889	\$68,772	\$69,666	\$339,503

These may include improved mental health, quality of life, and self-pride. Some of these benefits of the Barunga remote laundry have been qualitatively captured in a previous AIG project. An example of which is included below:

"I want to do this apprenticeship to prove I am the right person to do the job. I can do training for a year and get that certificate to prove that I can do this in the future...I've waited 40 years to get a job"

Freddie, employee at Barunga remote laundry





Extrapolation to seven communities

Value gain from seven remote laundry communities – key findings

The S-CBA analysis included an extrapolation to six additional communities which in addition to Barunga include: Borroloola, Yarralin, Wadeye, Gunbalanya, Ngukurr and Ramingining. To quantify the costs and benefits we used community specific population, age distributions, and employment statistics from as per the 2016 Census specific to each community's Indigenous Location (ILOC) code.

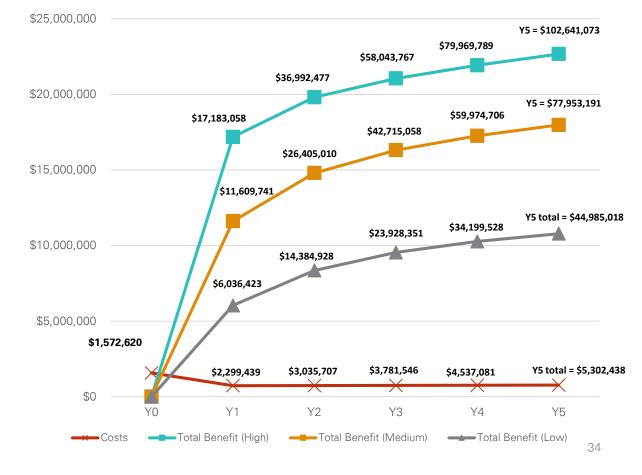
When the S-CBA analysis is extrapolated to include all seven communities, at the end of the fifth year following implementation of the laundries, the benefit outweighs the cost by a factor of 19.4, 14.7 and 8.5 for the high, medium and low incidence reduction models, respectively (see table 10). The annual cost and benefit across five years for the seven communities can be seen if figure 7 with the data labels indicating the cumulative cost and benefit.

Table 10. Annual and total cost and benefit for seven communities over five years

Year	Total Cost	Total Benefit (High)	Total Benefit (Medium)	Total Benefit (Low)
Y0	\$1,572,620	\$0.00	\$0	\$0
Y1	\$726,819	\$17,183,058	\$11,609,741	\$6,036,423
Y2	\$736,268	\$19,809,419	\$14,795,269	\$8,348,505
Y3	\$745,839	\$21,051,289	\$16,310,049	\$9,543,423
Y4	\$755,535	\$21,926,022	\$17,259,647	\$10,271,177
Y5	\$765,357	\$22,671,284	\$17,978,485	\$10,785,490
Total	\$5,302,438	\$102,641,073	\$77,953,191	\$44,985,018
Benefit : (Cost	19.4	14.7	8.5

Figure 7. Annual and cumulative cost and benefit of the Remote Laundry Project in seven communities over five years





Conclusion

• Social Cost-Benefit Analysis by design, the Remote Laundries Project produces exceptional short term social returns with:

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- 6.01 dollars of accrued benefit for every 1 dollar invested in the remote laundry over a 5-year period in the Barunga site only, comprising \$757,491 worth of costs and \$4,554,833 worth of benefits, and
- o 14.7 dollars accrued for every 1 dollar invested over a 5-year period across seven communities, comprising be \$5,302,438 worth of costs and \$77,953,191 worth of benefits.
- The break-even point, or the point at which the remote laundry 'pays for itself', occurs at very low rates of annual incidence reduction in primary illnesses:
 - o 4% in Barunga, and
 - o 1.5% across all seven communities.





Conclusion

Summary of results

Key findings

Table 10 below summarises the overall outcomes of the cost benefit analysis, showing that \$757,491 worth of costs, \$4,554,833 worth of benefits and social returns have been produced in Barunga over the five-year period following implementation of the Remote Laundry Project when medium incidence reduction model is assumed. It demonstrates that the benefits accruing from the Remote Laundry Project significantly outweigh the costs, with 6.01 dollars of accrued benefit for every 1 dollar invested in the remote laundry.

Table 11 summarises the overall outcome of the cost- benefit analysis when extrapolated to include all seven proposed communities, showing that

Table 10. Quantitative CBRSA outputs in Barunga – aggregate impacts

	Item	Value
	Approximate value of costs	\$757,491
	Approximate value of benefits derived	\$5,931,813
High Incidence Reduction	Net quantitative benefit	\$5,174,322
	Benefit cost ratio	7.83
	Approximate value of benefits derived	\$4,554,833
Medium Incidence Reduction	Net quantitative benefit	\$3,039,843
	Benefit cost ratio	6.01
	Approximate value of benefits derived	\$2,716,015
Low Incidence Reduction	Net quantitative benefit	\$1,958,524
	Benefit cost ratio	3.56

\$5,302,438 worth of costs, \$77,953,191 worth of benefits will be produced over the five year period following implementation of the remote laundry when the medium incidence reduction is assumed. It demonstrates that the benefits accruing from the Remote Laundry Project significantly outweigh the costs with 14.7 dollars accrued for ever 1 dollar invested.

As noted in the previous section of this report, this quantitative analysis does not take into account the full range of quantitative and qualitative benefits the remote laundry brings to communities and society, in terms of improved education due to increased attendance and the subsequent positive impact this has on indirect employment and criminality outcomes for individuals. Additionally, the analysis does not consider the economic costs due to lost productivity for those experiencing medical conditions.

Table 11. Quantitative CBRSA outputs seven communities – aggregate impacts

	Item	Value
	Approximate value of costs	\$5,302,438
	Approximate value of benefits derived	\$102,641,073
High Incidence Reduction	Net quantitative benefit	\$97,338,635
	Benefit cost ratio	19.4
	Approximate value of benefits derived	\$77,953,191
Medium Incidence Reduction	Net quantitative benefit	\$72,650,753
	Benefit cost ratio	14.7
	Approximate value of benefits derived	\$44,985,018
Low Incidence Reduction	Net quantitative benefit	\$39,682,580
	Benefit cost ratio	8.5

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Conclusion

Estimated break-even point

Key findings

In order to determine the point at which the remote laundry would 'pay for itself', we have modelled the break-even point by adjusting the most sensitive element of the model – the incidence reduction in primary illness due to the remote laundry. The break even point is the point at which the benefit and social returns to society gained from the remote laundry is equivalent to the cost of the laundry. In Barunga, the break-even point occurs with an approximate annual reduction of 4% in primary medical conditions (see table 12). When we extrapolate to all seven communities, the break even point occurs at an annual incidence reduction of 1.5% in primary medical conditions (see table 13).

Figure 8 demonstrates the break down of the value gain at the break-even point for Barunga. At this point, the predominant benefit comes from the associated improvements in quality of life as well as the unemployment cost savings due to direct employment at the remote laundry. At the break-even point, the avoided treatment costs make up the smallest proportion of this benefit.

Table 12. The Barunga remote laundry break-even point

Year	Total Benefit	Total Capital & Operational Costs	Net benefit
0	\$0	-\$224,660	-\$224,660
1	\$115,694	-\$103,831	\$11,863
2	\$142,403	-\$105,181	\$37,222
3	\$157,720	-\$106,548	\$51,172
4	\$167,406	-\$107,934	\$59,473
5	\$174,289	-\$109,337	\$64,952
Total	\$757,513	-\$757,491	\$22

Table 13. Break-even point of the remote laundries at extrapolation to seven communities

Year	Total Benefit	Total Capital & Operational Costs	Net benefit
0	\$0	-\$1,572,620	-\$1,572,620
1	\$805,976	-\$726,819	\$79,152
2	\$995,222	-\$736,268	\$258,949
3	\$1,104,693	-\$745,839	\$358,849
4	\$1,173,962	-\$755,535	\$418,421
5	\$1,223,012	-\$765,357	\$457,650
Total	\$5,302,865	-\$5,302,438	\$427

Figure 8. Remote Laundry benefits at break-even point - Barunga



Appendices





Appendix A: List of External Consultees

List of External Consultees

Contact	Organisation
Professor Hugh Taylor	Indigenous Eye Health Unit, Melbourne School of Population and Global Health
Public Health Officer	Sunrise Health Service, Katherine
TelethonKids Institute	Centre of Research Excellence – TelethonKids Institute
Public Health Unit	Centre for Disease Control