



**Our Community.
Our Future.
Our Homes.**

ROOM TO BREATHE

PROGRAM DESIGN GUIDELINES

AUGUST 2019

DEPARTMENT OF LOCAL GOVERNMENT,
HOUSING AND COMMUNITY DEVELOPMENT



ACKNOWLEDGING TRADITIONAL OWNERS

The Department of Local Government, Housing and Community Development respectfully acknowledges the past and present traditional custodians of this land on which we work.

We show our recognition and respect for Aboriginal and Torres Strait Islander people, their culture and their heritage while working towards improved social outcomes for the Northern Territory.

REFERENCE DOCUMENTS

These Design Guidelines are to be read in conjunction with the following documents:

- National Construction Code, Current Edition
- *NT Building Act* and Regulations
- Northern Territory Planning Scheme.
- National Indigenous Housing Guide (2007)
- The Guide (2011) online Tool Kit Design + Specification
- Liveable Housing Australia's Liveable Housing Design Guidelines
- NT Department of Infrastructure's Standard Specification for Small Building Works (current version)
- Remote Engagement and Coordination Strategy
- All other applicable legislation, codes and standards
- Design Guidelines, Remote Community Housing

ACRONYMS

ABS	Australia Bureau of Statistics
AIS	Aboriginal Interpreter Services
AS	Australian Standard
BER	Beyond Economic Repair
CNOS	Canadian National Occupancy Standard
DLGHCD	Department of Local Government, Housing and Community Development
GPO	General power outlet
HLP	Healthy Living Practices - from Health Habitat
HOSD	Housing Suitability Index: Census, 2016
HRG	Housing Reference Group
LDM	Local Decision Making
NCC	National Construction Code
NT	Northern Territory
NTG	Northern Territory Government
OVF	Occupancy Verification Form
PC	Primary Client (Person listed on Tenancy Agreement who has responsibility for the house)
PCO	Property Contract Officer
PWC	Power Water Corporation
R&M	Repairs and Maintenance
RHNAME	Remote Housing Needs Assessment Model
RPDO	Remote Housing Program Delivery Office
RtB	Room to Breathe Program
TCO	Tenancy Contract Officer
TMS	Tenancy Management System
UA	Universal Access
WC	Water Closet (toilet)



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1.0 Introduction

1.0 INTRODUCTION

The role of the Department of Local Government, Housing and Community Development ('the Department', or DLGHCD) is to provide an affordable and accessible social housing system by supporting eligible Territorians with options that are appropriate to their housing needs.

The Department is the primary provider of social housing in the Northern Territory, managing approximately 12,000 houses, with around 58% of the asset portfolio being Remote Housing located in the Territory's remote communities. As a landlord, the Department is responsible for providing habitable, safe and secure premises for its tenants in these properties.

The NT Government's housing strategy, **Tackling the Remote Housing Deficit**, provides a vision for social housing based on the following principles:

- Sustainable housing system: a housing system to meet the needs of today and tomorrow.
- Sustainable communities: a housing system that supports communities to grow and prosper.
- Sustained well-being for people: a housing system that delivers the right response, to the right person, at the right time.

1.1 OBJECTIVES OF THE RTB PROGRAM

The Remote Housing Program '**Our Community, Our Future, Our Homes**' is an initiative of the NTG to address remote community housing issues across the territory for ten years from 2017-2027. The **Room to Breathe Program** (RtB) is part of the overall Remote Housing Program.

The RtB program is for the targeted delivery of works in nominated remote communities in the NT. The works will include alterations and additions to existing houses with the aim of reducing the negative effects of overcrowding and enhancing current living environments.

Local Decision Making (LDM) is a critical foundation for the RtB program rollout. The RtB methodology is designed to empower local decision making, and enable tenant co-design of alteration/additions and improvements to housing through a rigorous community engagement and design process.

At each step of the RtB program rollout, local Housing Reference Groups (or similar) and individual tenants themselves are engaged to determine decisions around overcrowding priorities, design and layout choices as well as providing inputs into culturally appropriate design responses.

This approach is unique in State or Territory subsidised housing programs, and these Program Design Guidelines (the 'Guidelines') aim to assist the implementation of such a rigorous, complex and individualised program.

1.2 REMOTE HOUSING NEEDS ASSESSMENT MODEL

The NTG is committed to a robust, equitable and evidence-based model to assess remote housing need for programs such as Room to Breathe and the Capital Works Program.

Since 2017, the Department has been building a comprehensive data tool that can target housing investment in remote communities. The Remote Housing Needs Assessment Model (RHNAM) has been designed to focus on outcomes rather than arbitrary hard targets and has the potential to measure other social determinants over time.

The RHNAM is a more complete assessment methodology with a stronger economic and social focus.

The RHNAM is used to inform five year programs for the Room to Breathe and HomeBuild NT (Capital Works) programs. Using the model outputs, the NTG is able to more fully understand any infrastructure requirements to support new investment.

The RHNAM has a number of key benefits including:

- achieving real reductions in overcrowding.
- informing pipelines of works to support sustainable employment and Aboriginal Enterprise Development.
- guiding investment resulting in savings in infrastructure and new builds without compromising targets.
- assisting in informing funding negotiations for future remote housing agreements.

The RHNAM has been built using a wide range of data sources and assumed inputs including:

- NTG Tenancy Management System (TMS)
- NTG Asset Systems Nexus (ASNEX)
- NTG Integrated Land Information System (ILIS)
- population statistics sourced from ABS and TMS with an assumed population growth rate of 1.6% (Source: ABS)

The RHNAM is further targeted to the Room to Breathe program by assessing needs based upon key criteria for program delivery including:

- households must be considered overcrowded under CNOS criteria (refer p.9)
- the Household requires a maximum number of two additional bedrooms only to reduce overcrowding effects
- subject land area must be greater than 800m² to allow for the expected increase in building footprint, and reduce likely cost implications for building within setback or easement areas.

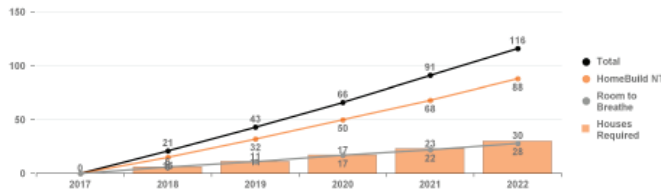
Households that satisfy the above criteria in communities are able to be then prioritised by the HRG through an LDM process for the application of the Room to Breathe Program.

The diagrams below show examples of the RHNAM analysis and outputs of the model (NB: for information only).

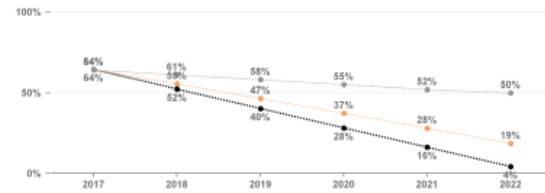


CBIS0129 - Remote Housing Needs Assessment

To reduce Overcrowding by 60% by the year 2022, an additional 116 bedrooms will need to be built



Construction of 116 bedrooms will reduce Overcrowding(OC) from 64% to 4% by the year 2022



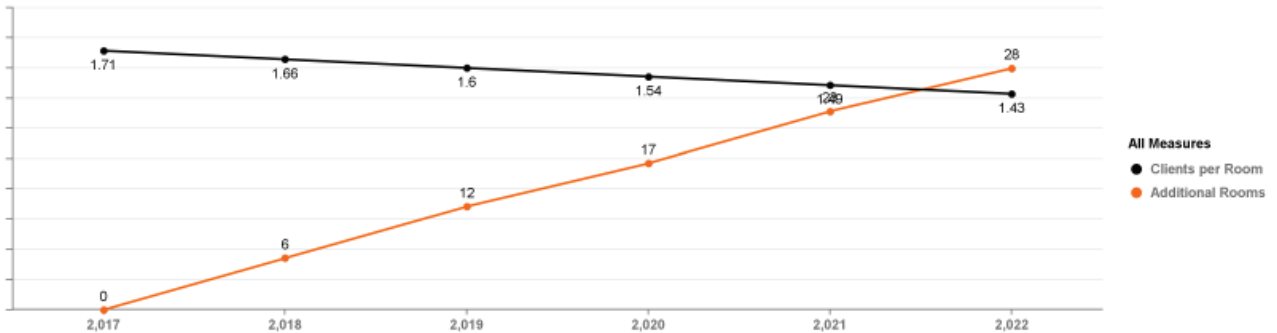
Location	Population			Dwellings		Bedrooms Required		2017			2018			2019			2020			2021			2022											
	Clients	ERP	Forecast	# Occupied	Overcrowded	Starting	Growth	Total	OC%	2B	HB Total uses	OC%	R2B	HB Total uses	OC%	R2B	HB Total uses	OC%	R2B	HB Total uses	OC%	R2B	HB Total uses	OC%										
1	240	350	385	61	56 (64%)	107	18	125	64%	6	15	21	6	52%	11	32	43	11	40%	17	50	66	17	28%	22	69	91	23	16%	28	88	116	30	4%

Outputs from the RHNAM analysis of Community 'X':

To reduce crowding by 60% by the Year 2022, an additional 116 bedrooms will need to be built. The model shows the number allocated to Room to Breathe and HomeBuild NT (Capital Works) separately, along with the overall number of houses required.

Construction of 116 Bedrooms will reduce overcrowding) from 64% to 4% by the year 2022. The Model describes annual construction targets for each Program Stream, along with corresponding decreases in expected overcrowding.

Room to Breathe (R2B) additions based on CNOS requirements of <= 2 additional rooms



Region	Location	Current State			R2B Target		Forecast Outcome After R2B Achieved			ved	
		# Dwellings	# Overcrowded	Overcrowded %	Clients per Room	Additional Rooms	Dwellings	# Overcrowded	Overcrowded %		Clients per Room
	'X'	56	36	64%	1.71	28	20	16	29%	1.43	1.43
		56	36	64%	1.71	28	20	16	0.29	1.43	1.43

Outputs from the RHNAM analysis of Community 'X':

Room to Breathe additions based upon CNOS requirements of <= 2 additional rooms. The Model shows the annual decrease in expected room occupancy density (clients per room) from the "current State" to the "Forecast Outcome after RtB Achieved"

Dwelling #	Lot	Area SqM	Current State				R2B Target	Forecast Outcome After R2B Achieved	
			Bedrooms #	Clients #	# Overcrowded	Clients per Room	Additional Rooms	# Overcrowded	Clients per Room
73339	BAM 00168	1,450	3	2		0.67			0.67
56				240	36	1.71	28	5	1.43

Initial program target, refer below for details.

Dwelling #	Lot	Area SqM	Current State				R2B Target	Forecast Outcome After R2B Achieved	
			Bedrooms #	Clients #	# Overcrowded	Clients per Room	Additional Rooms	# Overcrowded	Clients per Room
7128601001	BAM 00347	949	2	5	Yes	2.5	2		1.25
73221	BAM 00158	848	2	4	Yes	2	2		1
73235	BAM 00177	985	3	5	Yes	1.67	2		1
73243	BAM 00183	812	3	6	Yes	2	2		1.2
73253	BAM 00195	1,600	3	6	Yes	2	2		1.2
73255	BAM 00208	1,040	3	5	Yes	1.67	2		1
73289	BAM 00258	1,030	3	5	Yes	1.67	2		1
73313	BAM 00314	872	3	6	Yes	2	2		1.2
61511	BAM 00194	959	3	7	Yes	2.33	1		1.75
61519	BAM 00313	892	3	5	Yes	1.67	1		1.25
6407301003	BAM 00237	1,540	1	2	Yes	2	1		1
6407301004	BAM 00237	1,540	1	2	Yes	2	1		1
6407301005	BAM 00237	1,540	1	2	Yes	2	1		1
7128601002	BAM 00348	1,370	2	4	Yes	2	1		1.33
73223	BAM 00159	974	3	6	Yes	2	1		1.5
73227	BAM 00162	902	2	3	Yes	1.5	1		1
73237	BAM 00179	818	3	6	Yes	2	1		1.5
73257	BAM 00209	1,100	3	5	Yes	1.67	1		1.25
73309	BAM 00304	1,000	3	5	Yes	1.67	1		1.25
73315	BAM 00315	1,180	3	5	Yes	1.67	1		1.25
73249	BAM 00192	1,450	3	7	Yes	2.33	4	Yes	2.33
73219	BAM 00157	719	3	8	Yes	2.67	3	Yes	2.67
73267	BAM 00223	979	3	9	Yes	3	3	Yes	3
73275	BAM 00230	800	3	7	Yes	2.33	3	Yes	2.33
73287	BAM 00257	896	2	6	Yes	3	3	Yes	3
7128701001	BAM 00345	716	2	6	Yes	3	2		3
73239	BAM 00180	742	3	5	Yes	1.67	2		1.67
73241	BAM 00181	629	3	6	Yes	2	2		2
73293	BAM 00262	772	3	6	Yes	2	2		2
73299	BAM 00273	782	2	4	Yes	2	2		2
6405401001	BAM 00186	611	2	4	Yes	2	1		2
7128701002	BAM 00346	522	2	3	Yes	1.5	1		1.5
73245	BAM 00184	738	2	4	Yes	2	1		2
73247	BAM 00185	651	2	5	Yes	2.5	1		2.5
73269	BAM 00226	749	3	7	Yes	2.33	1		2.33
73271	BAM 00227	703	1	4	Yes	4	1		4
61507	BAM 00178	1,180	3	3		1			1
61509	BAM 00191	1,110	1	1		1			1
61513	BAM 00233	1,920	3	3		1			1
6405401002	BAM 00186	611	2	2		1			1
6407301002	BAM 00237	1,540	1	1		1			1
7128501001	BAM 00343	740	2	1		0.5			0.5
7128501002	BAM 00344	594	2	1		0.5			0.5
7128901001	BAM 00316	949	2	4		2			2
7128901002	BAM 00317	801	2	2		1			1
73229	BAM 00163	718	2	4		2			2
73231	BAM 00174	716	2	3		1.5			1.5
73259	BAM 00210	1,300	3	3		1			1
73261	BAM 00219	858	4	4		1			1
73263	BAM 00220	1,090	3	1		0.33			0.33
73273	BAM 00229	671	2	2		1			1
73291	BAM 00261	996	3	3		1			1
73297	BAM 00272	685	3	4		1.33			1.33
73311	BAM 00305	1,510	4	4		1			1
73337	BAM 00167	1,410	4	7		1.75			1.75

RtB target informs initial program to be discussed in community - 28 additional bedrooms as per summary.

Does not form part of initial program planning. Requires analysis.

Less than 800sqm may not be suitable for RtB program. Requires additional analysis.

1.0 Introduction

1.3 PURPOSE OF THE GUIDELINES

The purpose of the Guidelines is to provide guidance on the design, procurement and construction of house additions and alterations which are habitable, safe and secure. The objective of this guidance is to ensure that all tenants under the program are provided with design and construction outcomes for people to raise healthy families, undertake work and social activities, and engage fully with their community.

The Guidelines describe design principles and establish fundamental house requirements to ensure an appropriate level of design, quality, function and robustness.

The Guidelines will inform the works required to refresh and reform the Department's remote housing stock to improve sustainability and better match need. Over time, the Guidelines will be reviewed and amended to reflect lessons learnt and promote continuous improvement in order to deliver better housing outcomes. The first review and amendment period will occur within 12 months of issue.

INFORMING LOCAL DECISION MAKING

1.4 WHO ARE THE GUIDELINES FOR?

These Guidelines are intended to be used by DLGHCD RtB program team members, along with sub-consultants such as Architects, Engineers and Quantity Surveyors. The RtB team includes members from the DLGHCD head office in Darwin, Tenancy and Property Officers (TCO and PCO) from NT regions, Project Managers from NT regions, and Community Engagement officers.

The Guidelines are designed to outline both Best Practice and minimum standards for design of certain building elements, such as bedrooms and ancillary structures.

Users of the Guidelines may use the principles outlined in assessment and design as a minimum, but are encouraged to work through an LDM process to ensure whatever is designed is appropriate to the local context, climate and culture.

Through genuine conversations and engagement, a co-design process should ensure that outcomes for community members are enhanced, and the objectives of the RtB program are fully achieved.

1.5 APPLICATION OF THE GUIDELINES

These guidelines apply to the construction of new alterations and additions to existing houses classified as Class 1a, Class 1b, Class 2, and associated Class 10 buildings under the National Construction Code. Typical house alterations and additions covered by these guidelines include:

Additions of new bedrooms, indoor and outdoor living areas, and bathrooms (single storey only).

Alterations to verandahs and internal walls, including security and privacy upgrades.

Addition of new ancillary structures such as concrete pathways, mowing strips, clothes lines and storage spaces.

General Repairs and Maintenance (R&M) noting these are ancillary, and funded separately, to the RtB Program.

1.6 STRUCTURE OF THE GUIDELINES

1. Introduction:

Outlines the aims and objectives of the RtB program, and the background and purpose of the Guidelines.

2. Program Methodology:

This sets out the processes required through the RtB program. It details each stage and nominates the parties involved, the key inputs and outputs and significant risk factors.

3. Site Visit Requirements:

This section provides detailed requirements and guidance for the various stages of the RtB program that involve on-site visitation of communities and tenants.

4. Program Design Guide:

This section sets out performance requirements, design considerations and target provisions relating to internal and external spaces which form the focus of the RtB program.

1.7 KEY DESIGN OBJECTIVES

The following are overarching objectives for the design of sustainable building works:

- **Appropriate.** Robust, flexible, comfortable and appealing houses which are capable of supporting a wide range of tenants and their needs, including young families, singles, seniors and people living with a disability.
- **Culturally Appropriate.** Houses must address the unique cultural needs of its occupants, in order to provide a supportive platform for cultural practice.
- **Accessible.** Houses designed to maximise accessibility and usability by a wide range of tenants, regardless of their age and ability, and easily adaptable to meet specific tenant needs.
- **Healthy, Safe and Secure.** Houses designed to prevent injuries or health issues, maximise personal safety from crime and antisocial behaviour, and promote principles of the 9 Healthy Living Principles and Crime Prevention Through Environmental Design (CPTED).
- **Economically Sustainable.** Houses that are robust and represent good value for money, with a construction and design quality which minimises ongoing maintenance and maximises longevity.
- **Built Properly.** Housing must aim to meet or exceed the relevant construction codes, including the Australian Standards and the National Construction Code¹. Housing must also be supervised during construction, appropriately maintained, and assessed post occupancy. Achieving this will create more robust houses and will positively impact ongoing costs and maintenance.
- **Site Responsive.** Location and climatically appropriate designs which incorporate passive energy design principles, making for comfortable and energy efficient houses.

Household overcrowding is a condition where the number of occupants exceeds the capacity of the house space available, whether measured as rooms, bedrooms or floor area, resulting in adverse physical and mental health outcomes. Overcrowding is a result of a mismatch between the house and the household.

Overcrowding relates to the conditions of the house as well as the space it provides: people may crowd into particular rooms in their home to avoid cold or uninhabitable parts of the house or to save on heating and other costs.

The effects of overcrowding can be broadly defined as the hazards associated with inadequate space within the house for living, sleeping and household activities. Overcrowding is considered to be stressful to health and well-being. Several studies have reported a direct association between overcrowding and adverse health outcomes, such as infectious disease and mental health problems. In addition, researchers have connected overcrowding to poor educational attainment.

¹ See page 19, Compliance and Standards

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1.8 OVERCROWDING

There is no universally accepted definition of what constitutes an overcrowded household. The ABS uses the Canadian National Occupancy Standard (CNOS) when preparing census reporting, and most recently used this as the basis for its Housing Suitability (HOSD) reporting (2016 Census).

There have been a number of studies completed by the Australian Housing Urban Research Institute (AHURI) that have looked specifically at overcrowding in Indigenous housing contexts, and the causes, impacts and mitigating factors that householders have applied to deal with overcrowding.

Some key points from this research include:

- Overcrowding in Indigenous households has structural causes, including the shortage of appropriately designed and affordable rental housing, and cultural causes, including visiting and sharing practices.
- Housing design that caters for large families and visitors would offer the opportunity of fulfilling cultural obligations to house visitors, alleviating some issues of overcrowding.
- While the Canadian National Occupancy Standard (CNOS) is currently used to measure overcrowding, it does not distinguish between those situations where overcrowding causes little stress and those where it does have negative effects for residents.
- Case studies revealed that the number of people living in the house was not the most significant trigger of stress but the lack of control over who stays and their behaviour.
- The most critical mediating factors for coping in large households are: firm administration of house rules by the householder, rules in organising sleeping space in large households and sharing visitors among other family households.

AHURI Bulletin:
How is overcrowding in Indigenous households managed?
Issue 180 November 2014 · ISSN 1445-3428

The World Health Organisation (WHO) released the WHO Housing and Health Guidelines in 2018, which included Overcrowding as the third most critical element in health related impacts from housing. It identified:

- household overcrowding is a condition where the number of occupants exceeds the capacity of the house space available, whether measured as rooms, bedrooms or floor area, resulting in adverse physical and mental health outcomes. Overcrowding is a result of a mismatch between the house and the household.
- overcrowding relates to the conditions of the house as well as the space it provides: people may crowd into particular rooms in their home to avoid cold or uninhabitable parts of the house or to save on heating and other costs.

WHO Housing and health guidelines. Geneva:
World Health Organization; 2018

REDUCING THE NEGATIVE IMPACTS, EFFECTS OR STRESSES OF OVERCROWDING IS THE KEY OBJECTIVE OF THE RTB PROGRAM.

As such, it is important to understand and assess overcrowding in individual homes. To achieve a holistic assessment of overcrowding several quantitative and qualitative measures are employed, combining elements such as bedroom occupancy (density) and resident stress analysis of overcrowding.

These include a mix of assessments done through LDM processes that include:

- **Bedroom Occupancy Density** using the Canadian National Occupancy Standard (CNOS). This is a metric that measures number of people per bedroom in a house, and stipulates (amongst other requirements) the separation of adults, and children of certain ages into individual bedrooms. A breakdown of the CNOS requirements is shown in Table 1.
- **Health Hardware Function** (based on principles from Housing for Health and the 9 Healthy Living Principles). Crowded living conditions increase the risk of the spread of infectious diseases, such as meningococcal disease, rheumatic fever, tuberculosis and respiratory infections. In a crowded house it can also be more difficult to access health hardware, such as a working shower, toilet, hot water and washing machines. Increasing house size does not guarantee reduced overcrowding. Increasing house function does.
- **Livability Stressors**. This considers overcrowding through stress on tenants, and acknowledges that spatial or health hardware metrics may not explain fully peoples feelings of overcrowding. Factors such as loss of personal control, cultural obligations, fear and worry, and personal experience of stress contribute to the negative effects of overcrowding. This is a qualitative metric determined through conversations with occupants about the livability of their house. Other factors that impact upon stressors may require an expert analysis of housing design, layout, orientation and yard amenity, living area choices, climatic and cultural impacts and visitor patterns.

Table 1 provides further detail on each. These assessment models will be used by the RtB team and through LDM over the various stages of the RtB program.

Table 1 describes a variety of possible methodologies to assess overcrowding in residential scenarios. This is not intended as a definitive or prescriptive guide to assessment, but to assist RtB team members in developing an holistic assessment of overcrowding in communities, and the elements that may be discussed with Primary Clients in Co-Design workshops.

The agreed assessment on a tenant's response to overcrowding stress will utilize a combination of the above noted assessment tools, and be determined through community engagement and a LDM process. Maintaining accurate documentation of interviews and house assessments is thus critical to ensure transparency and accountability in the program rollout.

Any concept designs developed through the Co-Design Workshop process will need to take into account the LDM assessment.

TABLE 1: A GUIDE TO OVERCROWDING ASSESSMENT MODELS

Bedroom Occupancy Density	Health Hardware	Quality Of Life / Stressors
Comments		
<ul style="list-style-type: none"> • Occupation Density is a simple metric obtained through numerical analysis of tenancy data and housing type - ie: number of occupants / number of bedrooms. • This analysis can often be determined through TMS data. • Distinguishes between ages and gender. • Does not provide for family preferences, cultural obligations, complexity of familial relationships. • Does not account for fluidity of occupation due to seasonal, cultural or other drivers. 	<ul style="list-style-type: none"> • This assessment model approaches the reduction of negative effects of overcrowding by reducing transmissible health conditions as a priority. • The assessment is used to determine if the house is functioning to promote the 9 Healthy Living Practices. • Ensuring the house has functioning and well designed fixtures/fittings and spaces is critical to ensuring that maximum health benefits are delivered to the resident. • Prioritized according to the 9HLP's, the highest priority to reduce impacts of transmissible disease is 'Washing People' and as such the most critical elements include access to hot water, working showers, disposal of waste water and access to private bathrooms. • Reviewing the health hardware (what is either missing/non-functioning) assists in scoping/briefing for the RtB program. • Maintenance of the Health Hardware is critical to ensure ongoing benefits to occupants. 	<ul style="list-style-type: none"> • This assessment model considers other factors that may have an impact on occupants feelings of overcrowding stress, such as loss of control over personal space, issues of privacy, housing design and layouts and cultural factors. • Considers Indigenous cultural practices and values (e.g. deep obligation to accommodate needs kin), and the 'elastic' nature of housing occupation from seasonal and cultural visitation. • Visitation may be complex and difficult to easily quantify, and can range from long term visitation to daytime visitors. • Housing Design can have a large impact on quality of life - with access to living areas, private space and access to safe and secure access to bedrooms and bathrooms.
Assessment metrics		
<ul style="list-style-type: none"> • Currently the NTG utilise the Canadian National Occupancy Standard (CNOS) which stipulates: • There should be no more than 2 persons per bedroom; • Children less than 5 years of age of different sexes may reasonably share a bedroom; • Children 5 years of age or older of opposite sex should have separate bedrooms; • Children less than 18 years of age and of the same sex may reasonably share a bedroom; and, • Single household members 18 years or older should have a separate bedroom, as should parents or couples. 	<ul style="list-style-type: none"> • There are limited quantitative metrics that have been developed for Health Hardware in houses. • Health Habitat utilised a measure of 50 litres hot water per person per day, for washing, as a minimum in the NIHG. • Other assessment tools may include the number of bathrooms (showers and toilets) with a recommendation that any home with three or more bedrooms should have at least two bathroom areas, including two showers, two toilets and hand washing basins in each room. 	<ul style="list-style-type: none"> • Assessment to be undertaken through tenant interview, and should investigate items such as; • Size of lot, site factors such as overlooking, privacy from neighbours, outdoor living areas, road and vehicle access • Cultural obligations, such as avoidance obligations, privacy, belief systems. • Visitation Demand and Frequency (daytime, overnight, duration) • Relationships inside the house, including age, gender, non-familial occupants. • Living areas and functional cooking and washing areas can have an impact. Housing with options for indoor and outdoor living (climate dependant) is often key to reducing overcrowding stress
When to use:		
<ul style="list-style-type: none"> • Using CNOS is useful at Project Initiation stage, to determine an initial assessment of overcrowding in a target community. • An assessment against the CNOS metric may be used in the final reporting stage to provide any changes to occupation density. 	<ul style="list-style-type: none"> • Assessment of Health Hardware should be carried out at Site Visitation stages, with a careful review of functionality, appropriateness and location of health hardware. 	<ul style="list-style-type: none"> • Assessments should be done at each site visit or community engagement interaction, including : • Community Confirmation Workshop/s • Co-Design Workshops with Tenant interviews
Further information		
https://meteor.aihw.gov.au/content/index.phtml/itemId/386254	http://www.healthhabitat.com/the-healthy-living-practices	https://www.ahuri.edu.au/research/research-and-policy-bulletins/180

2.0 Program methodology

The following diagram nominates the various program stages, outlining recommendations on:

- **Who is involved** in each stage;
- **What information** or input is required; and
- What the **key outputs** or deliverables are.

Broadly the RtB Program is designed to follow the following stages for each target community:

1. PROJECT INITIATION

This stage is informed by the use of the Remote Housing Needs Assessment Model (refer p. 4). The purpose of this stage is to gather preliminary information on communities and individual houses in order to establish baseline information on overcrowding, transitional accommodation and identify missing information. The program is also developed in this stage for subsequent stages, including site visitation which requires liaison with the department's regional office staff.

Refer to section 3.1 for detailed requirements of information that should be captured.

2. COMMUNITY CONFIRMATION (SITE VISIT #1)

This stage is where the Community Engagement team facilitate a Community Confirmation Workshop in communities with RtB team and local decision makers. The purpose of the workshop is to outline the program objectives, and through LDM, confirm overall community priorities and scope, (based on RHNAM information).

Refer to section 3.2 for the agenda for the workshop.

3. TENANT CO-DESIGN WORKSHOP (SITE VISIT #2)

This is the first scoping site visit of individual houses the Architect may attend along with RtB team (tenancy and property), AIS and community representatives. The key purpose is to engage with the tenant of each house to obtain data about the house and occupants. From this a brief/scope of works will be prepared by the architect using the Guidelines, and a co-designed outcome developed with the Primary Client. The Primary Client may 'sign-off' on the concept sketch on-site

Refer to 3.3 for detailed requirements for data collection.

4. CONCEPT DESIGN BOOKLET

This stage is the collation (by the RtB team or Architect) of data, Primary Client approved brief design and conceptual sketch, and Quantity Surveyors costing, into a package for submission to RPDO for approval to proceed to detailed design and tender.

Refer Appendix for Concept Design Booklet template.

NB: If approval cannot be obtained by RPDO in Concept Design Booklet stage, an additional site visit may be required to amend the brief and seek Primary Client approval.

5. DETAILED DESIGN

The production of tender documentation including certified architectural and engineering drawings and cost estimates.

6. PROCUREMENT AND DELIVERY

The selection and engagement of a contractor to undertake the approved Alterations, Additions and Repair works. Management of the delivery stage to be by Regional Project Management staff.



PROJECT INITIATION



COMMUNITY CONFIRMATION



Who

- Led by: RtB Head Office Team
- Liaison with:
 - DLGHCD Regional team
 - Power Water Corporation
 - Department of Infrastructure, Planning and Logistics

Who

- Led by: DLGHCD Community Engagement Team
- Liaison with:
 - RtB team (regional tenancy and property)
 - Local decision making group (e.g. HRG) and/or Community members
 - Aboriginal Interpreter Service + Local Community Housing Officer

Inputs Required

- PWC input to understand local services / limitations
- Department of Infrastructure, Planning and Logistics input for any infrastructure issues
- Liaison with HomeBuild NT team for any other projects
- Regional assessment /availability of transitional housing
- Regional assessment /availability of contractor accommodation
- RHNAM assessment
- Site Background, Leasehold, Planning
- Asset history (where possible)
- RtB Fact Sheet for distribution at Community Confirmation

Inputs required

- Community Engagement will advise on trip date, logistics (RtB team will initiate by providing availability).
- RtB Program Fact Sheet (detailing the focus of the program)
- Meeting agenda and proposed script

Tools Used

- Remote Housing Needs Assessment Model
- Site analysis (to assist with community discussion regarding what is and isn't possible)

Tools Used

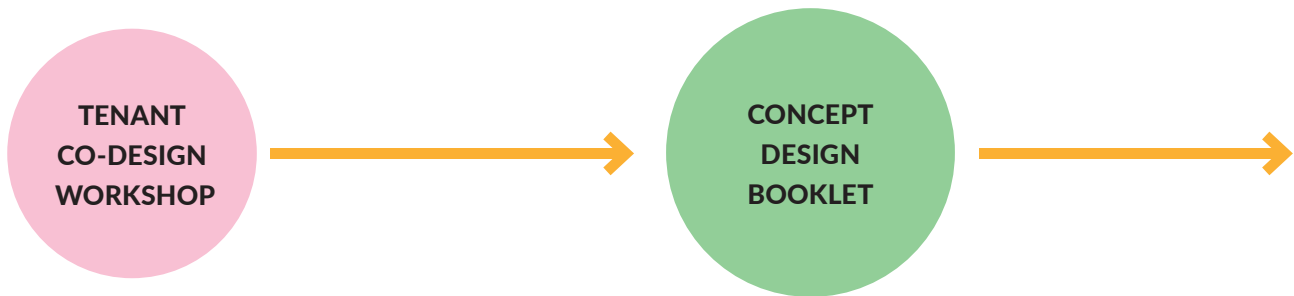
- Workshop format (Community Engagement agenda)
- RtB Program Fact Sheet
- Generic RtB scoping examples, visual aids

Outputs

- Community Dossier of above noted inputs
- Community Map, showing lots noted as crowded based upon Remote Housing Needs Assessment Model (Large scale printed map of assets and projects for community discussion)

Outputs

- Community expectations and priorities
- Updated scoping map of RtB houses
- Priority list of houses (first group of houses. Ideally this scoping not to occur more than 2 months after the workshop)
- Preferred time for Co-Design Workshop to scope houses (considering cultural/ceremonial events)
- Consideration of transitional housing
- LDM Report. This report is equally contributed by RPDO attendees and finalised by the Community Engagement team.

**Who**

- Led by: RtB team (Head Office/Tenancy/ Property) and,
- Design Architect
- AIS
- Primary Client
- Option for including engineer depending on briefing

Who

- Led by: RtB team/ Architect / Quantity Surveyor / Engineer
- Liaison with:
 - RtB Head Office
 - RPDO

Inputs required

- Updated Tenancy Management System for every house (not just those scoped for RtB). An Occupancy Verification Form (OVF) will confirm the occupants.
- Confirmed priority list or map.
- Architect collated site information including:
 - Asset plans including site boundaries (if applicable)
 - Aerial imagery, with cadastral overlays (if applicable)
 - Site dossier (as prepared by RtB team)
 - Tenancy info sheet (as provided by RtB team)
 - Architectural plans of houses (wherever possible)
 - Existing conditions report (as provided by RtB team)

Inputs required

- Primary Client approved scope of works (brief) and conceptual floor plan sketch as prepared during Co-Design Workshop)
- Informal technical scope review and feedback by TCO and PCO.
- RPDO to review and approve Concept Design Booklet (with cost estimate) and to instruct to proceed to detailed design and procurement.

Tools to be used

- Narrative Guide (refer 3.3.)
- Architects Notes (refer 3.3)
- Sketch Guide and Photo Guide (refer 3.3.)
- RtB Program Design Guide (refer 4.0)

Tools to be used

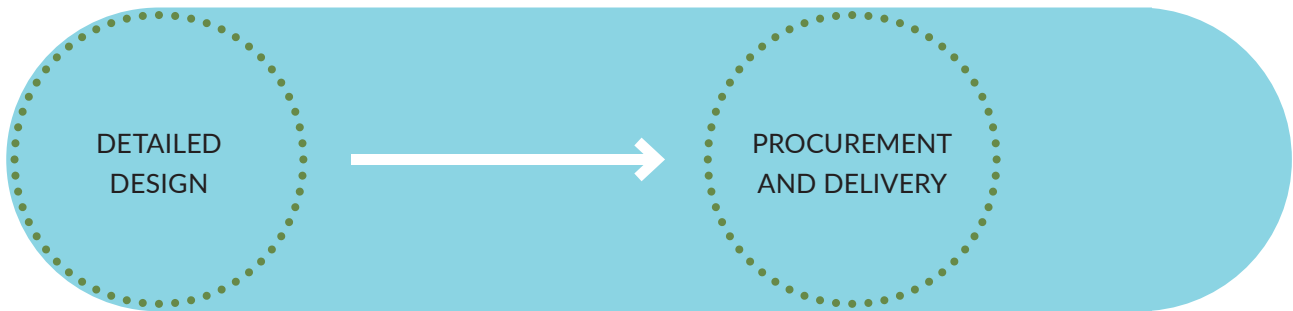
- Concept Design Booklet Template (refer Appendices)

Outputs

- R&M identifying any urgent work/hazards and major works. Minor works identified later.
- Co-Design Workshop Notes and Concept Design
- Brief/scope of works
- Site Assessment + Photographic Record
- Primary Client Approval of Concept Design Sketch
- Completed OVF to update TMS (provide to regional tenancy staff).

Outputs

- RPDO approved Concept Design Booklet, including Quantity Surveyor cost estimate
- Decision on procurement method - DLGHCD to seek input from the Aboriginal Business Enterprise Development unit as required.



Who

- Design team (Architect, Engineering consultant)
- Quantity Surveyor
- RtB team (regional tenancy and property)

Who

- Design team (Architect, Engineering consultant)
- Quantity Surveyor
- RtB team (head office, Regional Project Managers)
- Contractor
- Regional Project Managers

Inputs required

- Concept Design Booklet
- Confirmation of Site Servicing / Site Constraints
- Review by RtB Technical Team
- Technical review by TCO and PCO

Inputs required

- Certified architectural and engineering documentation including Section 40s
- Tender assessment
- Project delivery led by Regional Project Managers
- RtB Darwin team to oversee
- Design consultants to provide services during construction as required
- Quantity Survey assessment of claims

Tools to be used

Tools to be used

- Tender assessment report

Outputs

- Certified architectural and engineering documentation including Section 40s and building permit
- Tender documentation
- Quantity Surveyors cost estimate

Outputs

- Engagement of contractor/s
- Construction completed
- AIS information updated for house configuration

3.0 Site visit guidelines

3.1 INITIATION REQUIREMENTS

It is important to compile and collate sufficient information about the community prior to Visit 1. The following items are recommended to be completed during the Initiation stage, undertaken or managed by the RtB team. Maps, desktop overcrowding analysis and a general community profile is essential.

Individual house details may not be available however TMS does record summary house information i.e. number of bedrooms. This information is available through a report from our data systems and should form part of the Report noted below:

- An Internal Compilation Report shall be prepared for the community. Each scoped lot in the community will have a cover sheet with checklist identifying what information has been gathered and what information is missing. The report will include:
 - **Community Transitional Plan** (availability of transitional housing), prepared by regional team and confirmed by community. The plan includes (if available):
 - Size of community, number of houses
 - Community delineation (e.g. clan clusters at Wadeye)
 - Size of houses (scoping to upgrade for transitional housing)
 - Lease availability
 - **Desktop Overcrowding analysis**
 - Prepared by the RPDO planning team using RHNAM.
 - An A0 sized map shall be prepared locating any overcrowded houses noted from RHNAM analysis, and for use in the Community Confirmation Workshop.

OTHER INFORMATION:

- The preparation of a 'Site Dossier' to include any information to hand that may assist the RtB team in the Community Confirmation Workshop is desirable if the data is available. The Site Dossier may include:
 - Site analysis, identifying:
 - Essential services - PWC traffic light review, utility capacity (water is key)
 - Whether septic system or mains
 - Vacant serviced land
 - Any sub-divisible lots
 - Lease Boundaries
 - Existing Site Servicing Plans
 - Google aerial imagery + mapping
 - Asset history, identifying:
 - Age of asset
 - NTG maintenance history
 - BER Status
 - Construction commentary (e.g. house elevation sketch, construction method – basic flag for complexity and red flags for structural engineer)
- **Arranging the Community Confirmation Workshop:**
 - RtB team to initiate discussions with Community Engagement about the timing of the workshop.
 - RtB team to provide Community Engagement with agenda.
 - Community Engagement team to arrange logistics of the workshop.

3.2 COMMUNITY CONFIRMATION WORKSHOP

Community Engagement Agenda

- RtB team introduction:
 - Program objectives
 - Scope of the program including limitations
 - Generic RtB scoping examples
- Local Decision Making for the following items:
 - Establish broad community expectations and priorities (consider need to retain 2 bed housing stock).
 - Transitional housing options and confirmation.
 - Clan groups.
 - Priority list of houses identified for works under the RtB program. Confirmation and prioritisation of list.
 - Update scoping map of houses nominated for the RtB program.
 - Select preferred time for Co-Design Workshop (to scope individual houses).

Note: Post Community Confirmation Workshop engage Design Team (Architect, Engineering Consultants, Quantity Survey).

ROOM TO BREATHE

3.3 TENANT CO-DESIGN WORKSHOP

At the heart of the Room to Breath Program is genuine and direct engagement with individual tenants themselves to determine housing design and layout decisions as well as providing inputs into culturally appropriate design responses.

The Tenant Co-Design Workshop is a critical phase for the project, and should be undertaken in a systematic, transparent and rigorous manner, without being rushed to design an outcome.

Co-Design Discussion Guide

The discussion guide has been developed to support LDM and enable co-design of alteration/additions and improvements (including culturally appropriate design responses) to housing. This guide contains example questions which can prompt conversation with tenants around the livability and stressors of their house.

This conversation with tenants should occur at the start of scoping in order for it to inform the scope of works. Tenants should not be led in their responses. Refer to the Remote Engagement and Coordination Strategy, and 'Good Engagement' on bushready.nt.gov.au, for guiding notes regarding community engagement.

It is key at this stage to understand if overcrowding is a stressor, keeping in mind that overcrowding is seasonal and fluid, therefore a broad understanding of overcrowding is required here beyond the day of the conversation.

Refer to Appendices for an example Concept Design Booklet. The notes below should assist in completing this Booklet.



Image 1: Tenant drawn diagram of her proposed sleeping and bathroom arrangements (Angurugu, 2018)

Guidance questions to be used in the workshop:

- **Community scale**
 - Are you living where you want to live? If not, where do you want to live and why?
- **House scale**
 - What do you like about your house (including yard)?
 - What do you dislike about your house?
- **Patterns of Occupation**
 - What are the existing sleeping arrangements? (age, gender, relationship, bedroom number/living area)
 - Who can/can't sleep where/with who (e.g. due to conflict, avoidance)?
 - Does anyone have specific requirements, e.g. nightshift worker requires a quiet room during the day?
 - Are there any people who are away (e.g. Darwin, prison, visiting) who would come back if extra rooms were available?
 - Where do people like to spend their time (sitting, eating etc.) both indoors and outdoors?
 - Consider if extra Free to Air TV connections may assist in reducing overcrowding stress.
- **Visitors**
 - Do you have regular daytime only visitors? If so, how many? What implications does this have regarding privacy and how the house is used?
 - Do you have visitors sleeping at the house on a regular basis? If so how many, where do they sleep?
- **Accessibility/UA**
 - Are there any occupants with disabilities or aged with reduced mobility?
 - Is an accessible bathroom required?
 - Is a ramp to your house required?
 - Are there any other items that are required for accessibility (e.g. handrails)?
- **Privacy**
 - Do the occupants of the house all have adequate privacy and avoidance ability (e.g. private access/use of bedrooms, bathrooms, verandahs etc)? If not, provide details. (Note that enclosing decks in some climates can make it hot)
 - Are there adequate views to the street?
 - Is controlling dogs a problem, or keeping children contained?
- **Yard**
 - Are there any trees that should be protected or removed (only to be removed if in direct conflict with proposed works)?
 - Are there any site drainage issues (e.g. water ponding)?
 - Is outdoor living suitable and adequate?
 - Location of septic pits, grave-sites, trees, areas to be protected, etc.
- **Other**
 - Is the kitchen adequate for cooking and food storage (consider bench space and storage)?
 - Are there any other factors regarding the house and yard that is a cause of stress or loss of control?

- Any other ways that your cultural practices and values can be met through improvements to your house?

Architects Notes

This is the Architects 'design rationale', which includes the main notes around why the design has responded in the way it has.

For example, why has a new bedroom and bathroom been located as described in the concept sketch?

In order to validate the rationale, consider items such as:

- Building structure, roof pitch, windows, and access
- Maintaining breezes
- Privacy to street or neighbours
- Site issues such as septic locations, trees to be retained, shade, water ponding
- Client preference for location of new structures
- Location of verandahs (could be located in inappropriate areas where occupants can't see others coming, or too hot as there is no access to breeze)
- Where people like to congregate or sit outdoors (e.g. near an existing fire pit)
- If screening is required to outdoor living areas
 - e.g. to keep dogs out - use balustrade
 - e.g. to secure property - use secure screening
 - e.g. for private access to bathroom - use secure and private screening
- Avoid exacerbating existing site issues (e.g. water ponding)

Climate Responsiveness

The Architect should also reference any climate specific design responses that are recommended, which can account for differences between 'arid' and 'tropical' climate zones. These may include indoor versus outdoor living areas, passive solar considerations and shading.



Fig 1. Example of concept sketch

Sketch Guide and Photographic record

The following is a guide as to what to capture when in the field:

- Site verification (architect to have a cadastral map on hand)
 - Servicing locations and connections (e.g. septic pit locations)
 - Fencing in relation to boundary (measure location of fence if not aligned to boundary)
 - Significant trees/vegetation
 - Cultural (e.g. graves)
 - Concrete paths, hard-stand areas and carports
- Measured house drawing
 - Size of rooms
 - Location of windows/doors
 - Ceiling heights
 - Location of electrical items i.e. GPO, lights, fans, air conditioner
 - Roof type, pitch and conditions
- Photo record
 - Site and yard photos
 - Parallel photos of every external elevation (refer Fig 2)
 - Internal photos where necessary, once permission from the occupant is obtained (e.g. if it's likely a kitchen needs to be made larger, photos of the kitchen should be taken)
- Concept sketch and scope of work
 - Prepare the scope of works (brief) for Primary Client to sign off on at this site visit.
 - Conceptual plan sketch (refer Fig 1). Note: discuss the possibility of the concept sketch changing due to unforeseen circumstances. If major rectifications to the agreed work is required, a subsequent site visit will be required.
- Repairs and Maintenance
 - Identify major works (e.g. kitchen refurbishment)
 - Urgent/hazardous work - REPORT IMMEDIATELY
 - Note: minor works to be identified by contractor just prior to delivery.



Fig 2. Example of elevation photos

4.0 Program design guidelines

4.1 GUIDELINE STRUCTURE

This section sets out the areas of design that are included and excluded within the RtB Program. To ensure a consistent design response for alterations, additions and R&M, the Guidelines should be used to guide both the concept design stage and the final detailed design packages.

The Guidelines have been structured to include **Performance Requirements, Design Considerations** and **Target Provisions** relating to internal and external spaces of the houses under review.

It should be noted that **Target Provisions** nominate best practice targets, and are not intended to be proscriptive. Different regions in the NT may require alternate solutions due to factors such as climate, and alternate solutions may be considered by agreement with DLGHCD.

Given the wide range of housing types, construction methodologies, asset quality and age, site orientations and locations, the Guidelines focus on minimum standards for inclusion in the concept design and detailed design packages. It is important that any existing functionality or spatial arrangements of the existing houses are not diminished by the introduction of alterations and additions. This could include elements such as cross-ventilation, access to secure and private wet areas, outdoor living area sizes and adaptability of houses.

DLGHCD may consider alternative design approaches, due to the criteria being unachievable or by occupant request.

This section is to be read in conjunction with:

- Standard Specification for Small Building Works (excluding sanitary fixtures)
- Remote Community Housing Schedules Upgrades Generic
- AS 4299 1995 Adaptable Housing Standard
- Liveable Housing Design Guidelines (2017)
- The 9 Healthy Living Practices, Health Habitat

Compliance and Standards

It is accepted by the DLGHCD that due to the diversity of housing condition, design and layout full compliance with the above noted guidelines and National Construction Code provisions may not be realistic, nor practical.


Wherever possible consideration should be given to upgrading the house to comply with relevant standards, codes and guidelines, and where this is not possible, for this to be clearly articulated in the Architects Notes in the Concept Design Booklet and subsequent Construction documents.

4.2 DESIGN OBJECTIVES

In addition to the objectives outlined in 1.6 of this document, the notes below refer to Design Objectives of the Program.

The following are overarching objectives for the design of any RtB alterations and addition building works:

- **Robust and Flexible:**
Ensure that any design work is robust, and allows for future modifications / alterations wherever possible. These could be noted in the concept booklet to demonstrate future staging, development or even sub-division of the site may be possible.
- **Accessible:**
Houses should aim to achieve SILVER standards of the Liveable Housing Design Guidelines (2017) and requirements of AS 4299 (1995) the Adaptable Housing Standard.
- All houses should aim to be 'visitable' and allow basic provisions for ramp access, level thresholds to wet areas and living areas, and ease of use within toilets and showers.
- **Healthy, Safe and Secure.**
Designers should consider the 9 Healthy Living Practices and seek to enhance health hardware functionality to achieve these. Consideration should also be given to the HLP's which focus on site and environmental factors that can improve health outcomes.



The 9 Healthy Living Practices:

HLP 1	Washing People
HLP 2	Washing clothes and bedding
HLP 3	Removing waste water safely
HLP 4	Improving nutrition, the ability to store prepare and cook food
HLP 5	Reducing the negative impacts of overcrowding
HLP 6	Reducing the negative effects of animals, insects and vermin
HLP 7	Reducing the health impacts of dust
HLP 8	Controlling the temperature of the living environment
HLP 9	Reducing hazards that cause trauma

4.3 MAXIMUM DESIGN PARAMETERS

The Room to Breathe Program overarching objective to reduce the negative effects of overovercrowding by either adding bedrooms, living areas and other spaces, or modifying housing to better suit the requirements of the tenants.

There may be scenarios whereby the level of occupancy assessed required a large number of bedrooms to be added to a house. An example of this may be an existing 2 bedroom house with an occupancy in excess of 10 persons, which would require an additional 4 bedrooms to achieve a reduction in overovercrowding stress.

The resulting outcome would be a 6 bedroom house, with up to three toilets and two showers. This is a larger house than would be expected to be built under any standard HomeBuild NT housing designed, and may not meet the objectives of a long term sustainable house as R&M and running costs may become considerable.

To counter these kinds of scenarios, a series of Maximum Design Parameters has been established to guide the design process, and to ensure that the RtB Program delivers housing that is best suited to tenants now, but also meets the long term requirements of public housing for the NT Government.

This is detailed below and is the maximum limit to scope of works. In exceptional circumstances, and through agreement with DLGHCD the approved Scope of Works may exceed these Maximum Design Parameters.

Maximum Design Parameters: All Houses

- 5 bedrooms
- 2 bathrooms (2x toilets and 2x showers - one of each being separate, with hand washing facilities in each)
- 1 Laundry (separate to other wet areas)
- 1 Kitchen (sized to suit housing size)
- 2 Internal Living Areas (sized to suit housing size, and climatic conditions)
- 2 Outdoor Living Areas (eg. front and rear verandah)
- 1 Store

In all cases, and unless specifically agreed by the delegated officer in the RPDO, the Program's Maximum Design Parameters are:

- **No more than three additional bedrooms and one additional bathroom (either a combined bathroom, or one WC and one shower room) to be added to an existing house, and**
- **No house to exceed a maximum of five bedrooms and two bathrooms (or one bathroom, one WC and one shower room).**

In addition to the above a single lot may receive up to one ancillary house (granny flat) if there is a specific family need to be co-located, or there is limited access to additional sites within the community. If designed as a standalone house it must conform to the NT Planning Code and be no more than 50m².

Other elements such as outdoor living areas, modifications to existing bathrooms and laundries to improve healthy living practices, installation of screening for dogs and improving accessibility within the house may be considered part of RtB, as long as they clearly do not constitute Repairs and Maintenance.

If the scoping team identify the need for housing requirements greater than the Maximum Design Parameters, they must advise and confirm with the community and the Primary Client that the RtB Program alone cannot accommodate the demand. In these situations the possible solution may include a combination of elements from the Room to Breathe and HomeBuild NT programs. Alternatively the Lot should be referred to the HomeBuild NT Program for review and potential inclusion.

In all instances where a Scoping Team visit a house, major repairs and maintenance scoping should be carried out for possible inclusion into the final contractor packages of works for the community.

Repairs and maintenance are to be separately identified and funded under the OCOFOH repairs and maintenance program. Refer to appendices to a guide to what constitutes Room to Breathe works and when is to be identified as repairs and maintenance.

Beyond Economic Repair (BER) and the Room to Breathe Program

The Room to Breathe program is designed to provide upgrades, extensions and modifications to existing houses to reduce the negative impacts of overcrowding on households. In many instances the requirements to upgrade or add space to existing houses may exceed the cost of building a new house in a similar location. In this instance the RtB team or its consultants may recommend that the house be classified as "Beyond Economic Repair". The table below indicates the maximum target budget provision for houses receiving RtB works.

Additional bedrooms	Maximum budget	Notes	Inclusions/ Exclusions
Up to one bedroom (ie: from 3 to 4 bedroom)	\$200 000		Inclusions: All additional scoped items such as bedrooms, bathrooms, showers, toilets, modifications to wet areas and kitchens, outdoor living areas, pathways and clotheslines.
Up to two bedrooms (ie: from 2 to 4 bedroom)	\$250 000		Inclusions: All additional scoped items such as bedrooms, bathrooms, showers, toilets, modifications to wet areas and kitchens, outdoor living areas, pathways and clotheslines.
Up to three bedrooms (ie: from 2 to 5 bedroom)	\$325 000	Three additional bedrooms allowed only when separate approval is granted and where it is the best possible outcome for the household.	Exclusions: General repairs and maintenance, site servicing upgrades, landscape (such as tree removal) and any urgent site works, repair works or 'make safe' provisions.

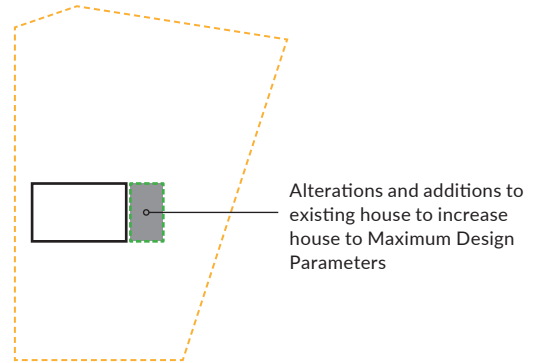
The above figures include all additional scoped items such as extra bedrooms, bathrooms, shower rooms, toilets, modifications to wet areas and kitchens, outdoor living areas, pathways, clotheslines, but exclude general Repairs and Maintenance, site servicing upgrades, landscape (such as tree removal) and any urgent site works, repair works or 'make safe' provisions.

4.4 SITE OPTIONS

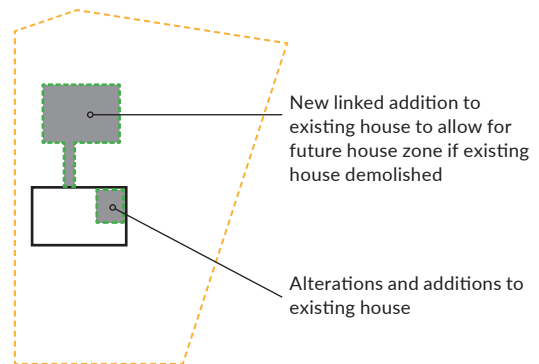
When developing a design response through the Tenant Co-Design Workshop the scope of work reaches the limit of the maximum design parameters, it should trigger consideration of other options. These options include:

- Option 1: ideal house size (as described above)
- Option 2: add a linked but separate addition which has the ability to be retained in future demolition of the existing asset.
- Option 3: Subdivide the lot and add a new house.

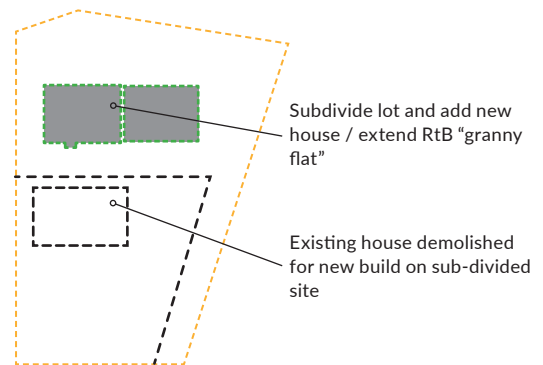
Liaison with the HomeBuild NT Team may also be required if the options above cannot be implemented, and overcrowding levels can only be resolved through the delivery of new housing.



Scenario 1: Maximum House Outcome



Scenario 2: Linked House, capable of future separation



Scenario 3: Subdivision of existing lot and new build



4.5 WET AREAS

Performance Requirements

- HLP1 the ability to wash people, particularly children
- HLP2 the ability to wash clothes and bedding
- HLP3 removing waste safely from the house and immediate living environment
- HLP5 reducing the negative effects of overcrowding
- To provide sufficient hot water capacity for washing for the number of occupants.
- To provide safe, discrete, robust and functional wet areas which are easily accessed and utilised by all occupants.
- Designed and located to maximise natural ventilation and sized appropriately for the house type and number of intended occupants.
- Designed to be free from flooding and ponding across all floor surfaces when not in use.

Design Considerations

- Locate all bathrooms so as to be accessible from bedrooms and living areas.
- Entry points of bathrooms and toilets are to be discrete, private and secure in relation to indoor and outdoor living areas.
- Disable adaptable design (space and provision for mounting grab rails as per AS1428 as and when required by the occupant's needs).
- Fittings and fixtures are to be robust and readily replaceable with easily obtainable items.
- Hobless shower recess designed to restrict water flow out of recess.
- Provide a splashback to shower, hand basins, and laundry troughs.
- All sub-ground plumbing waste is to be sized at 100mm diameter.
- All floor wastes are to be sized at 100mm diameter opening and are to be fitted with a drainage flange.
- Provide non mechanical vent or mechanical exhaust if required for certification.
- Provide access to natural ventilation and light.
- Laundries may be provided in an external undercover location.
- Hand basins to be located in the same room as toilets.

Target Provision

- 50L hot water per person per day for washing, adjusted to accommodate two typical sizes of hot water systems:
 - Target - 180 litre hot water system litre for a 1 or 2 bed home.
 - Target - 310 litre hot water system for a 3 or 4 bed home, or
- Provision for either solar hot water system or Heat Pump (region dependent, and by agreement with DLGHCD).
- In 2 bedroom houses provide:
 - 1 shower room with hand-washing basin PLUS
 - 1 toilet room with hand-washing basin PLUS
 - 1 laundry.
- In 3 bedroom houses provide:
 - 1 accessible bathroom with shower, toilet and hand-washing basin (UA fixtures only installed if necessary); OR
 - 1 accessible shower room with hand-washing basin PLUS
 - accessible toilet room with hand-washing basin; PLUS
 - 1 laundry.
- In 4 or more bedroom houses provide:
 - 1 accessible bathroom with shower, toilet and hand-washing basin (UA fixtures only installed if necessary); PLUS
 - 1 shower room with hand-washing basin; PLUS
 - 1 toilet room with hand-washing basin; PLUS
 - 1 laundry; and
 - Consider additional space and service connection for installation of an extra washing machine.
- Shower room to be min.1200mm x 2200mm. Provide dry bench seat, overhead shelf, fixed shower rose, soap dish, grab/towel rail.
- Toilet room to be min.1200mm x 2200mm. Provide pan, hand basin and tapware, toilet roll holder, shelf, mirror.
- UA Bathroom to be meet current AS1428 sizing requirements. Provide shower, toilet, basin, adjustable shower rose, shower rail, soap dish, shelf, mirror, towel/grab rail, coat hooks. Wall design to allow for fixing AS1428 fixtures and fittings (i.e. handrails).
- Laundry to have a trough and tapware suitable for washing children, under trough storage, overhead shelf, coat hooks.
- Provide convenient access to the clothes drying zone from the laundry.
- Floor wastes to be provided in all wet areas, including Scupper Drains to standard detail (refer Appendices).
- Toilet pan and connections suitable for future adaptation to a pan designed for disabled use without the need for rectification work.

4.6 KITCHEN

Performance Requirements

- HLP#4 improving nutrition: the ability to store, prepare and cook food.
- HLP#6 reducing the negative contact between people and animals, insects and vermin.
- Smoke Alarms to be installed to AS3786:2014.
- To provide secure storage of food for multiple family groups.
- To provide a functional food preparation area suitably sized for the size of house and number of occupants.
- To provide adequate bench space.
- To be readily adaptable to accommodate the widest range of occupants over the life of the house.

Design Considerations

- Kitchens are to be visually separated from bathrooms and WCs.
- Provide stainless steel cabinetry, fixtures and fittings.
- Provide doors on cabinetry if there is a strong desire from the tenant.

Target Provision

- Target kitchen bench provision is measured at the front of the bench and does not include any section used by kitchen sinks, cooktops, or any other item inserted into the benchtop
- Target bench lengths:
 - 2 bedroom house 2200mm.
 - 3 bedroom house 2400mm.
 - 4+ bedroom house 2600mm.
- Target pantry/overhead shelving provision (total linear meters):
 - 2 bedroom house 3200mm.
 - 3 bedroom house 4000mm.
 - 4+ bedroom house 4800mm.
- Sink provision:
 - 2 bowl / 1 drainer to all houses.
- 1 lockable pantry per family (refer DLGHCD standard detail B172).
- Provide 1 x 4-drawer unit to each kitchen.
- Provide a fridge space of 1000mm width.
- Provide a stove space of maximum 900mm.
- Provide a width of minimum 1200mm between benches.

4.7 BEDROOMS

Performance Requirements

- To provide a dedicated sleeping area complying with Class C of AS4299 (Adaptable Housing).
- To provide adequate space for a variety of sleeping arrangements.

Design Considerations

- Bedrooms should be located to allow visual separation from living areas.
- Bedrooms to be positioned away from noisy living areas if possible.
- Locate windows to promote cross-ventilation, ideally on two opposing walls.
- Provide obscure or anodised aluminium louvres below 800mm (nominal) for privacy.
- Maintain existing floor levels where possible.

Target Provision

- Minimum bedroom area 12sq.m with one internal dimension to be at least 3000mm.
- Provide ceiling fan and allowance for future A/C (refer 4.8 Climate Control).
- Provide 2 windows if possible, minimum 1, with a clear opening of 1m².
- Provide 1 robe (refer DLGHCD standard detail B172).

4.8 INTERNAL LIVING AREAS

Performance Requirement:

- HLP#5 reducing the negative effects of overcrowding.
- To provide an internal common area for the sharing of meals and gathering of a household.
- To be appropriately sized to accommodate the amount of furniture and number of occupants intended by the size of house.
- To be appropriately sized for specific occupant requirements (e.g. to accommodate visitors).
- The layout of living and dining zones should allow sufficient circulation space so as to prevent interruption by house traffic.

Design Considerations:

- The dining space should be located adjacent to the kitchen.
- The living space may be functionally separate to the dining area, however both zones should be accessible to each other.
- Consider location of TV.
- Living and dining space should be proportionate to the number of bedrooms in the house.
- Internal living areas should provide passive surveillance to outside areas.
- External living areas should be easily accessed from the living area.

Target Provisions (Living area):

- One wall dimension greater than 3000mm.
- Free to air TV connection point.
- Telephone connection point.
- Provide a ceiling fan.
- Provide a double GPO.

Target Provisions (Dining area):

To allow for:

- 1 and 2 bedroom houses:
 - Dining table - 900mm x 900mm (with four chairs).
- 3+ bedroom houses:
 - Dining table - 1800mm x 900mm (with six chairs).
- One wall dimension greater than:
 - 2 bedroom - 2400mm.
 - 3+ bedrooms - 3200mm.
- Provide a ceiling fan.
- Provide a double GPO.

4.9 OUTDOOR LIVING AREA

Performance Requirement:

- HLP#6 reducing the negative contact between people and animals, insects and vermin.
- To provide an external covered space/s sized appropriately for the number of intended occupants.
- To provide spaces which can keep out dogs, and keep children in.
- To provide a safe and secure space with adequate privacy.

Design Considerations:

- Outdoor living areas may include verandahs, shelter structures and bbq areas.
- Where providing enclosure to verandahs, consider the following:
 - To keep dogs out and children in - provide a balustrade height screen with gate.
 - To keep valuables safe - provide a secure full height screen (allowing for ventilation).
 - To have private access to wet areas - provide a secure full height screen with visual privacy.
- Where multiple family groups occupy a house, provide multiple outdoor living areas ideally on opposite side of the house.
- All outdoor living areas should be attached to the house and directly accessed from the internal living area.
- The floor area should be free draining, free from ponding, and extend beyond the drip line of the roof to prevent erosion.
- Where clothes drying areas are located on or adjacent to external living areas, clothes drying space should be in addition to the provisions stated below.
- No ceiling fans as a default, but available if requested.
- Installation of crimsafe mesh to be carefully considered due to it's cost, robustness and effect on cross ventilation (reduction) of enclosed spaces.

Target Provisions:

- 1 and 2 bedroom houses:
 - approx. 14m² (one dimension of 3500mm).
- 3+ bedroom houses:
 - 2 outdoor living spaces.
 - approx. 18m² (one dimension of 3000mm).
- To outdoor living areas attached to the house:
 - 2 weatherproof double GPO's.
 - Smoke alarm to densely screened/enclosed areas.
 - Provide separate lighting at each external entry doorway.
 - Provide floodlights with sunset switch to illuminate house surrounds for security.

4.10 ACCESSIBILITY

Performance Requirement:

- Provision of fixtures and fittings to assist those who are aged, frail or have a disability.
- Level access to all living, sleeping areas, and connections to existing house.

Design Considerations:

- Provision of one UA bathroom in all houses with 3 or more bedrooms. (Fixtures and fittings for AS1428 compliance to only be installed if necessary.)
- Ramp for wheelchair access.
- Widen doorways and access pathways.
- Install grab-rails, hand-rails, lever taps and step wedges.

4.11 STORE ROOM

Performance Requirement:

- To provide a weatherproof storage space for items such as mattresses.
- Prevent the room being used as a sleeping space.

Design Considerations:

- Storage to be attached to the house.
- Store rooms located under the main roof area are to be of the same construction and finish as the house.
- Store rooms are to have a target internal ceiling height of 2650mm.
- Store rooms located under the main roof area that are not in the main living areas (e.g. on the verandah) are only to be accessible from outside the main living area. Access to the storeroom shall not be through a connecting door from the main living area to the storeroom located on the verandah.
- Provide single lighting point.
- Provide adequate ventilation to internal storerooms.
- No ceiling fans or GPO's to store rooms.

Target Provisions:

- Store area up to 5sq.m with a maximum dimension in one direction of 1.2m.
- Provide lockable hardware.

4.12 ANCILLARY

Clothes Line

Performance requirement

- To provide a safe, secure, appropriate area for the drying of clothes away from public view.
- To provide low maintenance, durable and robust equipment appropriately sized for the intended size of household.

Design Considerations

- Locate clothes drying to the rear or side of a house away from main and side streets.
- Provide a sealed surface with circulation space underneath and a path for ease of access.
- Locate clothes drying area to maximise direct sunlight.
- Locate clothes drying so as to not impede on open living areas.
- Avoid ponding issues in yards where paths to the clothes drying area transect lawn area.

Target Provision

- 1 clothes line with concrete hardstand (4m long x 2m wide).

Mowing/DUST SUPPRESSION Strip

Performance requirement

- HLP#7 reducing dust.

Target Provision

- Provide min. 600mm wide reinforced concrete dust suppression strip to the perimeter of house.
- Provide 900mm x 900mm (where practical) concrete pad to tap hardstands.

Concrete Pathways

Target Provision

- Provide 1000mm wide reinforced concrete pathway from front boundary of property (or fenceline – in which case also install gate) to the main house entry point.
- Provide 1000mm wide reinforced concrete pathway from house exit (closest to laundry) to clothes line.
- Ancillary concrete should be 100mm (thickness) minimum to provide a min of 50mm reinforcing fabric covering.

Climate Control

Performance requirement

- HLP#8 controlling the temperature of the living environment.

Design Considerations

- Provide penetrations to wall and service connection (single GPO) for future installation of A/C.
- Provide ceiling fans to existing rooms provided ceiling height is a minimum of 2400 above floor level.
- Provide ceiling fans to new bedrooms, internal living spaces and kitchens.
- Refer DLGHCD air conditioner Panel detail in appendices.
- For existing air conditioner units install condensate drainage away from any habitable indoor or outdoor areas.

Painting

Target Provision

- Internal and external painting of all existing painted surfaces (including fascias and flashing).
- Consider painting of ColorBond surfaces where surface damage has occurred, such as long term deterioration, cyclone stripping and trees rubbing.
- Provide a colour scheme from standard DLGHCD selections.
- Provide house/lot numbering to meter box or wall facing street address.

ENTRY AWNINGS

Target Provision

- Provide awnings to front and rear access (1200mm x 1200mm) including concrete landing.

4.13 PROGRAM EXCLUSIONS:

- Fencing (new fencing to be provided only if it is necessary to relocate existing fencing).
- Carports.
- Air Conditioning or heating. Wall penetrations and power to be provided only.
- Landscaping and irrigation.
- Driveways.
- Paint colours other than those options specified.
- Additional storeys. Houses to remain single storey.

5.0 APPENDICES

- 5.1 Concept Design Booklet example
- 5.2 Standard Specification for Small Building Works (excluding sanitary fixtures)
- 5.3 Remote Community Housing Schedules Upgrades Generic
- 5.4 NTG Standard Details - various
- 5.5 RtB and R&M Schedule



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