



Jabiru Design Requirements



The Mirarr people have a Vision for Jabiru as:

"A world leading ecologically sustainable, economically and socially vibrant community where traditional Aboriginal culture, all people and the natural environment flourishes."



Contents

Introduction	1
How to use this document	2
Complying with the Jabiru Design Requirements	3
Exemption	3
Climate	3
Design goals	4
Residential	4
Non-residential buildings	4
Urban Design Requirements and Principles	5
Requirements and Principles for all dwellings and streetscapes in Jabiru	6
Annexure 1: Jabiru Materials List and Colour Palette	7
Annexure 2: Standard Outdoor Living Area Designs	15

Introduction

Jabiru is located within the dual-World Heritage listed Kakadu National Park.

The land was handed back to the Mirarr Traditional Owners on the 26th of June 2021, after 40-years of dispossession. It is the first Aboriginal owned and managed former mining town in Australia.

In 2018, as part of the future planning for Jabiru post-mining, Mirarr developed the Jabiru Masterplan 2018–2028 and Vision for Jabiru. This document includes the goals to guide the transition of Jabiru to a vibrant and sustainable tourism and government services hub. It also provides the Vision of the Mirarr – for Jabiru to become a “world leading ecologically sustainable, economically and socially vibrant community where traditional Aboriginal culture, all people and the natural environment flourishes.”

The adoption of the Jabiru Masterplan and its inclusion in Schedule 2 of the 2019 Jabiru Town Plan has provided crucial planning certainty for government and private industry and is the keystone document for all planning and development.

The Masterplan is the foundation document for all development in Jabiru. It reflects and enhances Mirarr knowledge, culture and tradition. It embraces its unique location through consistent urban form, building design, landscaping, and infrastructure while protecting the World Heritage values of Kakadu National Park.

As the Township Entity, Gundjeihmi Aboriginal Corporation Jabiru Town (GACJT) represents the Mirarr Traditional Owners for all issues related to Jabiru. GACJT administers the land tenure over Jabiru in accordance with the Township Lease and has a formal role under the Jabiru Town Plan to ensure compliance with the Jabiru Masterplan.

GACJT holds responsibility for the implementation of the Jabiru Masterplan which is supported by GACJT's Jabiru Masterplan Development Management Framework that was approved by the GACJT Board in 2022.

This Jabiru Design Requirement document is part of this larger framework and directs how existing and new builds in Jabiru should be designed or retrofitted to ensure compliance with the Jabiru Masterplan and Vision.

Implementation of Mirarr's Masterplan and adherence to Mirarr's Vision is a tangible act of respect for Mirarr culture and the traditional ownership and custody of the land.



How to use this document

This document combines the Jabiru Design Guideline 2021 and the Housing Design Requirements 2021. These two documents have been combined into one document to avoid duplication. While changes have been made to provide clarity and to ensure that obligations are realistic and achievable (especially for existing buildings) it is not intended to impose any additional obligations.

Any person or organisation that is planning works on any land in Jabiru held under a sublease, or on behalf of a proposed future sublessee, must comply with this document.

Firstly, it's critical to ensure that any person or organisation that is planning design or redesign works to be familiar with these Design Requirements and what the Mirarr require to ensure that buildings and spaces are designed or retrofitted in a way that is sustainable and suitable for the climate.

Your next step is to find the relevant requirements that apply to your project. This will change depending on the building and space. For the purposes of this document, when we talk about homes, we mean both houses and units.

Finally, if any of these requirements cannot be met, this document sets out the process to apply for an exemption/non-conformance waiver.

Proponents must also consider any external obligations, 'including acts and regulations, including but not limited to the NT planning Scheme, NT Building Act and the National Construction Code.'

These Jabiru Design Requirements include:

- the [Jabiru Materials List and Colour Palette](#), as annexed to these Design Requirements at Annexure 1.
- The [Standard Outdoor Living Area Designs](#) policy annexed at Annexure 2.



Complying with the Jabiru Design Requirements

The Jabiru Design Requirements (Design Requirements) were created to ensure that buildings and spaces in Jabiru are designed or redesigned using quality materials and building practices to be sustainable and suitable to Jabiru's hot climate. Many existing buildings and spaces in Jabiru do not suit the climatic conditions and are not up to current standards of sustainability in particular insulation.

The Design Requirements are based on the eight goals of the Jabiru Masterplan and Vision. By conforming with the Design Requirements, developers and sub-lessees will contribute to implementing the Mirarr Vision for Jabiru.

The Design Requirements apply to urban design, development, new buildings and the retrofit of existing buildings and urban environment in Jabiru. The Design Requirements inform sub-lessees of their obligations under the sub-lease. Sub-lease holders shall ensure buildings and infrastructure conform to these Design Requirements.

These Design Requirements should also be used to guide any future developments or improvements in Jabiru more generally. GACJT will also assess any proposed future works against these Design Requirements.

These Design Requirements provide both design principles and requirements. Principles listed are to be met where possible, while requirements are mandatory.

GACJT will not provide consent for shipping containers, caravans, buses, tents or demountable/transportable buildings in residential zones.

The use of shipping containers, caravans, buses, demountable/transportable buildings in zones other than residential is subject to the Jabiru Town Plan including approval, if applicable, through the NT Development Consent Authority.

All new builds and refurbishment works must comply with the [Jabiru Materials List and Colour Palette](#), as annexed to these Design Requirements at Annexure 1.

All homes must have an Outdoor Living Area installed in accordance with the [Standard Outdoor Living Area](#) policy annexed at Annexure 2.

Exemption

Failure to meet these Design Requirements will constitute a breach of the sub-lease unless GACJT has extended, varied or waived the requirement in writing through a **non-conformance waiver**.

Waivers will be assessed by GACJT on a case-by-case basis. Any waiver request must address the Jabiru Masterplan and Vision and establish consistency with the Jabiru Masterplan Development Management Framework as directed on page 10 under "Non-Conformance Waiver Request".

Climate

Jabiru's warming climate is an important consideration for the design or redesign of any building or space to ensure that residents, workers and visitors are comfortable while limiting power consumption.

Aboriginal people of the region (Bininj) characterise the climate in Kakadu as six distinct seasons. Bininj refer to Jabiru's monsoon season as Kudjewk (December to April). It is characterised by high rainfall and humidity and moderate heat. The prevailing breezes come predominantly from the West, Northwest, and North over the Kudjewk season. This season creates uncomfortable living conditions and makes it challenging to keep indoor temperatures cool without the use of air conditioning. Many of the requirements in this document are intended to improve this comfort for residents in a sustainable way.

Bininj describe the dry (May to September) as a series of seasons - Yekke, Wurrkeng and Kurrung. In these seasons the prevailing winds come from the south east with cooler nighttime temperatures and little to no rain.

The transitional season Kunumele (October to November) is characterised by high temperatures and humidity with little or no rain and winds. At this time it is particularly challenging to keep indoor temperatures within human comfort levels without the use of air conditioning.

According to a [2020 report](#), Jabiru will only get hotter, with a predicted total of days over 40 degrees rising from only 2 currently, to 21 by 2065. It will become only more important to ensure that buildings and spaces are designed with the climate in mind.

Design goals

The following seven goals guide the requirements and principles for existing and new developments in Jabiru:

1. **Apply Bioclimatic Design:** designing buildings to take advantage of local climate conditions to reduce energy consumption, improve occupant comfort, and minimize environmental impact. Bioclimatic building design must enhance human thermal comfort.
2. **Carbon Neutral Design:** Jabiru will be carbon neutral and demonstrate the potential to achieve township scale carbon reduction through a consistent approach to buildings, energy production and public spaces.
3. **Disaster Resilient:** Jabiru will be a disaster resilient community.
4. **Environmental Values:** urban development, including urban form and the built environment of Jabiru must reflect and enhance the world heritage values of Kakadu Notional Park.
5. **Public Places, Open Spaces and Pathways:** Jabiru public places, open spaces and pathways will be safe, walkable, connected and designed to reflect and enhance sense of place, biodiversity and protection from the elements.
6. **Cultural Values:** design features will reflect and enhance Bininj knowledge, culture, and tradition.
7. **Jabiru will aspire to become a showcase sustainable community.**

Residential

Most of Jabiru's 475 units and houses were built in the early 1980s and are not suitable for Jabiru's climate, or modern day living. Homes were built quickly to accommodate mining exploration and development. These volume-built homes come in 1-bed and 2-bed attached unit configurations, and 3-bed and 4-bed detached house configurations.

With high thermal mass construction and small building openings, existing dwellings in Jabiru are not well designed to suit the climate. Buildings are often poorly oriented, and windows are poorly shaded and subject to direct sun with subsequent heat gain. Many existing dwellings do not benefit from prevailing winds throughout the seasons. Existing homes often have inadequate insulation and do not seal well so that heat easily enters buildings and cool air from air conditioners can easily escape.

Refer to the table on **pages 5 and 6** for requirements and principles for existing and new homes.

Non-residential buildings

Similarly to the existing housing stock in Jabiru, many existing non-residential properties were built in the early 1980s and improvements are necessary to improve quality of structures, worker comfort, visual amenity and sustainability.

Refer to the table on **pages 5 and 6** for requirements and principles for existing and new non-residential buildings. Designs are assessed on a case-by-case basis and against the Masterplan Goals and Vision.

Requirements and Principles for Urban Design and all dwellings and streetscapes in Jabiru

1. Urban Design Requirement and Principles

Ref	Works	Urban Design
1	Material colours shall comply with the Jabiru Materials List and Colour Palette as annexed to these Design Requirements at Annexure 1 .	R
2	Design of all buildings, landscaping and public art installations will demonstrate respect for Bininj culture and their Cultural Intellectual Property rights.	P
3	The design of Jabiru's streets, buildings, neighbourhoods, and public spaces will be underpinned with Bininj story, nomenclature, and cultural themes.	P
4	Design and construction of trunk infrastructure applies water sensitive urban design principles to enhance the world heritage values of Kakadu National Park and reduce the impacts of development upon the natural water cycle.	P
5	Design of public buildings and spaces to Crime Prevention through Environmental Design (CPTED) principals.	P
6	Jabiru's public places, open spaces and pathways will be safe, walkable, connected and designed to reflect and enhance sense of place, biodiversity, and protection from the elements.	P
7	Landscaping design and species selection enhances community disaster resilience by reducing potential fire hazards, impacts from wind borne debris and heat stress of residents.	P
8	Landscaping to public spaces and buildings to enhance thermal comfort and shade buildings, public walkways and cycle paths.	P
9	Pathways are designed and landscaped to enhance pedestrian thermal comfort and in accordance with AS/NZS 1428 for the convenience of all users.	P
10	Pathways are designed and maintained as shared and inclusive spaces for the convenience of all users.	P
11	Pathways are to be designed to protect pedestrians from extreme heat and other harsh elements.	P
12	Public and open spaces are designed and landscaped to support natural processes, and to facilitate the movement of species to find resources, such as food and water.	P
13	Public spaces and open areas must include water sensitive design to manage seasonal flows and enhance catchment scale water quality, biodiversity protection and landscape amenity.	P
14	Streetscapes and public spaces apply a consistent use of natural materials, textures, and appearances in accordance with a Townwide Landscaping Plan, Urban Reforestation Plan and/ or Weed Management Plan (if any) developed by the current relevant department responsible for management of Kakadu National Park.	P
15	The design and management of public and open spaces promote a sense of pride in the community's public assets and provides opportunities for social interaction.	P
16	The design of buildings, street furniture, structures and public open spaces uses natural materials, textures, and appearances to achieve consistency with the world heritage values of Kakadu National Park and the Jabiru Materials List and Colour Palette.	P
17	Wayfinding within and between the precincts is achieved through deliberate place making, signage, maps and technological applications that identifies important elements such as streets, places, information, and services.	P
18	If achievable, Jabiru will achieve and showcase certification as a sustainable community on the Implementation of bioclimatic design principles and sustainability measures, and individual new builds will achieve individual certification.	P

2. Requirements and Principles for all dwellings and streetscapes in Jabiru

Ref	Works	New Home	Existing Home	New non-residential	Existing non-residential
1	All new builds, and works requiring a building permit, shall comply with the National Construction Code (NCC).	R	R	R	R
2	All new residential builds must have a NatHERS rating that is the greater of the NCC or 7 stars.	R	P	-	-
3	Ensure that windows and doors systems and seals are in good condition, operate freely, are watertight and airtight. (No metal galleries or single skin metal louvres)	R	R	R	R
4	Install ceiling fans for air circulation and cooling.	NCC	R	NCC	R
5	Establish landscaping to shade dwellings, in particular east and west walls.	R	P	R	P
6	Material colours shall comply with the Jabiru Materials List and Colour Palette as annexed to these Design Requirements at Annexure 1.	R	R	R	R
7	Seal ceiling penetrations, gaps at cornices, fans, downlights, exhaust fans etc.	R	R	R	R
8	Protect windows and walls from direct sunlight with eaves and awnings designed for year-round sun-shading.	R	P	R	P
9	Construct covered external living spaces as an extension of internal living spaces in accordance with the Standard Outdoor Living Area Policy at Annexure 2.	R	R	-	-
10	Install water efficient plumbing fixtures, including water saving devices.	NCC	P	NCC	P
11	Upgrade existing residential homes to achieve a minimum NatHERS 5-star energy rating (Grace Period: to be achieved by 1 January 2028).	NCC	R	-	-
12	Insulate walls in air-conditioned spaces.	NCC	P	NCC	P
13	Avoid windows to east and west orientations.	P	P	P	P
14	Designs should avoid the use of guttering. If guttering cannot be avoided, it shall be designed in accordance with the NCC2022 Gutter Downpipe Overflow (GDO) calculator +15%. Evidence of calculation to be provided.	R	R	R	R
15	Design of all buildings, landscaping and public art installations will demonstrate respect for Bininj culture and their Cultural Intellectual Property rights.	P	P	P	P
16	The design of Jabiru's streets, buildings, neighbourhoods, and public spaces will be underpinned with Bininj story, nomenclature, and cultural themes.	P	P	P	P

R	P	NCC	-
Requirement	Principle	Works must be in accordance with the standard set out in the National Construction Code	N/A