

TANGENTYERE COUNCIL SUBMISSION

Northern Territory Infrastructure Framework

Review



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Introduction

Tangentyere Council Aboriginal Corporation (TCAC) welcomes the opportunity to make a submission in response to the Northern Territory Infrastructure Framework Review.

Our response is primarily directed toward a consideration of 'Enabling Infrastructure Eco-Systems' with an emphasis on: Transport and Logistics (particularly roads); Utilities (Power/Energy, Water, Digital and Telecommunications, and Waste Management); and Social Infrastructure (particularly Housing and Sporting/Recreational/Lifestyle). The response will also consider 'Cross Cutting Objectives' with respect to the goal of 'Improved Liveability' as it relates to 'integrated place-based planning with local decision making and regional development strategies' and 'investment in green and blue infrastructure'.

In making this submission, the authors need to acknowledge that the focus of the submission is the Alice Springs Town Camps. It should however be noted that the 17 Alice Springs Town Camps together with 73 Remote Communities are part of the National Partnership Agreement (NPA) for Remote NT Footprint. Many of the observations made with respect to the Town Camps could similarly be applied to the other locations included in the NPA Footprint.

This submission has been adapted from 'Klerck, M. & Tucker, C. (2021). Tangentyere Council, Submission to the House of Representatives Select Committee Inquiry into Regional Australia. Canberra, ACT: Parliament of Australia.

Background

1. Tangentyere Council Aboriginal Corporation

TCAC is an Aboriginal Community Controlled Organisation (ACCO) delivering human services for the benefit of Aboriginal people from Alice Springs, its Town Camps and Central Australia.

TCAC has 16 Town Camp Corporate Members, over 600 Individual Members and provides services to more than 10,000 people from a region that covers approximately 873,894 km². The TCAC Board is composed of the elected Presidents of the 11 Town Camp Associations and 5 Aboriginal Corporations.

TCAC was formed to assist residents to gain tenure and access to water, electricity, and housing. From 1979 until December 2009 TCAC operated as an Aboriginal Community Controlled Housing Organisation (ACCHO) and service provider.

In 2009, 11 Housing Associations and 3 Aboriginal Corporations executed Tripartite Alice Springs Living Area Subleases with the Executive Director of Township Leasing (EDTL) on behalf of the Commonwealth and the CEO of Housing on behalf of the Territory. The EDTL then entered Housing Management Agreements (Subleases) with the CEO of Housing (NT) making the Department of Territory Families, Housing and Communities (DTFHC) the Housing Authority for the Town Camps.

The work undertaken by TCAC is aligned with action on the social, environmental, and behavioural determinants of health and wellbeing. Programs delivered throughout Central Australia include: (1) Child Protection and Wellbeing; (2) Children and Schooling; (3) Community Safety; (4) Alcohol and Other Drugs; (5) Tenancy Support; (6) Employment; (7) Aged and Disabled; (8) Chronic Disease Care Coordination; (9) Family Violence Prevention; (10) Housing Maintenance; (11) Municipal and Essential Services; (12) Construction and (15) Art and Culture.

TCAC is committed to the employment and capacity development of Aboriginal people. 55% of the TCAC workforce of 273 people is Aboriginal.

2. Local Decision-Making

TCAC and the Territory executed a Local Decision-Making (LDM) Agreement in July 2020.

LDM is underpinned by the principles of self-determination and the empowerment of Aboriginal people to determine service delivery models that work best for their community. The vision agreed to by TCAC and the Territory is that the LDM Agreement is a platform to support the transition to community control of services aligned with the Town Camp Wellness Framework.

3. Town Camp Wellness Framework

The Wellness Framework reflects the balance between elements identified by Town Campers.

The balance between elements including identity, country, shelter, knowledge, community, healing, and leadership contributes to outcomes of health and wellness.

This Framework has been developed by Town Campers and is underpinned by the premise that strong wellness of a Town Camp will improve the wellbeing of individuals living there. Physical, social, emotional, cultural values along with work, learning, safety, environment, and access to material basics all impact upon the overall wellness of each Town Camp.

The Wellness Framework provides an opportunity for community stakeholders to participate in the development of intersectoral responses to improve the expression of the social, cultural, and environmental determinants of health and wellness.

3.1 Figure 1:	Town Camp Wellness Framework Domains
Shelter	Access to basic elements needed to live a 'normal' life, including financial and
	occupational wellness, stable and healthy housing, clean water, clothing, healthy
	food, etc.
Keeping Country	Encompasses the interactions between individuals and their 'habitats' at a local,
	community and global level, and includes safety in nature, home, work and the
	community.
Community	Embraces positive relationships and connections with families and others and
	includes love.
Healing	Having one's physical, developmental, psychosocial, and mental health needs met
	to achieve optimal developmental trajectories and opportunities. Includes access
	to preventative measures and health education as well as access to services to
	redress emerging health issues.
Knowledge	Formal and informal experiences in the classroom, at home and in community,
	throughout the course of one's life, to maximise life opportunities. Includes
	cognitive and creative pursuits to also enrich one's capacity to make decisions,
	problem solve and maintain mental agility.
Leadership	Engagement with peers and community, including governance and decision-
	making, determining systems, and having a voice and say on matters. Includes
	access to digital systems and technology for social connections
Identity	A positive sense of self and culture underpins all the other dimensions and is
	fundamental to overall Town Camp wellbeing. Cultural wellness refers to an ability
	to both enact one's own cultural values as well as interact effectively with people
	from different cultures and work towards eliminating racism and systematic
	discrimination, whilst spiritual wellness is seeking meaning in existence.

Future Housing and Infrastructure Needs

4. Alice Springs Living Area Subleases

TCAC In 2009, 14 Alice Springs Town Camps executed Tripartite Alice Springs Living Area Subleases with the Executive Director of Township Leasing (EDTL) on behalf of the Commonwealth and the CEO of Housing on behalf of the Territory.

The Tripartite Alice Springs Living Area Subleases provided the following background:

- b) the residents of the Alice Springs Living Areas are living in very poor conditions, and it is very important to improve the health and standard of living of those residents. The Australian Government and the Northern Territory Government have stated their intention to undertake a capital works program to assist in improving the standard of living of those residents.
- e) the Australian Government wishes to substantially improve the quality and availability of infrastructure and housing on the Alice Springs Town Camps.
- f) to help achieve these aims the Australian Government has requested the grant of a sublease to the EDTL and has offered to make up to \$100 million funding available via the Strategic Indigenous Housing and Infrastructure Program to upgrade and increase housing and infrastructure located on the Alice Springs Living Areas during the 5 years from the commencement of the Subleases.
- i) the sublease is intended to support development and investment in the Alice Springs Living Areas and to improve the housing and infrastructure in the Alice Springs Living Areas including by the expenditure of \$100 million in accordance with Strategic Indigenous Housing and Infrastructure Program, and the development and implementation of policy which has regard to the ongoing infrastructure and housing needs on the Alice Springs Living Areas.
- j) The Parties acknowledge that decisions in relation to the housing, Infrastructure and tenancy management on the Alice Springs Living Areas will be made in consultation with the residents and have regard to the needs and requirements of residents.

5. Strategic Indigenous Housing and Infrastructure Program Expenditure Report

Strategic Indigenous Housing and Infrastructure Expenditure on the Town Camps was primarily reported against New Builds (\$450,000/dwelling); Rebuilds (\$172,0000/dwelling) and Refurbishments (\$75,000/dwelling). The reporting also outlined that Essential Services/Infrastructure were primarily upgraded at 4 Town Camps, but this expenditure was not provided other than that it was the balance of expenditure from the \$100 million not spent on housing. (Appendix 2).

The improvement of housing is acknowledged but the lack of improvement in critical infrastructure such as Sewage; Water; Electrical; Drainage and Roads is regrettable. The lack of aspiration by the Commonwealth and Territory to work toward amenity consistent with the Alice Springs Town Council Subdivision Guidelines is suboptimal. Town Camps have limited: Crime Prevention Through Environmental Design; Environmental Health; Traffic Management; Communications; Parks and Playgrounds; and Overall Amenity as a result. Many residents and stakeholders feel that this work should have been done first before building new houses.

6. Alice Springs Living Area Housing Management Agreements

The EDTL entered a Housing Management Agreement (Sublease) with the CEO of Housing (NT) making the Territory the Housing Authority for the Town Camps.

The Housing Management Agreements themselves represent an additional layer of Sublease and cover the entire land area outlined by the Head Leases in Perpetuity, and Alice Springs Living Area Subleases.

From the perspective of TCAC and its Town Camp Corporate and Individual Members this makes the Territory responsible for the Built Environment of the Town Camps including all Common/Public Spaces. At present the Territory has identified that it is not the competent authority for gazetting speed limits on the Town Camps. At present there is no speed limit. Additionally, the management of rough campers in public spaces on Town Camps has become an issue.

7. Independent Review of Housing and Infrastructure Needs

Section 12 of the Alice Springs Living Area Subleases states that the 'Commonwealth of Australia will have regard to the continuing housing an infrastructure needs in the Alice Springs Living Areas in developing and applying new Australian Government policy in relation to Indigenous housing and infrastructure'.

The Alice Springs Living Area Subleases also state that to inform the Commonwealth of Australia's regard to the continuing housing and infrastructure needs in the Alice Springs Living Areas, the Territory will commission an independent review of housing and infrastructure needs on a 3 yearly basis. Such a review will include:

- a) details of capital works carried out during the reporting period including detail of the works undertaken and he associated expenditure; and
- b) identification of outstanding housing and associated infrastructure needs including the priority of the needs and the estimate of cost based on the market rate at the time of the review. The 3 yearly reports will be made available by the Territory to the Association on request within a reasonable time, subject to any privacy or confidentiality obligations on the Territory.

7.1. Figure 2: Independent Review of Housing and Infrastructure Needs Milestones						
Description	Milestone	Status				
Alice Springs Living Area Sublease	December 2009	Executed				
Independent Review of Housing Infrastructure Needs	December 2012	Not Completed				
Independent Review of Housing and Infrastructure Needs	December 2015	Not Completed				
Independent Review of Housing and Infrastructure Needs	December 2018	Not Completed				
Independent Review of Housing and Infrastructure Needs	December 2021	Not Completed				

TCAC has advocated for this work to be undertaken since December 2012. TCAC subsequently successfully advocated for the Northern Territory Legislative Assembly Public Accounts Committee Inquiry into Town Camp Repairs and Maintenance. During this inquiry TCAC called for the Territory to commission an independent review of housing and infrastructure needs for the Alice Springs Town Campsⁱ.

The Northern Territory subsequently called an independent review of all 43 Town Camps across the Northern Territory. The review was commissioned in April 2016, with the tender awarded to Deloitte Touche Tohmatsu (Deloitte) through an open tender process at a cost of \$2.37 million in October 2016. TCAC did not consider this review to meet the expectations outlined by the Alice Springs Living Area Subleases. This review failed to consider key criteria relevant to the consideration of Future Housing and Infrastructure Needs, e.g., climate change and extreme heat; housing health hardware; and the alignment of the built environment to the Alice Springs Town Council Subdivision Guidelines.

Discrimination and Descriptions of Urban Drift

8. Regional Development Australia Plan 2010-2012

Regional Development Australia (RDA) is a partnership between Australian, Territory, and Local Government working with local leaders, business, and community groups to support economic and workforce development, local procurement, strategic regional planning and inform government programs and infrastructure investments.

Publications by the RDA include Regional Development Plans that could contribute to the development of Regional and Remote Northern Territory. These documents also reveal information about the divide between Regional and Remote Northern Territory. In some cases, these documents contain text that is discriminatory.

The 2010-2012 Regional Development Plan provided the following analysis of Urban Drift:

'Urban drift is a generic term used to describe situations across the nation whose only similarity is the movement of people from remote to urban communities.

In the Territory the position is even more extreme than in most other jurisdictions.

We have a unique situation here where most of the movement, although some of it is camouflaged by visiting hospital or prison inmates, is primarily to gain access to grog. Even the Rascals in New Guinea who are a huge criminal element initially came out of the bush seeking work whereas few if any of the vagrants within Territory urban communities have any intention of seeking work.

The most extreme symptoms of the problems associated with this drift do of course appear in urban centres where crime and antisocial behaviour are rife. Indeed, in some centres such as Tennant and to a lesser extent Alice Springs and Katherine many see the problem as intractable.

It seems that alhtough millions (billions?) of dollars are being thrown at the problem that money and improved access to housing in urban areas will never really provide a solution and this can only be achieved if people either seek work or return to their communities. There will of course be no large scale return to communities unless alcohol becomes available and this would need to be done under very controlled circumstances.

Although the picture for the urban centres is a very grim one, the position in the home communities themselves is no rosierⁱⁱ.

This 2010-2012 Regional Development Plan was removed from the RDA website following complains by Tangentyere Council to the Racial Discrimination Commission and the Human Rights Commission.

Such perceptions could explain the significant deficits in the quality of Essential Services and Infrastructure in Remote and Very Remote Northern Territory. Such deficits also exist in pockets of Regional Centres including Alice Springs, Tennant Creek, Katherine, Palmerston, and Darwin. It would

also explain the lack of coordinated responses to mobility between Remote and Regional Northern Territory.

Deloitte: Northern Territory Town Camps Review

9. Living on the Edge Report

According to Deloitte in February 2016, a Parliamentary Inquiry into housing in Aboriginal Town Camps was established by the Northern Territory Government. The Inquiry found that the various Governments over the years had failed to provide an efficient and effective Public Housing service to Aboriginal people living in Town Camp communities. The committee noted the complexity of delivering services into these living spaces and made several recommendations. The Government, recognising the importance of resolving this complex problem, instituted a major review of all 43 Town Camp communities in the Northern Territoryⁱⁱⁱ.

The Review was tasked with examining and reporting back to Government in the following areas: (1) legislation and governance arrangements; (2) leasing and tenure arrangements; (3) housing quality, management, and ownership; (4) municipal and essential infrastructure; (5) service delivery arrangements; (6) community aspirations; and (7) potential economic development opportunities^{iv}.

The assessment of this Review by TCAC was that it provided limited value to a shared understanding of current and Future Housing and Infrastructure needs of the Alice Springs Town Camp. It was noted that instead of the review that the Alice Springs Town Camps had expected as outlined by the Alice Springs Living Area Subleases a review was undertaken across all Town Camps in the Northern Territory. This approach conflated significantly different localities together in one report.

In our view the Review was not done well and produced a document that was large, divided, frequently and demonstrably inaccurate (in parts), incomplete (in other parts) and unusable because of its lack of meaningful structure.

The assessment of houses was very narrow and did not consider some critical issues of function (for example passive and mechanical heating and cooling). The engineering reports provided useful information about a narrow range of infrastructure in the built environment of the Town Camps including Sewage; Water; Roads; Drainage; and Electrical Supply. The housing figure of ~\$23 million estimated by the report was for estimated cost of deferred housing maintenance. The combined infrastructure figure of >\$33 million was for the estimated cost of infrastructure upgrades required to meet current design standards (Appendix 3). It needs to be considered that the assessed items were narrow and did not reflect the Alice Springs Town Council Guidelines, meaning that the real cost of upgrades would be far higher if parity with urban Alice Springs was the goal of upgrades. This is a verry narrow consideration of built environment.

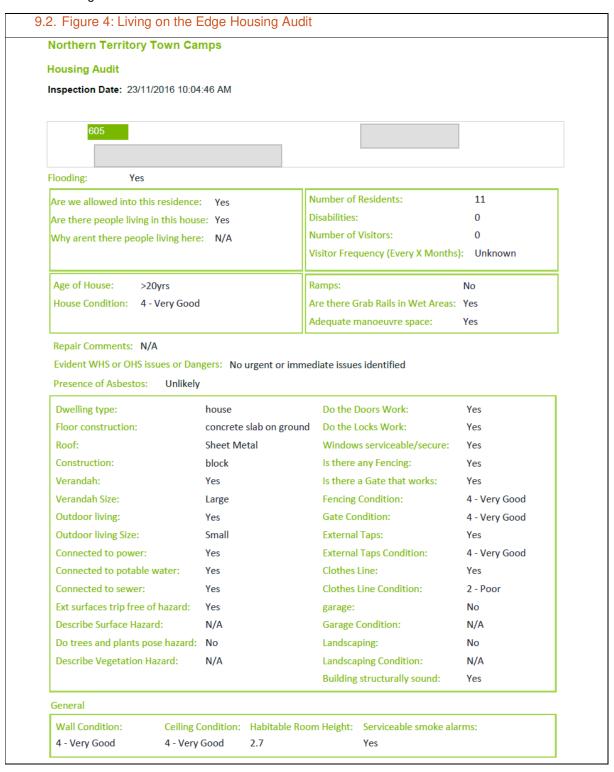
Since the Review was undertaken there has been no land servicing money for the Town Camps. None of the >\$33 million in required works has been funded or delivered.

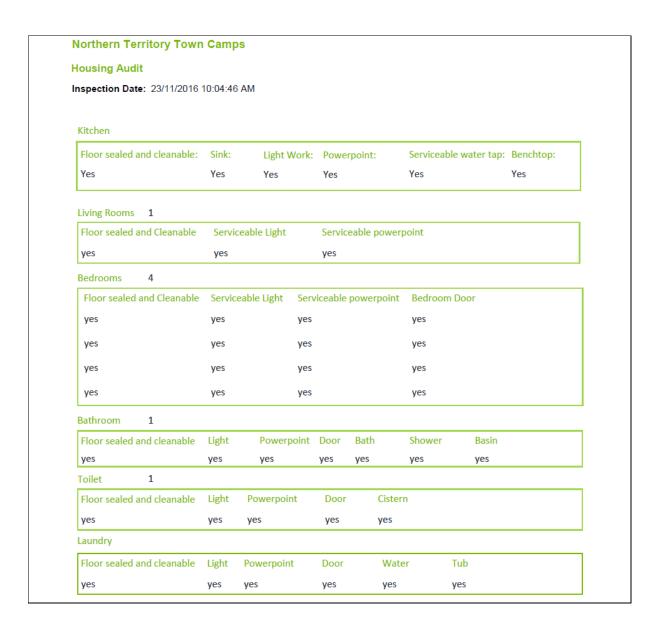
The Review should have considered the required investment to address the needs of the Alice Springs Town Camps with direct reference to: (1) the National Indigenous Housing Guide; (2) the National Construction Code; (3) the National Construction Code (Energy Efficiency Provisions); (4) Australian Standard for Adaptable Housing; (5) the Livable Housing Guide; and (6) the Alice Springs Town Council Subdivision Guidelines.

The structure of the Review and its length and size make it unusable. The following table highlights this issue:

Section	Figure 3: Living on the Edge Report Structure	Pages	KB
1.	Town Camps report A Section 1-10	89	3598
2.	Town Camps report B Section Summary by regions	83	1863
3.	Town Camps report C Section Town camps Part A	158	429
4.	Town Camps report D Section Town camps Part B	229	501
5.	Town Camps report E Section Town camps Part C	135	240
6.	Town Camps report F Section Town camps Part D	143	296
7.	Town Camps report G Section Town camps Part E	149	258
8.	Town Camps report H Appendix A Leasing Part 1	1638	5119
9.	Town Camps report H Appendix A Leasing Part 2	1976	4610
10.	Town Camps report I Appendix B Infrastructure Part A Part 1	348	1761
11.	Town Camps report I Appendix B Infrastructure Part A Part 2	348	1829
12.	Town Camps report I Appendix B Infrastructure Part A Part 3	348	1517
13.	Town Camps report I Appendix B Infrastructure Part A Part 4	348	1995
14.	Town Camps report I Appendix B Infrastructure Part A Part 5	352	1699
15.	Town Camps report J Appendix B Infrastructure Part B Part 1	389	5114
16.	Town Camps report J Appendix B Infrastructure Part B Part 2	418	5115
17.	Town Camps report J Appendix B Infrastructure Part B Part 3	390	5111
18.	Town Camps report J Appendix B Infrastructure Part B Part 4	465	5111
19.	Town Camps report J Appendix B Infrastructure Part B Part 5	119	2138
20.	Town Camps report K Appendix B Infrastructure Part C Part 1	453	5110
21.	Town Camps report K Appendix B Infrastructure Part C Part 2	510	5118
22.	Town Camps report K Appendix B Infrastructure Part C Part 3	472	5032
23.	Town Camps report K Appendix B Infrastructure Part C Part 4	11	635
24.	Town Camps report L Appendix B Infrastructure Part D Part 1	414	5116
25.	Town Camps report L Appendix B Infrastructure Part D Part 2	426	5111
26.	Town Camps report L Appendix B Infrastructure Part D Part 3	463	5066
27.	Town Camps report L Appendix B Infrastructure Part D Part 4	236	3755
28.	Town Camps report M Appendix B Infrastructure Part E Part 1	403	4872
29.	Town Camps report M Appendix B Infrastructure Part E Part 2	228	4937
30.	Town Camps report M Appendix B Infrastructure Part E Part 3	317	4922
31.	Town Camps report M Appendix B Infrastructure Part E Part 4	218	4471
32.	Town Camps report N Appendix C Housing	3689	4474
Total		15965	102020

The assessment of housing was limited to the following 2 paged survey tool. This assessment does not reflect the type of assessment that would be undertaken to consider assets against the National Construction Code or the National Indigenous Housing Guide. Notably the presence/absence and function of critical infrastructure such as insulation is not considered. This assessment does not consider Future Housing and Infrastructure Needs.





It is hoped that in future such assessments and reviews are undertaken and reported in a manner that delivers outcomes for all stakeholders. Current and Future Housing and Infrastructure Needs for Regional Australia are critical.

It is critical for regional and remote Australia that future assessments of need in the areas of housing and infrastructure be undertaken properly.

9.3. Living on the Edge: Incentivised Migration

The Living on the Edge Northern Territory Town Camps Review presented a view on economics and migration that was strongly opposed by many Aboriginal Community Controlled Organisations.

Deloitte recommended 'that investment in additional housing should not be made in the Town Camps' (Deloitte, 2017, p. 11). Deloitte outlined the need to limit investment to regions offering a 'diversified economic platform' and 'substantial opportunity' (Deloitte, 2017, p. 12). This recommendation would exclude expenditure on the Alice Springs Town Camps as although Alice Springs was identified as having 'solid economic fundamentals' it doesn't have the potential for growth according to the reviewer (Deloitte, 2017, p. 11).

Deloitte provided economic advice to the Territory using a traffic light system, with Darwin rated green for having a 'diversified economic platform' with 'substantial opportunities' (Deloitte, 2017, p. 12). Alice Springs, Katherine and Borroloola were rated amber with 'partially diversified economic platforms' with some opportunities (Deloitte, 2017, p. 12). The remainder of the Northern Territory was rated red due to being 'constrained by limited industries (Deloitte, 2017, p. 12). Deloitte recommended limiting expenditure in housing and infrastructure to regions of 'diversified economic platform' and 'substantial opportunities' as this would allow residents to integrate with the broader economy (Deloitte, 2017, p. 12). Deloitte advised that migration should be incentivised to regions of greater economic opportunity (Deloitte, 2017, p. 12). In short, the Territory was advised to abandon areas outside of Darwin.

Living on the Edge failed to acknowledge or respect the strong connection people have to country.

Living on the Edge was published by the Northern Territory Government. Many recommendations were not accepted. There have however been very limited improvements to Essential Services and Infrastructure. None of this has occurred on the Alice Springs Town Camps.

Climate and Energy

10.Climate Change and Extreme Heat

TCAC has initiated a relationship with the CSIRO to consider how Town Camp houses are performing with respect to internal ambient temperatures with an emphasis on periods of extreme heat and cold. TCAC is motivated to understand the impact that these internal ambient temperatures are having on the health of our stakeholders. It is hoped that this feasibility study will generate knowledge that contributes directly to the amelioration and mitigation of these impacts.

The following evidence was provided by TCAC to establish the need for such a project:

The Bureau of Meteorology reports that between July 2018 and June 2019 that Alice Springs has had a total of 129 days over 35 °C and 55 days over 40 °C. This period corresponded with a high volume of feedback to TCAC, Community Housing Central Australia (CHCA) and Tangentyere Constructions that Town Camp housing has performed badly with respect to internal temperatures.

Residents reported the failure of evaporative air-conditioners. It is however likely that the basis for the poor climatic performance of Town Camp (and other remote) housing is more complex than the failure of evaporative air-conditioners. It is likely that evaporative air-conditioners have been functioning but that they are insufficient to cool houses to optimal internal temperatures with such extreme weather conditioners prevailing.

The Post Occupancy Evaluation of Alice Springs Town Camp Housing 2008-2011 undertaken by the Centre for Appropriate Technology under the direction of TCAC found that the Strategic Indigenous Housing and Infrastructure Program (SIHIP) guidelines prioritised 4 'Critical Healthy Living Practices', which are also the first 4 HLPs listed in NIHG (Centre for Appropriate Technology, 2013). This means that the remaining HLPs were not prioritised. This has an impact on the adequacy of the dwellings, one that needs to be better understood. The HLP that addresses the issue of internal ambient temperatures; and passive and mechanical heating/cooling was not a priority for SIHIP.

Further evidence for the need for the consideration of climate change and heat mitigation comes from Living on The Edge. This report did not consider climate change and heat mitigation as part of its assessment of the Future Housing and Infrastructure Needs for the Town Camps. This omission is a significant concern.

To provide some context the 2004 report, Climate Change in the Northern Territory (Hennessy, 2004) noted that Alice Springs averaged 90 days over 35 °C and 17 days over 40 °C (in 2004). This report predicted that by 2030 these figures would increase to between 96-125 days over 35 °C and to between 21-43 days over 40 °C in The figures for 2018/19 have surpassed these predictions. This has implications for housing and power usage. TCAC is motivated to investigate the interrelated issues of climate change, heat, and health impacts. It is hoped that a partnership approach will generate data and strategies for mitigation, adaption, and amelioration of heat.

CSIRO and TCAC received ethics approval and the consent of the Executive Director of Township Leasing and the CEO of Housing to install temperature data loggers in the homes of Town Campers that have provided their consent. These data loggers will allow the monitoring of internal ambient temperatures and motion over a 12-month period. This data will be linked to other data.

TCAC considers that this data will provide evidence to support the anecdotal feedback of residents that these dwellings are not appropriate for extreme heat or periods of extreme cold.

Housing and Infrastructure in Regional and Remote Australia needs to be ready for Climate Change and Extreme Heat, but it is not.

11.Energy Insecurity

Prepayment Meter (PPM) Self-Disconnections are an indicator of multidimensional disadvantage and poverty. Energy insecurity undermines outcomes aligned to housing and health. Jacana Energy provided TCAC with consolidated PPM Self-Disconnection data for Darwin, Katherine, Alice Springs, and Tennant Creek.

Self-Disconnection means and interruption to the supply of energy because the PPM system has no credit (including emergency or friendly credit) available.

Energy insecurity requires the input of key stakeholders including consumers; the Australian and NT Governments; Government Business Enterprises including Jacana Energy, PowerWater, Territory Generation and Indigenous Essential Services; Energy Regulators; and NGOs.

The data includes: (1) Number of PPMs; (2) Number of PPMs that Self-Disconnected; (3) Total Number of PPM Self-Disconnections; and (4) Duration of Self-Disconnections. The data was for the following quarterly periods: (1) Jul-Sep 2019 (Q1); (2) Oct-Dec 2019 (Q2); (3) Jan-Mar 2020 (Q3); and (4) Apr-Jun 2020 (Q4). TCAC has added a quarterly mean (Q Mean) based on the average across quarterly periods.

The data is outlined in the following figures:

11.1. Figure 5: Number of Prepayment Meters (Regional NT Centres)							
2019/2020	Q1	Q2	Q3	Q4	Q Mean		
Darwin	480	478	483	478	480		
Katherine	624	623	618	607	618		
Alice Springs	424	427	430	424	426		
Tennant Creek	552	557	550	540	550		
Total	2080	2085	2081	2049	2074		

Nb- this data provided by Jacana Energy (Jacana Energy 2021, pers. comm., 20 February). The Q Mean is the average number of PPMs across Q1, Q2, Q3 and Q4. Digital PPMs can be reconfigured from prepayment to credit causing fluctuations between periods.

11.2. Figure 6: Individual Prepaym	Figure 6: Individual Prepayment Meters Disconnecting (Regional NT Centres)					
	Individual PPMs Disconnecting %				%	
2019/2020	Q1	Q2	Q3	Q4	Q Mean	
Darwin	240	353	359	304	65%	
Katherine	393	526	513	449	76%	
Alice Springs	327	410	413	402	91%	
Tennant Creek	260	358	368	312	59%	
Total	1220	1647	1653	1467	72%	

Nb- this data provided by Jacana Energy (Jacana Energy 2021, pers. comm., 20 February). The % Q Mean is the % of PPMs that Self-Disconnected (>1 time) as an average across Q1, Q2, Q3 and Q4.

11.3. Figure 7: Total Prepayment Meters Disconnecting (Regional NT Centres)						
Figure 3: Total PPM Disconnections		Total Disconnections				
2019/2020	Q1	Q2	Q3	Q4	Q Mean	
Darwin	1247	4569	4929	3506	3563	
Katherine	1539	5431	5429	3495	3974	
Alice Springs	2635	6463	7184	6981	5816	
Tennant Creek	1641	5383	5542	3914	4120	
Total	7062	21846	23084	17896	17472	

Nb- this data provided by Jacana Energy (Jacana Energy 2021, pers. comm., 20 February). The Q Mean is the total number of Self-Disconnections as an average across Q1, Q2, Q3 and Q4. The Q Mean across all sites was 17,472 Self-Disconnections.

11.4. Figure 8: Average Duration of	Figure 8: Average Duration of Disconnection (Regional NT Centres)						
	Average Duration Disconnection Events (Minutes)						
2019/2020	Q1	Q2	Q3	Q4	Q Mean		
Darwin	319	336	362	235	313		
Katherine	396	460	385	330	393		
Alice Springs	349	433	496	331	402		
Tennant Creek	258	382	488	272	350		

Nb- this data provided by Jacana Energy (Jacana Energy 2021, pers. comm., 20 February).

On average PPMs Self-Disconnected for between 313 and 402 minutes per site across the period.

Based on the values calculated for the quarterly mean for PPMs, PPMs Self-Disconnecting, Total PPM Self-Disconnections, and the Duration of Self-Disconnections in Alice Springs- 91% of PPMs Self-Disconnected on 13.6 occasions for an average incident duration of 6 hours and 42 minutes. This can be scaled up to ~55 occasions for a combined duration of ~15 days per annum.

PPMs employ mechanisms to try to reduce the impact of Self-Disconnections. TCAC considers that these mechanisms provide mixed outcomes. Friendly Credit has received criticism from our individual

members, the Town Camp residents. It has been suggested that Friendly Credit has immediate positive impacts but that it leads to increased debt and longer Self Disconnections.

Friendly Credit means a defined period during which a PPM does not Self-Disconnect regardless of the meter balance. Emergency Credit means a defined amount that the PPM can go into debt. Emergency Credit is offered to the customer when the meter has no credit available.

Jacana Energy is not currently subject to national regulations however it has outlined that it attempts to align wherever possible. The national regulations regarding PPM systems are outlined in Part 8 of the National Energy Retail Rules. The following clauses relate to Friendly and Emergency Credit: 129 (3) Friendly Credit- the prepayment meter system must not disconnect supply to the small customer as a result of a self-disconnection, otherwise than between the hours of 10am and 3pm on a weekday (Jacana Energy uses the period 9 am to 4 pm); 129 (6) Emergency Credit- the prepayment meter system must provide an amount of emergency credit not less than: (a) a level equivalent to the average cost of 3 days of electricity or gas supply (as applicable) to within \$1.00; or (b) such other amount as is approved by the Australian Energy Regulator (AER). from time to time in accordance with the requirements (if any) of these Rules. The Energy Emergency Credit provision for Jacana Energy PPMs is currently set at \$20.

TCAC notes that he Northern Territory Electricity Retail Supply Code does not contain regulations regarding PPM systems except for clause 10.6. This exception relates to Life Support Equipment.

While we have highlighted the issue for the Jacana Energy serviced regional centres it needs to be noted that the issue is present across the National Partnership Agreement for Remote Housing Northern Territory Footprint. There are 5100 dwellings across this remote NPA footprint. There are >2000 dwellings with PPMs in the regional centres. The issue of energy insecurity for low-income PPM households therefore extends to >7000 households in the NT. Roof top solar needs to be considered for remote and regional public housing.

Housing, Environmental Health and Safety

12. The Built Environment and Health

Chakraborty et al acknowledged that 'limited research has examined the role of built environments in relation to Indigenous health in remote Australia'. An interest in this relationship resulted in a study being undertaken to investigate the 'influence of built environmental factors on chronic and infectious diseases in remote Northern Territory'.

Essential services and facilities for health/safety were the highest ranked domains for both chronic and infectious diseases. Within these domains, adequate housing infrastructure, water supply, drainage system, reliable sewerage and power infrastructure, and access to health services were identified as the most important contributors to the development of these diseases. The findings highlight the features of community environments amenable to public health and social policy actions that could be targeted to help reduce prevalence of chronic and infectious diseases^{vii}.

At the time of preparing this submission there is limited time to explore the methodology and findings of this work in any detail. It is recommended that the Select Committee consider the publication directly.

The study notes that the World Health Organisation estimates that about 22% of the global burden of disease, and 23% of all deaths are attributable to modifiable environmental factors. Disease burdens associated with environmental exposures are largely the result of chronic (e.g., cardiovascular) and infectious (e.g., respiratory) diseases. The WHO calls for creating and maintaining healthful environments as a priority for primary prevention.

The importance of Housing and the Built Environment on Public and Environmental Health outcomes cannot be overlooked. At present the emphasis in the Northern Territory through the National Partnership Agreement is on new houses and new bedrooms. From our perspective the Built Environment of the Town Camps and Remote Communities is a priority and that these localities required standards comparable to the standards outlined in Subdivision Guidelines. In addition, more resourcing needs to be directed toward Repairs and Maintenance in Remote Public Housing.

13. Building Control Areas in the Northern Territory

According to the Northern Territory Government there is a two-tiered system of Building Control Areas in the Northern Territory^{viii}. This could be more accurately described as a three-tiered system with three categories of Building Control Area: (1) Tier 1; (2) Tier 2; and (3) Tier 3.

13.1. Tier 1 Building Control Area

Full certification requirements, including requirements to get occupancy certification at the end of the construction process, apply for all building work.

13.2. Tier 2 Building Control Area

Adelaide River	6. Jabiru	11. Namarada
2. Batchelor	7. Katherine	12. Pine Creek
3. Borroloola	8. Kings Canyon	13. Tennant Creek
4. Brewer Estate	9. Larrimah	14. Timber Creek
5. Elliott	10. Mataranka	15. Yulara

Class 1a buildings such as a single dwelling or detached house require only partial certification. For partial certification, a building permit is required before commencement of construction. During construction, a building certifier does not need to conduct inspections. At completion of work, a building certifier does not need to issue an occupancy permit. The builder does need to provide a builder's declaration.

13.3. Outside the Building Control Area

Remote	Remote Public Housing					
1.	Acacia Larrakia	26.	Haasts Bluff		51.	Nyirripi
2.	Ali Curung	27.	Hermannsburg	ı	52.	Papunya
3.	Alpurrurulam	28.	Imangara		53.	Peppimenarti
4.	Amanbidji	29.	Imanpa		54.	Pigeonhole
5.	Amoonguna	30.	Jilkminggan		55.	Pirlangimpi
6.	Ampilwatja	31.	Kalkarindji		56.	Pmara Jutunta
7.	Angurugu	32.	Kaltukatjara		57.	Ramingining
8.	Apatula	33.	Kintore		58.	Rittarangu
9.	Areyonga	34.	Kybrook Farm		59.	Robinson River
10.	Atitjere	35.	Lajamanu		60.	Santa Teresa
11.	Barunga	36.	Laramba		61.	Tara
12.	Belyuen	37.	Maningrida		62.	Titjikala
13.	Beswick	38.	Manyallaluk		63.	Umbakumba
14.	Binjarri	39.	Milikapiti		64.	Wadeye
15.	Bulla	40.	Milingimbi		65.	Wallace Rockhole
16.	Bulman	41.	Milyakaburra		66.	Warruwi
17.	Weemol	42.	Minjilang		67.	Willowra
18.	Canteen Creek	43.	Minyerri		68.	Wilora
19.	Daguragu	44.	Mount Liebig		69.	Wurrumiyanga
20.	Engawala	45.	Mutitjulu		70.	Yarralin
21.	Epenarra	46.	Nauiyu		71.	Yirrkala
22.	Galiwinku	47.	Nganmarriyang	ga	72.	Yuelamu
23.	Gapuwiyak	48.	Ngukurr		73.	Yuendumu
24.	Gunbalanya	49.	Nturiya			
25.	Gunyangara	Numbulwar				
Total H	Total Houses					5100

Outside of the Building Control Area work does not need to be conducted by a Registered Building Contractor.

13.4. Building Control Areas- The Pyramid

In summary the Two-Tiered System is a Three-Tiered System that can be described as follows:



13.5. Building Control- Final Thoughts

At present the requirement for Building Permits, Building Inspections (by Building Certifiers) and Certificates of Occupancy are triggered for New Builds and Structural Upgrades. Public Housing that has received limited upgrades (or no upgrades) may not have been assessed for National Construction Code compliance since construction (if at all).

It is our understanding that even outside the Building Control Areas that the Department of Infrastructure, Planning and Logistics requires new builds constructed as part of the current National Partnership Agreement to comply with the same standards as construction inside the Building Control Areas.

Our primary concern therefore relates to housing stock in existence prior to the current National Partnership Agreement. Remote housing needs to be constructed to the highest standard.

14. The Guide to Housing and Infrastructure Standards for the Alice Springs Town Camps

TCAC and its Subsidiary Tangentyere Design have had a 5-year partnership the University of Newcastle (UoN) School of Architecture and Built Environment (SABE). The emphasis of this partnership is on elements including Local Decision Making, Environmental Health, and Crime Prevention Through Environmental Design.

Since 2019, the work has focused on the development of a Guide to Housing and Infrastructure Standards for the Town Camps and Local Decision-Making aligned Master-Planning. The Guide is a design manual incorporating a review of regulations, industry guidelines and climate change research. The Master-Planning is led by residents, supported by architecture students, and aims to address the serious

deficiency of housing and infrastructure standards on the Town Camps. The work has led to some funded projects and built outcomes.

The development of the Guide to Housing and Infrastructure Standards for the Town Camps was commissioned by TCAC in November 2019. The Terms of Reference provided by TCAC were as follows:

In developing a 'Guide to Housing and Infrastructure Standards' TCAC requests that the UoN SABE consider a range of materials and their interface with the local context including the following:

- 1. Codes, Standards and Guidelines
 - 1.1. The National Indigenous Housing Guide.
 - 1.2. The National Construction Code 2019.
 - 1.3. The National Construction Code 2009 (Energy Efficiency Provisions).
 - 1.4. Australian Standard for Adaptable Housing.
 - 1.5. The Livable Housing Guide.
 - 1.6. The Alice Springs Town Council Subdivision Guidelines.
- 2. Analysis
 - 2.1. The Post Occupancy Evaluation of Alice Springs Town Camp Housing 2008-2011.
 - NT Public Accounts Committee Inquiry- Report on Repairs and Maintenance of Housing on Town Camps (2016).
 - 2.2.1. Terms of Reference.
 - 2.2.2. Submission 6- Tangentyere Design.
 - 2.2.3. Submission 11- Tangentyere Council.
 - 2.3. Living on the Edge- NT Town Camps Review Report (2017)
 - 2.3.1. Terms of Reference.
 - 2.3.2. Appendix A-Town Camps Reports
 - 2.3.3. Appendix B- Infrastructure
 - 2.3.4. Appendix c- Housing

The Guide to Housing and Infrastructure Standards in Town Camps is a both a design manual, and a review of the regulations, industry guidelines and climate change research as they relate to the houses and infrastructure within the Town Camps of Alice Springs.

It is the history and laws governing the built environment of the Town Camps that makes a Guide an essential way of understanding how the housing and infrastructure of Town Camps might develop.

The Guide also identifies the Terms of Reference for the proposed Review of Future Housing and Infrastructure Needs, and the Terms of Reference for the ongoing three-year review required by the Tripartite Alice Springs Living Area Subleases between the individual Town Camp Associations; the Executive Director of Township Leasing (Commonwealth) and the CEO of Housing (Territory).

The Guide is also to help TCAC, its subsidiaries and partners to implement a Community Housing Model. The goal is to develop best practice strategies that are cost effective, sustainable, and capable of delivering strong environmental health and community safety outcomes.

The Guide will exist in three distinct parts:

- Firstly, a summary of the regulations, industry guidelines and climate change research as they
 relate to the houses and infrastructure within the Town Camps of Alice Springs. This summary
 establishes the Terms of Reference for the proposed Review of Future Housing and Infrastructure
 Needs,
- 2. Secondly, a graphically orientated manual that describes design options for Town Camps, and

3. Thirdly, as a digital resource, where background research concerning the first two parts is identified. The complete Guide to Housing and Infrastructure Standards in Town Camps will eventually be available through a digital interface, with the graphically orientated second part envisaged as a stand-alone hard copy booklet that might be used on-site within the Town Camps.

Significant work has been undertaken and while the Guide is not ready for publication it may be possible to share elements of the Guide with the Committee if it is not published as part of the Inquiry. Once completed it is likely that may other regions can benefit from this body of work.

15.Local Decision-Making Aligned Master-Planning

TCAC and its Subsidiary Tangentyere Design have had a 5-year partnership the University of Newcastle (UoN) School of Architecture and Built Environment (SABE). The emphasis of this partnership is on elements including Local Decision Making, Environmental Health, and Crime Prevention Through Environmental Design.

To date LDM Master-Planning has taken place at most of the Alice Springs Town Camps. The work has emphasised the aspiration of residents to see the infrastructure and the built environment of the Town Camps comparable to that of urban Alice Springs. Residents require Crime Prevention Through Environmental Design; Traffic Management; Quality Road Networks; Local Parks and Playgrounds; Access to Telecommunications; Flood Mitigation; Quality Municipal and Essential Services (including Water, Sewage and Electrical); and Heat Mitigation.

It is apparent that most aspects of the Built Environment on the Town Camps do not meet the Alice Springs Town Council Subdivision Guidelines. This includes basic infrastructure including Water, Sewage, Electrical Supply, Roads, Drainage and Parks/Playgrounds.

16.Community Housing Model Development

A Community Housing Model (CHM) is being developed by the Town Camp Consortium to re-establish community-controlled housing on the Alice Springs Town Camps. The members of the Town Camp Consortium are Tangentyere Council and its subsidiaries Community Housing Central Australia and Tangentyere Constructions.

The main objective is to develop a new, sustainable, and culturally appropriate CHM for Alice Springs Town Camps led by Tangentyere Council and controlled by the Town Camp Consortium.

The Project will be delivered by the National Affordable Housing Consortium (NAHC) who has been engaged by the Town Camp Consortium, with funding from the Executive Director of Township Leasing. The Project is underpinned and supported by provisions in the Alice Springs Living Area Subleases, the Housing Management Agreements, the National Partnership Agreement for Remote Housing NT and the LDM Agreement between Tangentyere Council and the Territory.

The Town Camp Consortium will work with the Office of Township Leasing and the Territory to enable a transition to a community housing model under the control of the Town camp Consortium to commence at the expiration/cessation of the current Housing Management Agreements.

The next stage of this project will utilise Quantity Surveyors to consider the expenditure required to ensure that housing stock is upgraded to a level required by the National Construction Code. This process will also be informed by the work of Healthabitat, Tangentyere Council and Tangentyere Constructions who

are collaborating in a process of Survey/Fix work against Safety and the 9 Healthy Living Practices outlined by the National Indigenous Housing Guide.

Conclusion

To promote better health and wellness outcomes in Remote and Regional Australia the standards of Housing and the Built Environment need to be bench marked to the National Construction Code, National Indigenous Housing Guide, the Australian Standard of Adaptable Housing, the Livable Housing Guide, and Subdivision Guidelines comparable to major regional centres.

Remote and Regional Public Housing needs to be assessed against the National Construction Code to ensure that it is fit for purpose. The assessment of Future Housing and Infrastructure Needs should be undertaken periodically in consideration of key factors including climate change, extreme heat, and the gap in life expectancy between Aboriginal and non-Indigenous Australians. Such assessment needs to be undertaken in a manner that yields tangible and useful outputs. The frequency of detailed Building Inspections should not be limited to periods of structural upgrade.

Time limitation does not permit a mode detailed assessment of matters including Digital Access and Energy Security, but such matters need to be investigated and addressed. We would recommend that where there is extreme disadvantage these Essential Services need to be delivered to the highest standard.

Tangentyere Council will provide a supplementary submission that will present a redacted version of the draft Housing and Infrastructure Guide for the Town Camps outlined earlier. The detail and images of this document will help to strengthen the narrative of this submission.

TCAC can provide a place-based list of projects required to improve the built environment of the Town Camps for inclusion in NT Infrastructure Planning and Budget allocation. The projects are not frivolous but are required for the Town Camps to approach parity with surrounding suburbs in critical areas of public infrastructure. These improvements relate directly to Crime Prevention Through Environmental Design; Public and Environmental Health; and Telecommunications/Digital Inclusivity.

Appendix 1: NPARH Footprint

The following table was published as part of the Tangentyere Council, Supplementary Submission to the House of Representatives Inquiry into Homelessness in Australia in July 2020^{ix}.

The Territory provided the number of dwellings; the number of Registered Occupants; and the Estimated Resident Population for the NPARH Footprint (excluding 3). The Estimated Resident Population for the Town Camps (3) is based on the Population and Mobility Study undertaken in 2005 (Foster et al, 2005)^x. The ABS provided Census data for each location.

		[Dwellings	Census	Registered	Estimated	
	Locality	Provider	Total	Occupied	2016	Occupants	Population
1.	Acacia Larrakia	IES	14	14	48	87	87
2.	Ali Curung	IES	73	58	494	257	587
3.	Alice Springs Town Camps:						
	1) Akngwertnarre	Jacana	15	13	34		65
	2) Anthelk-Ewlpaye	Jacana	16	13	91		121
	3) Anthelk-Ewlpaye	Jacana	4	4	91		
	4) Anthepe	Jacana	15	12	141		94
	5) Karnte	Jacana	19	15	141		135
	6) Aper-Alwerrknge	Jacana	7	7	19		51
	7) Ewyenper-Atwatye	Jacana	47	42	181		243
	8) Ilparpa	Jacana	13	12	56		106
	9) Ilperle Tyathe	Jacana	9	8	33		109
	10) Ilpeye-Ilpeye	Jacana	15	15			61
	11) Ilyperenye	Jacana	10	9	42		89
	12) Inarlenge	Jacana	22	22	110		154
	13) Itwiyethwenge	Jacana	2	2	59		9
	14) Mount Nancy	Jacana	11	9	59		63
	15) Lhenpe Artnwe	Jacana	14	13	13		167
	16) Mpwetyerre	Jacana	6	5	21		74
	17) Nyewente	Jacana	26	24	81		148
	18) Yarrenyty Arltere	Jacana	34	29	112		184
4.	Alpurrurulam	IES	75	66	431	294	505
5.	Amanbidji	IES	24	15	67	59	92
6.	Amoonguna	IES	60	39	237	111	315
7.	Ampilwatja	IES	46	44	410	319	401
8.	Angurugu	IES	159	152	857	656	948

		Dwellings		Census	Registered	Estimated
Locality	Provider	Total	Occupied	2016	Occupants	Population
9. Apatula	IES	41	31	241	109	176
10. Areyonga	IES	32	25	189	125	264
11. Atitjere	IES	24	22	240	133	194
12. Barunga	IES	72	63	368	258	350
13. Belyuen	IES	43	42	155	118	200
14. Beswick	IES	71	68	543	366	602
15. Binjarri	IES	36	35	188	150	272
16. Bulla	IES	25	13	80	44	140
17. Bulman	IES	23	35	164	196	207
67. Weemol	IES	16	50	102	196	327
18. Canteen Creek	IES	26	25	178	148	238
19. Daguragu	IES	42	39	239	197	213
20. Engawala	IES	23	21	161	108	162
21. Epenarra	IES	31	29	176	136	240
22. Galiwinku	IES	234	226	2072	1,678	2,220
23. Gapuwiyak	IES	112	105	918	591	972
24. Gunbalanya	IES	177	175	1127	679	1,258
25. Gunyangara	IES	31	28	276	134	166
26. Haasts Bluff	IES	16	12	136	77	168
27. Hermannsburg	IES	98	92	634	418	652
28. Imangara	IES	15	12	72	50	107
29. Imanpa	IES	24	19	144	69	198
30. Jilkinggan	IES	37	25	292	168	326
31. Kalkarindji	IES	59	53	347	251	311
32. Kaltukatjara	IES	46	43	355	194	310
33. Kintore	IES	60	57	409	270	501
34. Kybrook Farm	IES	13	8	106	41	93
35. Lajamanu	IES	102	91	599	471	648
36. Laramba	IES	40	37	228	167	269
37. Maningrida	IES	277	273	2333	1,583	2,465
38. Manyallaluk	IES	17	17	87	70	127
39. Milikapiti	IES	99	97	412	327	486

			Dwellings	Census	Registered	Estimated
Locality	Provider	Total	Occupied	2016	Occupants	Population
40. Milingimbi	IES	116	115	1276	778	1,191
41. Milyakaburra	IES	34	29	146	98	189
42. Minjilang	IES	40	37	224	176	326
43. Minyerri	IES	55	50	660	392	536
44. Mount Liebig	IES	26	22	167	107	168
45. Mutitjulu	n/a	38	28	303	161	321
46. Nauiyu	IES	68	59	382	260	477
47. Nganmarriyanga	IES	50	46	360	242	414
48. Ngukurr	IES	134	127	1154	734	1,182
49. Nturiya	IES	23	16	80	65	110
50. Numbulwar	IES	122	120	756	506	763
51. Nyirripi	IES	43	37	263	158	223
52. Papunya	IES	48	42	384	210	450
53. Peppimenarti	IES	32	31	189	168	196
54. Pigeon Hole	IES	23	14	102	84	107
55. Pirlangimpi	IES	90	80	362	255	397
56. Pmara Jutunta	IES	35	28	164	102	226
57. Ramingining	IES	95	94	880	603	904
58. Rittarangu	IES	16	4	130	18	106
59. Robinson River	IES	38	30	206	159	289
60. Santa Teresa	IES	99	92	577	384	595
61. Tara	IES	19	13	90	53	65
62. Titjikala	IES	39	39	219	147	226
63. Umbakumba	IES	76	73	488	327	495
64. Wadeye	IES	277	257	2291	1,360	2,409
65. Wallace Rockhole	IES	31	14	109	41	77
66. Warruwi	IES	67	64	422	268	486
68. Willowra	IES	41	40	284	190	238
69. Wilora	IES	25	22	88	72	131
70. Wurrumiyanga	IES	306	300	1572	1,121	1,624
71. Yarralin	IES	45	28	293	129	270
72. Yirrkala	IES	95	92	857	485	766

		Dwellings	Census	Registered	Estimated	
Locality	Provider	Total Occupied		2016	Occupants	Population
73. Yuelamu	IES	37	29	228	82	219
74. Yuendumu	IES	119	114	705	499	688
Total		5,100	4,646	33,519	21,543	36,327

Appendix 3: Strategic Indigenous Housing and Infrastructure Program Expenditure

	SIHIP Housing Expenditure and Outputs										
Name	New		Rebuilds		Refurb		No Work	Houses	Upgrade \$	Work	Upgrade \$
Akngwertnarre	5	\$2,250,000	5	\$860,000	2	\$150,000	3	15	\$3,260,000		
Anthelk-Ewlpaye	0		7	\$1,204,000	4	\$300,000	10	21	\$1,504,000		
Anthepe Housing	7	\$3,150,000	2	\$344,000	3	\$225,000	3	15	\$3,719,000		
Aper-Alwerrknge	1	\$450,000	4	\$688,000	1	\$75,000	1	7	\$1,213,000		
Ewyenper-Atwatye	24	\$10,800,000	16	\$2,752,000	2	\$150,000	5	47	\$13,702,000	Major	
Ilparpa	2	\$900,000	8	\$1,376,000	0	\$0	3	13	\$2,276,000		
Ilperle Tyathe	2	\$900,000	4	\$688,000	0	\$0	3	9	\$1,588,000		
Ilpeye-Ilpeye	5	\$2,250,000	4	\$688,000	1	\$75,000	4	14	\$3,013,000	Major	
llyperenye	2	\$900,000	3	\$516,000	1	\$75,000	4	10	\$1,491,000		
Inarlenge	9	\$4,050,000	6	\$1,032,000	2	\$150,000	5	22	\$5,232,000		
Itwiyethwenge	0		1	\$172,000	0	\$0	1	2	\$172,000		
Karnte	7	\$3,150,000	6	\$1,032,000	0	\$0	6	19	\$4,182,000		
Lhenpe Artnwe	2	\$900,000	7	\$1,204,000	4	\$300,000	0	13	\$2,404,000		
Mount Nancy	0		6	\$1,032,000	2	\$150,000	3	11	\$1,182,000		
Mpwetyerre	0		3	\$516,000	0	\$0	3	6	\$516,000		
Nyewente	7	\$3,150,000	8	\$1,376,000	6	\$450,000	5	26	\$4,976,000	Major	
Yarrenyty Arltere	12	\$5,400,000	13	\$2,236,000	2	\$150,000	7	34	\$7,786,000		_
Dwellings	85		103		30		66	284			
Sub-Total		\$38,250,000		\$17,716,000		\$2,250,000					
Total									\$58,216,000		\$41,784,000

Appendix 3: Northern Territory Town Camps Review: Essential Infrastructure Upgrades

Name	Lot	Hectares	Sewage	Water Supply	Road Works	Drainage	Electrical	Misc.	Sub-Total
Akngwertnarre	5150	2.8	\$0	\$72,000	\$426,000	\$486,000	\$257,000	\$159,000	\$1,400,000
Anthelk-Ewlpaye	3702	1.8	\$0	\$60,000	\$1,692,000	\$1,001,000	\$1,001,000	\$460,000	\$4,214,000
Anthelk-Ewlpaye	3704	0.7	\$117,000	\$27,000	\$62,000	\$86,000	\$43,000	\$50,000	\$385,000
Anthepe	5146	14.4	\$601,000	\$358,000	\$848,000	\$829,000	\$501,000	\$386,000	\$3,523,000
Aper-Alwerrknge	5180	0.9	\$117,000	\$157,000	\$110,000	\$143,000	\$72,000	\$81,000	\$680,000
Ewyenper-Atwatye	5189	28.6	\$0	\$84,000	\$0	\$0	\$0	\$20,000	\$104,000
Ilparpa	5713	3.6	\$204,000	\$729,000	\$607,000	\$601,000	\$358,000	\$309,000	\$2,808,000
Ilperle Tyathe	5149	8.7	\$369,000	\$599,000	\$898,000	\$658,000	\$529,000	\$376,000	\$3,429,000
Ilyperenye	5708	2.7	\$603,000	\$323,000	\$352,000	\$372,000	\$215,000	\$233,000	\$2,098,000
Inarlenge	3701	8.9	\$761,000	\$89,000	\$873,000	\$887,000	\$587,000	\$393,000	\$3,590,000
Irrkerlantye									
Itwiyethwenge	5123	0.7	\$438,000	\$265,000	\$779,000	\$601,000	\$143,000	\$277,000	\$2,503,000
Karnte	7850	7.5	\$535,000	\$93,000	\$837,000	\$715,000	\$501,000	\$331,000	\$3,012,000
Lhenpe Artnwe	1733	10.9	\$741,000	\$47,000	\$195,000	\$372,000	\$114,000	\$186,000	\$1,655,000
Mount Nancy	5135	4.3	\$515,000	\$603,000	\$390,000	\$372,000	\$229,000	\$263,000	\$2,372,000
Mpwetyerre	2664	1.5	\$160,000	\$239,000	\$267,000	\$315,000	\$157,000	\$146,000	\$1,284,000
Nyewente	5152	6.9	\$0	\$97,000	\$0	\$0	\$0	\$21,000	\$118,000
Yarrenyty Arltere	5195	90.6	\$0	\$26,000	\$0	\$0	\$0	\$13,000	\$39,000
Total			\$5,161,000	\$3,868,000	\$8,336,000	\$7,438,000	\$4,707,000	\$3,704,000	\$33,214,000

Appendix 3: References

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