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Mparntwe (Alice Springs) Transport Disadvantage Research Project

Investigating the dimensions and responses to transport disadvantage in Mparntwe (Alice Springs)

Final Report

WORKING
TOGETHER
WALKING
TOGETHER

30 June 2023

Citation

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Acknowledgments

We acknowledge the Traditional Owners of Mparntwe (Alice Springs) and their connections to Country and community. We pay our respect to their Elders past, present and future and extend that respect to all Aboriginal and Torres Strait Islander peoples today.

This project was brought about by Child Friendly Alice's Transport Working Group and developed collaboratively by Tangentyere Council Research Hub, which is part of Tangentyere Council Aboriginal Corporation (TCAC), an Aboriginal owned and controlled organisation. Qualitative research was led by TCAC Senior Aboriginal Researcher Vanessa Davis. The research findings include survey work previously conducted by David Denmark.

We would like to thank the following people and organisations for their contributions to the project:

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David Denmark – Consultant

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Introduction

This report has been prepared as part of the project, *Investigating the dimensions and responses to transport disadvantage in Mparntwe (Alice Springs)* being undertaken by TCAC on behalf of the Child Friendly Alice – Transport Working Group.

The purpose is to provide research findings and recommendations for reducing the occurrence of transport disadvantage in Alice Springs.

Access to transport is an important enabling factor for improved individual wellbeing and for the overall development of families and communities. In small regional locations, such as Alice Springs, internal transport networks are dominated by individual and household car commuting. However, these options can be particularly problematic for low-income individuals, families and the elderly due prohibitive costs associated with private vehicle ownership, including purchasing, registration, insurance, and maintenance costs, as well as barriers to attaining driver's licensing. Understanding the various drivers of transport disadvantage and barriers to accessing existing transport services is a critical aspect of working towards improvement of transport options. In Alice Springs, public transport and community transport systems have important roles to play in supporting people to access services. Using a community-centred approach ensures that community voices, ideas and needs are at the centre of strategies designed to address existing inequities. This research is first step in enabling improved transport in Alice Springs.

The project is partnership between TCAC Research Hub and the Child Friendly Alice – Transport Working Group. Its purpose is to better understand transport disadvantage in Alice Springs, including its impacts on children and families, and to develop strategies that improve transport options for those affected by transport disadvantage. The project scope covers all of Alice Springs (whole of community), with a particular focus on areas/groups that are likely to be most disadvantaged with respect to transport, and who are likely to experience intersecting sources of disadvantages including income, age and gender, including emphasis on:

- Aboriginal people, particularly resident from Town Camps and Amoonguna
- Migrants, particularly those with culturally and linguistic diverse (CALD) backgrounds
- Low-income families
- Young people
- People with disabilities
- Elderly people.

Our methodology involves mixed methods analysis. We have drawn on survey data and Northern Territory (NT) Government datasets for local public and school bus services. We also listened and learnt from community members and service providers (using semi-structured interviews) to build an understanding of the existing transport issues and potential solutions.

Project aims and objectives

This project aims to better understand transport disadvantage in Alice Springs and to identify strategies to improve transport options for people and communities affected by transport disadvantage. The research work underpinning the project has three main objectives, and several research questions support each objective. Individual research objectives interact with the other parts of the research.

Objective 1: To investigate the characteristics of transport disadvantage in Alice Springs based on community member perspectives and experiences.

- What areas are not covered by public transport and what does this mean for the community members?
- What factors contribute to transport disadvantage?
- What services/agencies do community members rely on to overcome limited transport access?

Objective 2: To identify community sector organisations' current operational capacity to provide client/community transport services and determine gaps in current services across Alice Springs.

- What organisations provide transports to their clients/community members, and how is this delivered?
- What opportunities are there to co-ordinate existing services and achieve greater transport access to those most disadvantaged?

Objective 3: To investigate community and public transport solutions that reduce transport disadvantage in Alice Springs.

- What solutions/recommendations should be considered to improve transport systems?
- What models of community transport could be supported and developed further?

Executive summary and recommendations

This report investigates transport disadvantage in Alice Springs. We present research findings about the experience of transport disadvantage in Alice Springs, based on surveys of community members and service providers, analysis of public transport datasets, qualitative interviews with community members and stakeholder organisations, and expert interviews conducted from 2021-2022.

Our key findings include:

- Transport disadvantage is widespread in Alice Springs, and acutely felt within Town Camps and Amoonguna
- Key factors contributing to transport disadvantage in the Alice Springs context include limited transport options and high transport costs for low-income households
- Impacts of transport disadvantage include lack of access to services, energy and food insecurity, and reduced employment and educational opportunities, including crucial early childhood learning opportunities
- The Alice Springs public transport system can do better to meet the needs of its community, with problems identified in public transport network coverage, location of bus stops, frequency of services, perceived passenger safety, and community awareness of public transport options
- Communities and stakeholders support improvements to transport services in Alice Springs, based upon a whole community approach.

Drawing on the evidence base, we propose **10 recommendations** to improve transport services and accessibility in Alice Springs. The recommendations are to:

1. Acknowledge that transport disadvantage affects individuals and families in Alice Springs and surrounding areas, in particular Town Camp and Amoonguna community members, remote-living Aboriginal people who access services in Alice Springs, low-income households, young families, new arrivals, some CALD community members, and people living with disabilities
2. Commit to achieving improved transport services in Alice Springs through a whole community transport strategy
3. Commit to centring community and community-identified needs within the transport strategy proposed in Recommendation 2
4. Improve public transport routes, service frequency (including on weekends), public transport settings, and community awareness of public transport services
5. Introduce additional free public transport services
6. Review existing community transport services offered by Alice Springs-based organisations as formal parts of their operations through partnerships between government and key community organisations
7. Pilot flexible, on-demand and free community transport options through partnerships between government and key community organisations
8. Introduce targeted travel subsidies for priority groups e.g., for new parents attending health appointments and support programs
9. Support community infrastructure upgrades in Town Camps and Amoonguna, recognising that crucial infrastructure needs interact with and amplify transport disadvantage for priority communities
10. Support digital inclusivity for Town Camps and Amoonguna, recognising that online access to services can help mitigate transport disadvantage for priority communities.

1. Background

1.1. Literature

Transport disadvantage reflects a lack of access to transport options required to meet essential individual and family needs. Essential needs are fundamental building blocks that every child and family require to thrive (SNAICC, 2017). Amongst these, transport is essential for securing and maintaining employment, accessing education and healthcare, and participating in social activities (Cullen et al., 2017; Guenther, 2019). Those most vulnerable to transport disadvantage – the elderly, young people, people with ongoing medical needs, women, unemployed, and low income earners – are also more likely to be socially excluded (Hine and Mitchell, 2003, Clifton and Lucas, 2004). Thus, lack of adequate transport options can intensify inequalities and social exclusion by creating barriers to accessing core needs (Clifton and Lucas, 2004; Hine and Mitchell, 2017; Kenyon et al., 2002; Lucas, 2012). A detailed literature review explores these concepts and issues (**Appendix 1**).

Transport disadvantage studies from Australia have predominantly focused on experiences in urban locations (e.g. Delbosc and Currie, 2011; Engels and Liu, 2011; Rachele et al., 2017). In Australia, transport disadvantage can involve difficulty accessing public and private transport, and maintaining private transport, due to the costs associated with purchase and upkeep of vehicles (Currie et al., 2009; Rosier and McDonald, 2011). For First Nations people, there may be difficulties in obtaining driver's licences, accessing quality, affordable cars, and maintaining vehicle registrations, with the result that issues of transport disadvantage and criminal justice pathways often interact (Cullen et al., 2017; Helps and Moller, 2007). These complex factors can make families dependent not only on public and community transport services but commercial services such as taxis and minibuses with added pressures for constrained household budgets (Tangentyere Council, 2020). Prior research undertaken in the remote setting of Katherine identified complex, intersectional disadvantages and inequities faced by community members who were frequent attenders to the Katherine Hospital Emergency Department, including that 80% had little or no transport, and concurrently experienced food insecurity, domestic violence, housing issues and/or overcrowding (Quilty et al., 2019). Recent research on food insecurity amongst pregnant women and young families in remote First Nations communities identified transport disadvantage and energy insecurity as being inherently linked to food insecurity, and more accessible and affordable transport options as important requirements for improving individual and community outcomes (Booth et al., 2023). Transport disadvantage is also a recognised barrier to participation in early childhood education and care (ECEC) by Aboriginal and Torres Strait Islander children and families, undermining crucial early development opportunities (Biddle, 2007; NACCHO, 2023; NIAA, 2021). Addressing transport disadvantage therefore provides opportunities to improve outcomes for families and children across intersecting sources of disadvantage.

In Alice Springs transport disadvantage is widespread, but particularly affects low-income Aboriginal families in Town Camps and Amoonguna (Currie and Senbergs, 2007; Guenther, 2019). Community services often fill gaps by providing transport for clients and families to access services and attend programs (e.g. Congress, 2022). The initial report for Child Friendly Alice identified that "while for the majority of people living in Alice Springs there are good job opportunities, low housing stress and relatively good transport options, for those living in Town Camps issues of transport, employment, housing quality and provision of basic infrastructure are all significant concerns" (Guenther, 2019, p. 19). Guenther's report identified that people living south of The Gap are disproportionally impacted by limited public transport options and facilities, with an estimated 1,700 people living 1.8 kilometres or more from the nearest bus stop. Limited transport options for Town Camps were identified as part of the challenge for improving child and family outcomes in Alice Springs (Guenther, 2019).

The Town Camp Wellness Framework defines seven priority areas identified by Town Camp community members as critical to their wellness – Keeping Country, Shelter, Identity, Camp/Community Leadership, Knowledge, Healing and Community (Tangentyere Council, 2020). The concept of 'shelter' encompasses all the basic needs to live a healthy and happy life, including the adequate provision of transport. This project aims to expand on prior research by investigating areas and people affected by transport disadvantage, along with factors contributing to such inequities. Using this evidence base, opportunities can be identified for improving access to transport services in Alice Springs.

1.2. Stakeholders and governance

The project is overseen by Child Friendly Alice's Transport Working Group. The work of the TCAC Research Hub is also overseen by the TCAC Board of Directors. The Transport Working Group comprises of representatives from government and non-government agencies.

The Transport Working Group is a key project partner, contributing both funding and oversight to the project. In preparing this report, we drew on insights from the group by discussing preliminary findings and testing recommendations in a roundtable setting. It is hoped that this group will use the report to progress transport solutions that have the support of the community.

The funding for this research is provided through a consultancy agreement. TCAC Research Hub submitted an expression of interest and was the successful applicant. The total funding for the project is $44,000, with 20% upfront and the remainder on completion of the project.

The funding is auspiced by NTCOSS and includes contributions from members of the Transport Working Group, including NT Government – Department of infrastructure, Planning and Logistics, Department of Health – Central Australian Health Service, Department of Education, Department of Chief Minister, and NGOs including Anglicare NT, Lutheran Care, Red Cross, and Connected Beginning.

1.3. Study design and method

Study design

The study uses a mixed methods approach and draws on number of existing data sources, as well collecting primary qualitative data through interviews and workshops. Applying quantitative and qualitative methodologies, we analyse data and contextualise this analysis with the lived experiences of community members and insights from community-based service providers. Using mixed methods ensures that understanding is gained of the extent of issues across the community and depth of experiences and problems faced among individual households.

The mixed methods approach ensures that unique aspects of transport disadvantage for families are investigated. Drawing on a range of datasets ensures that the greater understanding of barriers and gaps in existing transport services are understood. Further, the combination of data will be used to bring together stakeholders in determining solutions and opportunities for improving transport access. The stages of the project are outlined below.

Stage 1: Analysis of existing quantitative datasets

The first stage of the research draws on existing data sources.

Tangentyere Wellness Survey: We utilise survey responses from 120 town camp residents who responded to the Town Camp Wellness survey in 2020/21. The dataset includes 9 questions related to transport access and needs, and the broader dataset provides individual and family characteristics. We analyse this dataset to better understand transport issues facing Town Camp residents.

Department of Infrastructure, Planning and Logistics: The Department of Infrastructure, Planning and Logistics (DIPL) provided data on public bus and school bus usage in Alice Springs. The public bus dataset covers usage of public bus routes from 2016-17 through to 2020-21 and includes data about fare types, boardings and alightings at bus stops across the Alice Springs public bus network. The school bus dataset covers student usage of school buses from 2020 and 2021. Data provided for 2020 is truncated compared to the school year (i.e., only available for March – early December 2020). Using the school bus datasets, maximum daily usage, and numbers of boardings and alightings at school bus stops is available across the Alice Springs school bus network. We analyse these datasets to better understand usage of the public transport system.

Existing survey data: We review and present key points from the online Alice Springs Transport Survey conducted in mid 2021 by the previous project consultant, David Denmark.

Stage 2: Contextualising and triangulating the data with community and stakeholder perspectives

The second stage of the research seeks to contextualise and triangulate the findings from Stage 1. Stage 2 provides depth in both the understanding of transport disadvantage in this context and opportunities to reduce it.

Interviews and workshops with transport disadvantaged groups: Communities affected by transport disadvantage were engaged for workshops, interviews and participation in online surveys. We held workshops with key community members who are particularly exposed to and experience transport disadvantage, including residents of Town Camps. The qualitative insights from these workshops enable us to contextualise quantitative findings and to seek other feedback on transport issues that may not have been collected in existing datasets. Workshops were planned with Amoonguna residents and representatives of CALD communities, but unfortunately these could not occur within the timeframe for the final report.

Stakeholder interviews: We have conducted semi-structured interviews with staff in NT Government agencies and non-government organisations whose client base is impacted by transport disadvantage. The interviews focus on documenting stakeholder understanding of the barriers to accessing public transport, their organisation's role in transporting clients, and suggestions for improving transport options in Alice Springs.

Stage 3: Final workshops and collation of data

The final stage of the data collection is a roundtable with the Transport Working Group to consider findings and to work towards decisions/processes that seek to reduce transport disadvantage.

Once preliminary findings were obtained, a roundtable was held with the Transport Working Group to discuss the interim report including initial results, ongoing research activities, and preliminary recommendations. This provided stakeholder organisations an opportunity to provide their perspectives on the direction of research, review the recommendations and discuss proposed system and service responses to addressing transport disadvantage. Feedback and insights gathered at the roundtable have informed the final report and its recommendations.

Study population and sample

There are two study populations that are drawn on for this project: (1) the Alice Springs community, and (2) organisational stakeholders. Our aim is to engage with those in the community most acutely affected by transport disadvantage and organisational representatives who provide transport options for their clients. Capturing both groups is essential to the research process.

In relation to quantitative data, our project relies on existing data sources, where the sample has already been determined. For example, we draw on data from the Tangentyere Wellness Survey, which is a dataset of over 120 Town Camp residents representing each Town Camp.

Town Camp data and participants

The Tangentyere Wellness Survey was designed by TCAC to support Town Camp Local Decision Making and includes key questions related to transport and accessing services. Every Town Camp household was invited to participate in the survey and, in most cases, the person responding to the survey was the head tenant. There was a total of 126 survey participants, with 72% female and 28% male respondents (**Table 1**). There was reasonable representation across adult age groups and Town Camps, however younger people are underrepresented with the average age of respondents being 44 years.

Table 1. Characteristics of Town Camp participants in Wellness Survey

Sample characteristics	Number (%)
Gender	
Female	89 (71.8%)
Male	35 (28.2%)
Age group	
20-34 years	22 (26.2%)
35-54 years	40 (47.6%)

Sample characteristics	Number (%)
>55 years	22 (26.2%)
Centrelink recipient	
No	11 (9.2%)
Yes	109 (90.8%)
Employment	
Not employed	97 (81.5%)
Employed	22 (18.5%)
Education level	of School
No school or some primary school	34 (27.6%)
Some High School	33 (26.8%)
Years 10 and above	56 (45.5%)
Town camp region	
Northern	30 (24.4%)
Eastern	16 (13.0%)
Southern	37 (30.1%)
Western	40 (32.5%)

The data was de-identified (removal of identifying information address, name), and participants allocated a code. All participant codes and identifiers are stored separate from the data and only accessed by the project administrator. Researchers involved in this analysis do not have access to use de-identified data and will not have access to identifiable data unless undertaking data linkage. The key data analysed from this dataset include the following transport variables:

- Individual with license/registered vehicle
- Other families with license/registered vehicle
- Main modes of transport used by individuals: car, public bus, taxi, support from services/programs, walk, ride
- Services that people have difficulty accessing
- Main place of shopping.

Data has been aggregated and reported together, no individual Town Camps are identified and no individuals or households living in a Town Camp are identifiable. We do not disclose/report data cells where n<5, which could potentially contain identifiable data.

CALD Survey data and participants

A short online survey was designed to obtain insights about the experiences of CALD communities in accessing transport in Alice Springs. The survey comprised five questions to ascertain the cultural background or first language of the respondent, how far they live from the city centre, their primary mode of transport, specific experiences of limited access to transport, and suggestions for improving their transport options. The process of informing CALD community members about the survey and collecting survey responses was managed by the Multicultural Community Services of Central Australia (MCSCA), who asked key community leaders to participate. Five survey responses were obtained during the allocated timeframe and all survey responses were provided without identifying information except for indicators of cultural background and/or the first language of the respondent. The small number of survey participants means that only select insights can be derived about the experiences of CALD community members in accessing transport in Alice Springs, noting that the responses have been provided by individuals with attuned knowledge of their communities. Future studies could valuably build upon these insights by investigating the issue of transport disadvantage amongst CALD communities across a representative sample including younger people.

DIPL data

All NT Government data has been provided in non-identifiable format and analysed at aggregate level. Small cells <5 are not reported, in accordance with government data procedures. The data from DIPL includes:

- Public Bus usage – passenger numbers by route and bus stop (2016/17 to 2020/21 inclusive)
- School Bus usage – passenger numbers by route and bus stop (2020 and 2021).

1.4. Ethics

The project received approval for conduct of the study from the Central Australian Human Research Ethics Committee (HREC). The HREC Ethics Reference Number for the study is HREC CA-21-4178.

1.5. Definitions used in this report

Community transport is a safe, affordable, and flexible form of transport, run by the community for the community. The aim is to engage communities by offering services responsive to their needs. In the Alice Springs context, we recognise that community transport may be offered as a core part of an organisation's services or incidentally, in an ad hoc way that supports core services and client needs. To distinguish between the two approaches, we adopt the terms 'formal' and 'informal' community transport in this report. We also recognise that community transport may be offered generally to the whole community, or by service organisations for the benefit of their discrete community or client base. Currently, there are no community-wide community transport options in Alice Springs and the surrounding areas, however some organisations offer purpose-specific transport services to discrete groups. For example, Central Australian Aboriginal Congress (CAAC) offers transport services to clients living within clinic service areas for the purpose of attending scheduled health appointments. The TCAC Night and Youth Patrol provides night transport for people at risk including intoxicated people, victims of violence and the homeless based on a one-way, one-ride policy on any given night.[1]

Public transport is a system of transport available for use by the public, typically managed on a schedule, operated on established routes, and with a fare applying for each trip.

Whole community is an approach and process by which community members, organisations, and government can collectively understand and assess the needs of their communities and identify the best ways to strengthen community capacity and achieve community-aligned outcomes and goals. The following three principles are foundational for a whole community approach:

1. Understand and meet the actual needs of the whole community,
2. Engage and empower all parts of the community,
3. Strengthen what works well in communities daily.

Transport disadvantage reflects individual or family circumstances whereby transport difficulties are consistently identified as a factor that restricts the capacity to access services and participate in activities.

[1] For more information, see https://www.caac.org.au and https://www.tangentyere.org.au/community-safety#NightPatrol.

2. Existing transport options in Alice Springs

The transport system in Alice Springs is comprised of private transport (own vehicles), commercial transport (e.g., taxis, minibuses and ride share vehicles), public transport (buses, school buses), and various forms of community transport. In rural and remote areas, community transport provides additional services due to inflexibility and lack of public transport and often specifically targets certain client groups. In Alice Springs, some community organisations provide transport to ensure that clients can attend services and programs, often on an ad hoc basis with limited co-ordination across organisations. For example, Tangentyere Council provides informal transport assistance for Town Camp residents and Congress Health Clinics offer formalised transport services for clients to and from medical appointments.

There is a need to ensure that public transport and community transport options work to support each other and avoid duplication. The role of community transport is to 'top up' transport services for client groups where there are identified needs and funding is available. However, "community transport services … should not detract from the mainstream public transport network but should feed into it or provide a reasonable alternative for those who cannot access it" (Community Transport Association, 2001, p. 19).

In the NT, public transport is structured and governed by legislation, but community transport is outside regulatory frameworks. There is a need to address how the two services should intersect in the Alice Springs context. Additionally, commercial transport services such as taxis and minibuses have varying degrees of regulation in the Territory (**see Appendix 1**). The extent to which transport disadvantaged groups are dependent upon commercial transport options needs to be considered, alongside the cost burdens of such transport options for low-income households. Transport strategies must seek to provide affordable mobility options that enable transport disadvantaged individuals and families to access core services and activities that enable healthy and meaningful lives.

3. Research findings

3.1. Tangentyere Wellness Survey: Transport-related findings

Key findings

- **The most popular form of transport among Town Camp survey respondents is private car**
- **However, at the individual level many adults surveyed do not have a registered vehicle or a driver's licence**
- **Town Campers who are employed or have higher levels of education are more likely to have a driver's licence and registered car**
- **Town Campers receiving Centrelink or living in Southern Town Camps are less likely to have a driver's licence and registered car**
- **Over half of those surveyed report at least some difficulty accessing services, with Centrelink services presenting the most difficulty followed by shopping and hospital services**
- **There is a strong relationship between transport disadvantage (including lack of access to a registered car) and reported difficulty accessing services.**

Forms of transport used by Town Camp residents

Understanding the forms of transport most used by Town Camp residents is an important part of assessing and responding to transport disadvantage in Alice Springs. Amongst Town Camp residents the most popular form of transport is private car, with 56% of survey participants reporting use of a private car always or often for commuting. Taxi and walking are the next most popular forms of transport, with 25% of participants reporting that they always/often use taxi and 21% always/often walk. Only 10% of participants report using public bus services always/often. By comparison, 12% indicate that they always/often use support services for transport and 32% indicate they sometimes use support services. Very few of the Town Camp residents surveyed (9%) use bikes for commuting, which may also be related to ages represented within the participant group (**Figure 1**).

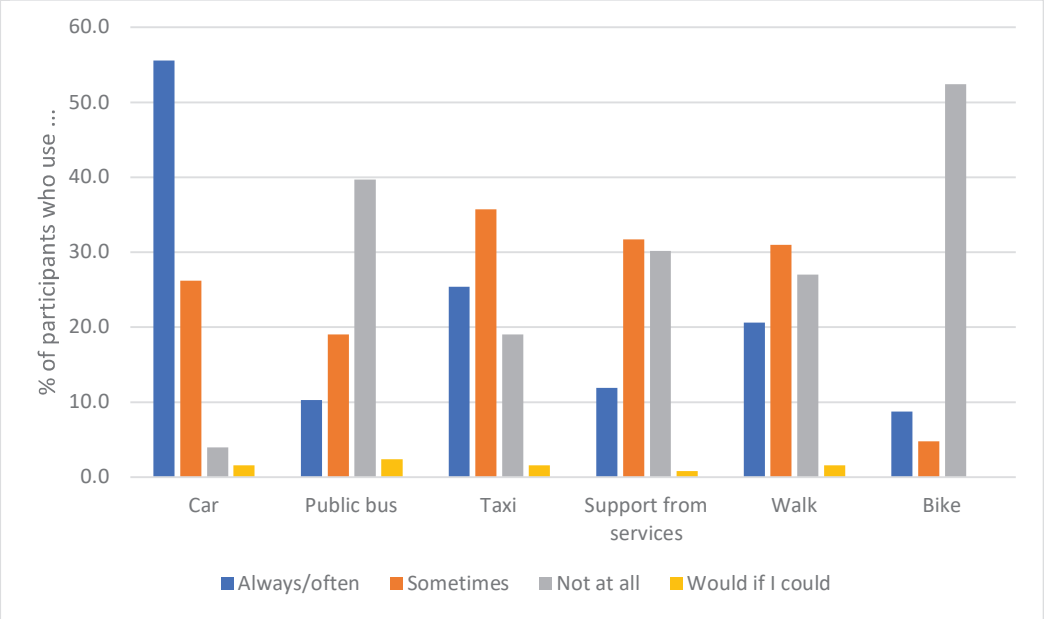
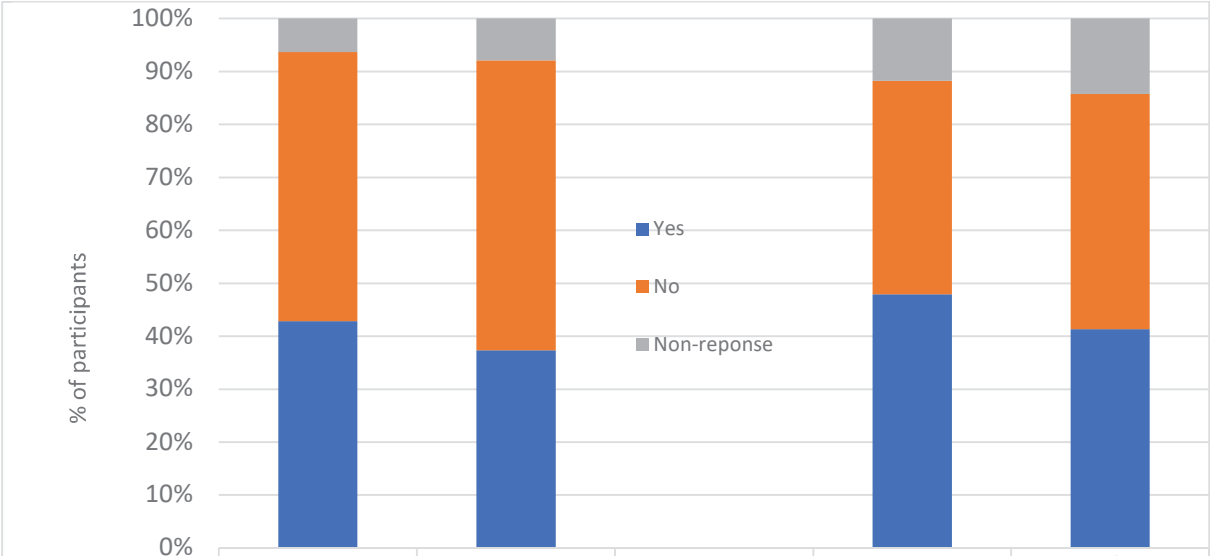


Figure 2. Forms of transport used by Town Camp residents

Access to driver's license and registered vehicles among individuals and households

While private car is the preferred option for Town Camp residents, at the individual level many adults do not have a registered vehicle or a driver licence. At the time of the survey, only 42% of respondents had a driver's licence and 37% had a registered vehicle. These figures are substantially higher than 2014 survey results which found 23% of Town Camp participants had a driver's licence and 19% had vehicle access in an emergency (Baker IDI Heart & Diabetes Institute, 2015). Therefore, we caution that innate selection bias may be impacting the survey results. The survey primarily involved head tenants i.e., those individuals who have either self-selected or been encouraged by other householders to assume responsibility for the administration of the house. This potentiates a greater likelihood that respondents have a driver's licence and registered vehicle.

We find that Town Camp residents who do not have their own vehicle frequently rely on family members to assist with transport and commuting. Within Town Camp households, we found that slightly higher numbers reported that other family in the house had a licence or registered car. In total, 45% reported that other family had a licence and 41% reported that other family had a registered car (**Figure 2**). Combining both individual and family ownership together, 23% of households were still without a licenced driver or registered car in their household. Given the reliance on private cars, the fact that slightly more than one in five households don't have access to licence driver and/or registered car in the household demonstrates a significant area of transport disadvantage.



	I have a licence	I have a registered car		Other family have a licence	Other family have a registered car
Non-reponse	8	10		14	18
No	64	69		48	56
Yes	54	47		57	52

Figure 2. Driver's licences and registered vehicles among Town Camp individuals and households

We analysed the factors associated with having a driver's licence and registered vehicle for an individual. Having a driver's licence is associated with being in employment (unadjusted PRR 1.93, 95% CI 1.36-2.73, p-value 0.138) and having higher levels of education (unadjusted PRR 2.43, 95% CI 1.27-4.63, p-value 0.007). Conversely, people on Centrelink benefits are less likely to have a driver's licence. Those living in southern Town Camps (unadjusted PRR 0.41, 95% CI 0.21-0.80, p-value 0.009) are less likely to have a driver's licence. There is no statistically significant difference in having a driver's licence by gender or age group (**Table 2**).

Table 2. Analysis of individual factors associated with having a driver's licence

	Have a drivers licence (%)	n/N	Prevalence Rate Ratio	P-value
Gender				
Female	44.0%	37/84	1 (base)	
Male	50.0%	16/32	1.39 (0.90-2.15)	0.138
Age group				
20-34 years	61.9%	13/21	1 (base)	
35-54 years	40.5%	15/37	0.65 (0.39-1.09)	0.107
>55 years	31.8%	7/22	0.51 (0.26-1.03)	0.061
Centrelink recipient				
No	90.9%	10/11	1 (base)	
Yes	41.6%	42/101	0.46 (0.34-0.62)	0.00001
Employment				
Not employed	39.6%	36/91	1.0 (base)	
Employed	76.2%	16/21	1.93 (1.36-2.73)	0.0001
Education level				
No school or primary school	24.2%	8/33	1 (base)	
Some High School	51.6%	16/31	2.13 (1.06-4.26)	0.033
Years 10 and above	58.8%	30/51	2.43 (1.27-4.63)	0.007
Town camp region				
Northern	55.6%	15/27	1 (base)	
Eastern	84.2%	13/16	0.59 (0.27-1.26)	0.173
Southern	33.3%	11/33	0.41 (0.21-0.80)	0.009
Western	61.5%	24/39	0.68 (0.42-1.09)	0.109

We observed that registered car ownership was also associated with being employed (unadjusted PRR 2.10, 95% CI 1.39-3.16, p-value 0.0001) and having higher education levels (unadjusted PRR 2.2, 95% CI 1.15-4.21, p-value 0.0001). Further, registered car ownership was less likely among Centrelink recipients (unadjusted PRR 0.42, 95% CI 0.28-0.62, p-value 0.0001) and those living in southern Town Camps (unadjusted PRR 0.41, 95% CI 0.21-0.80, p-value 0.0009) compared to other camps. We also observed that participants aged between 35-54 years were less likely than younger participants to own a registered vehicle but did not observe this for participants over 55 years (**Table 3**).

Table 3. Analysis of individual factors associated with owning a registered vehicle

	Own registered car %	(n/N)	Prevalence Rate Ratio	P-value
Gender				
Female	37.0%	31/80	1 (base)	
Male	51.5%	17/33	1.39 (0.90-2.15)	0.138
Age group				
20-34 years	57.9%	11/19	1 (base)	
35-54 years	29.7%	11/37	0.51 (0.27-0.96)	0.037
>55years	40.0%	8/20	0.69 (0.36-1.34)	0.272
Centrelink recipient				
No	81.8%	9/11	1 (base)	
Yes	34.3%	34/99	0.42 (0.28-0.62)	0.0001

	Own registered car %	(n/N)	Prevalence Rate Ratio	P-value
Employment				
Not employed	33.3%	30/90	1 (base)	
Employed	70.0%	14/20	2.10 (1.39-3.16)	0.0001
Education level				
No school or primary school	25.0%	8/32	1 (base)	
Some High School	36.7%	11/30	1.47 (0.68-3.14)	0.325
Years 10 and above	54.9%	28/51	2.2 (1.15-4.21)	0.018
Town camp region				
Northern	60.7%	17/28	1 (base)	
Eastern	35.7%	5/14	0.59 (0.27-1.26)	0.173
Southern	25.0%	8/32	0.41 (0.21-0.80)	0.009
Western	41.0%	16/39	0.68 (0.42-1.09)	0.109

Services accessibility is associated with transport disadvantage

Transport options are crucial because they provide people and families with access to services, support, and social participation. Overall, 54% of survey participants reported a lot to some difficulty accessing services, 29% reported no difficulty, and 17% did not provide a response (**Figure 3**). The survey asked respondents to report their level of difficulty in accessing common services used by Town Camp residents, including shopping, Centrelink, support services, clinics, and hospitals. The greatest proportion of participants reported difficulty accessing Centrelink, with 62% of participants reporting difficulty accessing the service at least sometimes. Following this, participants reported difficulty accessing shopping (56%) and hospital (55%) at least sometimes, implying likely interactions between transport disadvantage, food insecurity, and health, intersectionalities which are supported by academic studies (Booth et al., 2023; Quilty et al., 2019). Support services and clinics present somewhat lower levels of access difficulties for Town Camp respondents—however, 51% and 46% still report difficulties accessing support services and clinics, respectively, at least sometimes (**Figure 4**). Part of the reason Town Camp community members report lower levels of difficulty accessing support services and clinics may be due to satellite services located across town, transport services provided by organisations to assist client access, and community-based service delivery. For example, clinics have provided pop-up COVID-19 vaccination clinics in Town Camps and some support services provide in reach through Community Centres.

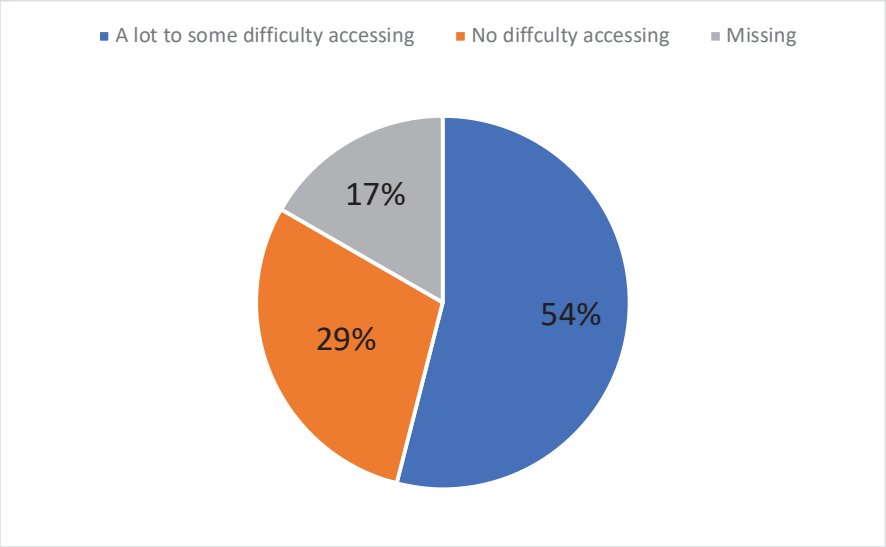
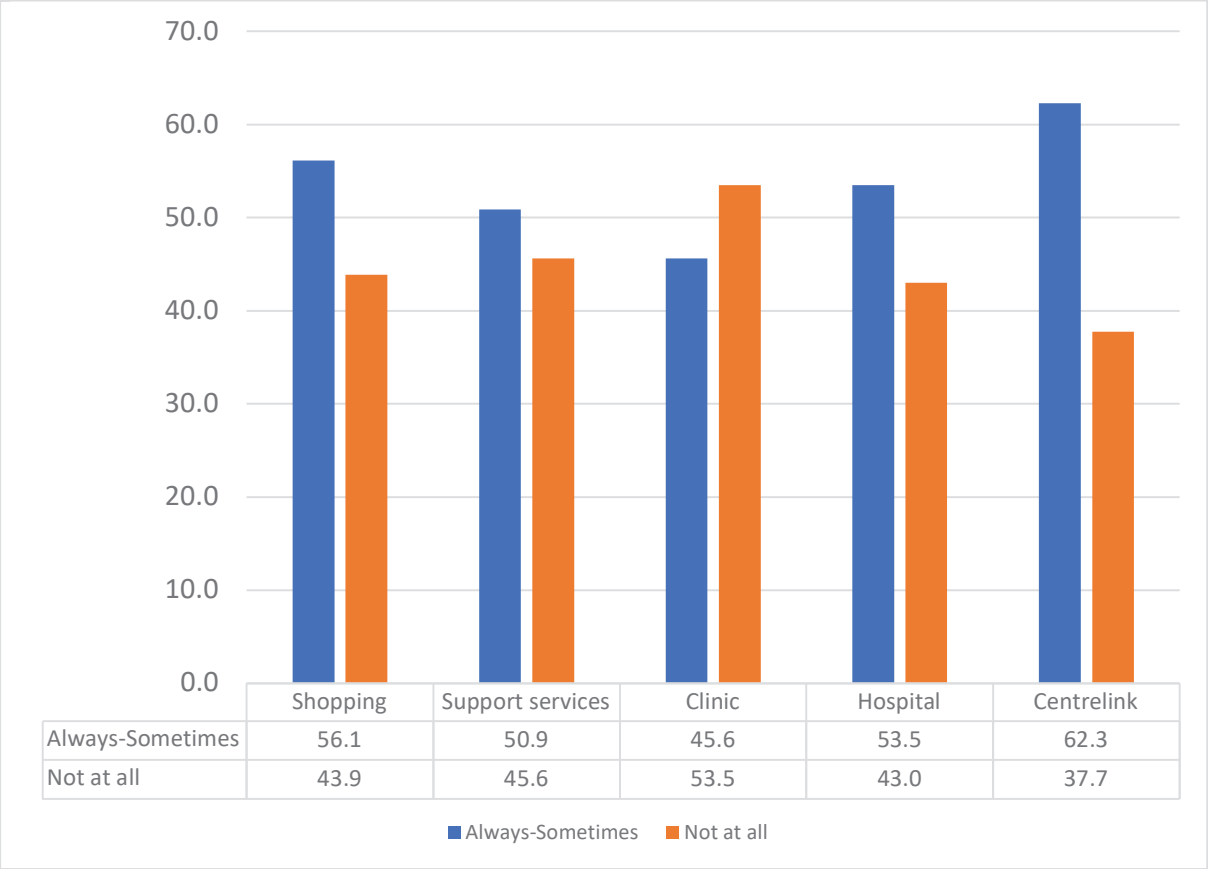


Figure 3. Service accessibility for Town Camp residents

Centrelink services for some Town Camp residents are likely to have become less accessible due to the move to online services and the closure of the Centrelink outreach service at TCAC's main office building in March 2020. We observe a strong correlation between transport disadvantage (including lack of access to a registered car) and reported difficulty accessing services. The equally strong implication is that improved transport services are likely to positively impact Town Camp resident's access to services and enable improved wellbeing for individuals and families.



	Shopping	Support services	Clinic	Hospital	Centrelink
Always-Sometimes	56.1	50.9	45.6	53.5	62.3
Not at all	43.9	45.6	53.5	43.0	37.7

Figure 4. Accessibility of commonly used services among Town Camp residents

3.2. Case Study 1: Missing the school bus

"Do you know, if kids are picked up, they would come to school"—Organisational stakeholder

Our research reveals that there is relatively low use of morning school buses from bus stops located near Town Camps (see **section 3.5** below). Different factors likely influence use of these morning bus services, including distances to bus stops from the home, early departure times, significant travel times before school starts, and associated safety and wellbeing concerns for young children. Organisational stakeholders identified a link in difficulty accessing public transport and school attendance especially for younger kids.
For example, we spoke to an organisational stakeholder in November 2022. They had just helped an Aboriginal grandmother and her two young grandchildren with transport to primary school in the morning. That morning, the kids had missed their school bus, which departs at 7:30am for an 8:30am school start. Typically, the young kids would be on connecting buses (via the interchange) for an hour before their school lessons begin. The direct route to their primary school is only 3 kilometres or a 5-minute car drive.

Grandma had phoned for a taxi but there was going to be a substantial wait and in this case the community organisation was able to step in and help with informal transport. The taxi fare from home to school would have been $13 one way. The organisational stakeholder informed us that Grandma was planning to walk home after dropping the children off to save money. She said this happens frequently.

When asked about ways to make it easier for her grandkids to catch the school bus in the mornings, Grandma suggested the bus should be direct and depart later i.e., 8 am. In our discussions, organisational stakeholders expressed concern about the impacts of early starts and significant school travel times on young children:

"In winter, the sun's only coming up at just before seven, and it's cold. That's too long for little kids to be on the bus before school. That's why by lunch time, they'll be cracking the shits … because they're tired." – Organisational stakeholder

Similar issues were identified by stakeholders for young school students' experiences on afternoon school buses, with concerns for child safety and wellbeing due to lengthy travel times home after school.

3.3. Case Study 2: Transport disadvantage within Alice Springs and beyond

Families experiencing transport disadvantage in Alice Springs indicate that their experience extends to difficulties travelling from Alice Springs to other places within the Territory and interstate. Transport affordability is a key issue. For example, significant costs are involved for families organising travel from Alice Springs to remote communities for cultural business where private hire vehicles are needed.
Similarly, costs of bus travel for families within the Territory is substantial. An Aboriginal family of six shared with us their experiences of booking commercial bus tickets from Alice Springs to Darwin. The one-way bus fares for two adults and four children totalled $2,047 (**Figure 5**). Travel time is around 22 hours. The travel costs represent significant budget pressures for low-income households and do not cover return travel, which will cost the family another $2,000.

FARES AND PAYMENT

Fare Price	$2,042.00
Booking Fee	$5.00
Total	**$2,047.00**

All AUD items include 10 % GST.

Figure 5. Costs for commercial bus travel from Alice Springs to Darwin for a family of six (2 x adults, 4 x young children, one-way)

Another Aboriginal family shared with us their experiences of the costs of travel from Alice Springs to Adelaide. For one adult and two teenagers, one-way fares totalled $1,091 (**Figure 6**). Travel time is 21 hours. Return travel to Alice Springs will cost the family another $1,100.

FARES AND PAYMENT

Fare Price	$1,086.00
Booking Fee	$5.00
Total	**$1,091.00**

All AUD items include 10 % GST.

Figure 6. Costs for commercial bus travel from Alice Springs to Adelaide for 1 x adult and 2 x teenagers (one-way)

Affordability and access problems also exist for travel to remote communities from Alice Springs. The travel cost for a one-way adult ticket to Elliott, NT currently ranges from $266 for early bird fares to $273 for

premium tickets with booking flexibility using Greyhound bus services.[2] The same trip on the Centre Bush Bus currently costs $215.[3] For families, remote travel costs are multiplied. For example, bus travel for one adult and one child aged between 3-14 years to Elliott on the Greyhound currently increases to $485-498 one way, or $370 on the Central Bush Bus.[4] Trips to community are necessary parts of maintaining family and cultural connections for Aboriginal households in Alice Springs, meaning remote travel costs are commonly borne by low-income families with constrained resources.

These cases highlight that the transport disadvantage experienced by households within Alice Springs is part of bigger picture of transport disadvantage affecting priority groups in the Northern Territory. Local transport disadvantage commonly intersects with wider experiences of disadvantage when it comes to mobility for essential needs (travel for cultural business, maintaining family connections and obligations).

3.4. Alice Springs Transport Survey results

Key findings

- **Community service organisations characterise transport disadvantage as being widespread in Alice Springs, and acutely felt within Town Camps**
- **Many of the organisations surveyed provide some form of community transport to people living in Alice Springs, often without external funding support**
- **Community transport services are most often provided to individuals and to a lesser extent to groups**
- **Some of the groups identified by community service organisations as being most affected by transport disadvantage include Town Camp residents, people and families living with disability, households without private vehicles, elderly people, young families, and new arrivals.**

The Alice Springs Transport Survey was conducted in mid 2021. It involved an online survey of representatives from service organisations which have contact with individuals and families experiencing transport disadvantage. Twenty-two organisations responded in part or in full to the survey. The questionnaire included 32 transport-related questions. Key questions included:

- Whether the organisation provides transport services for people who are transport disadvantaged in Alice Springs
- Which groups the organisation understand are affected by transport disadvantage
- Destinations that people have trouble accessing in the organisation's experience
- Organisational perceptions of the impacts of transport disadvantage on affected individuals and households
- Which age groups in their client base are most affected by transport disadvantage
- Where clients affected by transport disadvantage live
- How any community transport services the organisation offers are funded
- How any transport services are provided by the organisation (e.g., vouchers, organisation's vehicles)
- Whether the organisation can meet the demands for transport services
- If they cannot meet community transport needs, what are the impacts of those unmet needs for affected clients and communities, and
- If they supported the idea of a dedicated community transport service in Alice Springs.

[2] Based on fares obtained from <www.greyhound.com.au> for travel during late June 2023.
[3] Based on fares obtained from www.centrebushbus.com.au> for travel during late June 2023.
[4] As above.

Organisations providing community transport services

Many of the organisations surveyed provide some form of community transport to their clients within Alice Springs (68%) (**Figure 7**). Most of these organisations fund the provision of transport services internally (43%). Some organisations receive funding for transport services from the Commonwealth Government (24%) or the NT Government (19%) (**Figure 8**).

Amongst organisations surveyed, community transport services are primarily provided on an individual basis (38%), however a high proportion also provide group services (21%) or individual shared ride services (17%). Taxi vouchers or other supports such as fuel costs are also provided by organisations to clients and community members (17%) (**Figure 9**). Most services are provided on an on-demand basis (45%) with fewer services organised according to regular, fixed pick-ups and drop offs (35%). Missing from the dataset is information that indicates or estimates unmet demand for community transport services. The level of unmet demand in Alice Springs and surround areas is likely to be significant, given that existing formal and informal community transport options are purpose-specific, supporting some clients when criteria are met and where there is capacity.

A vast majority of the organisations thought it would be better if a transport service was available to address community needs (82%). This suggests that in providing transport the surveyed organisations are reducing their own capacity and resources for core priorities and services. No organisations disagreed outright with the idea of a dedicated transport service, however 18% of respondents were unsure about the concept. This may indicate that the type of transport service proposed is important, and without more detail respondents were uncertain about whether such a service would be capable of meeting their clients' transport needs.

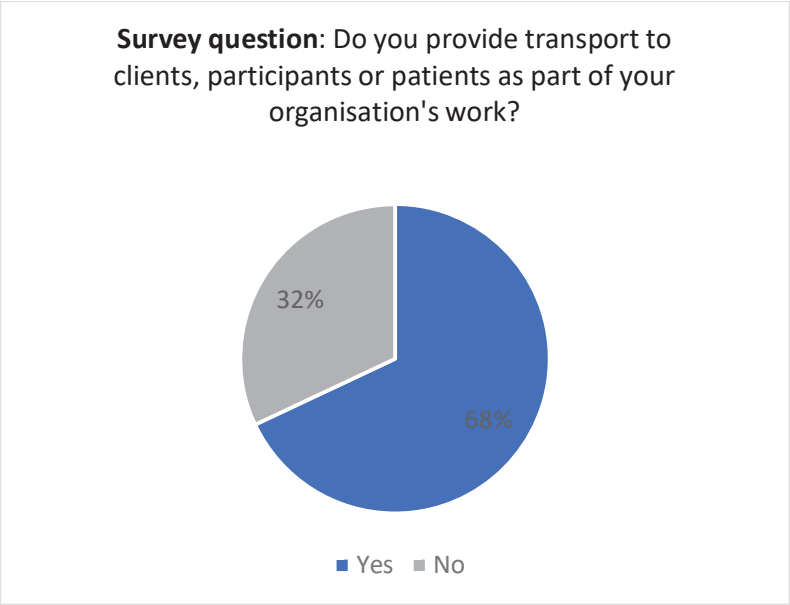


Figure 7. Percentage of surveyed organisations which provide transport services

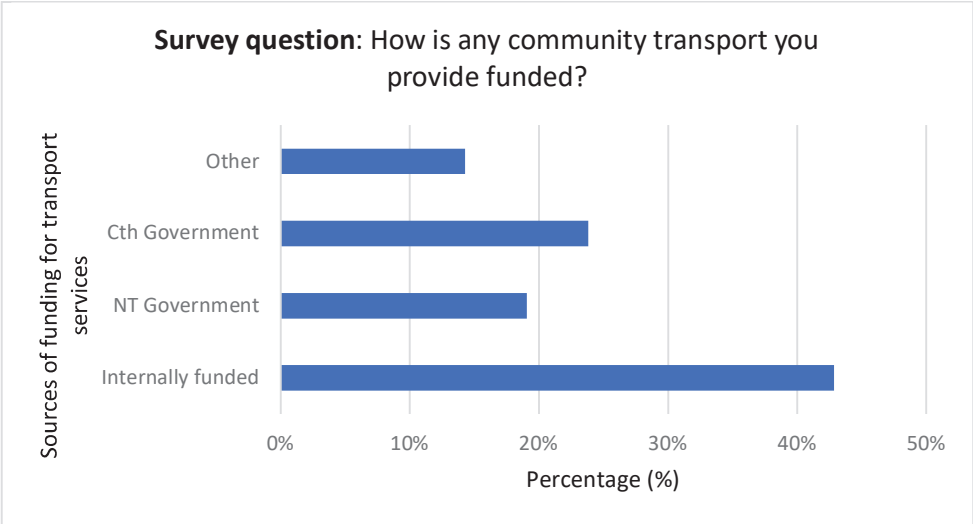


Figure 8. Sources of organisational funding for community transport services

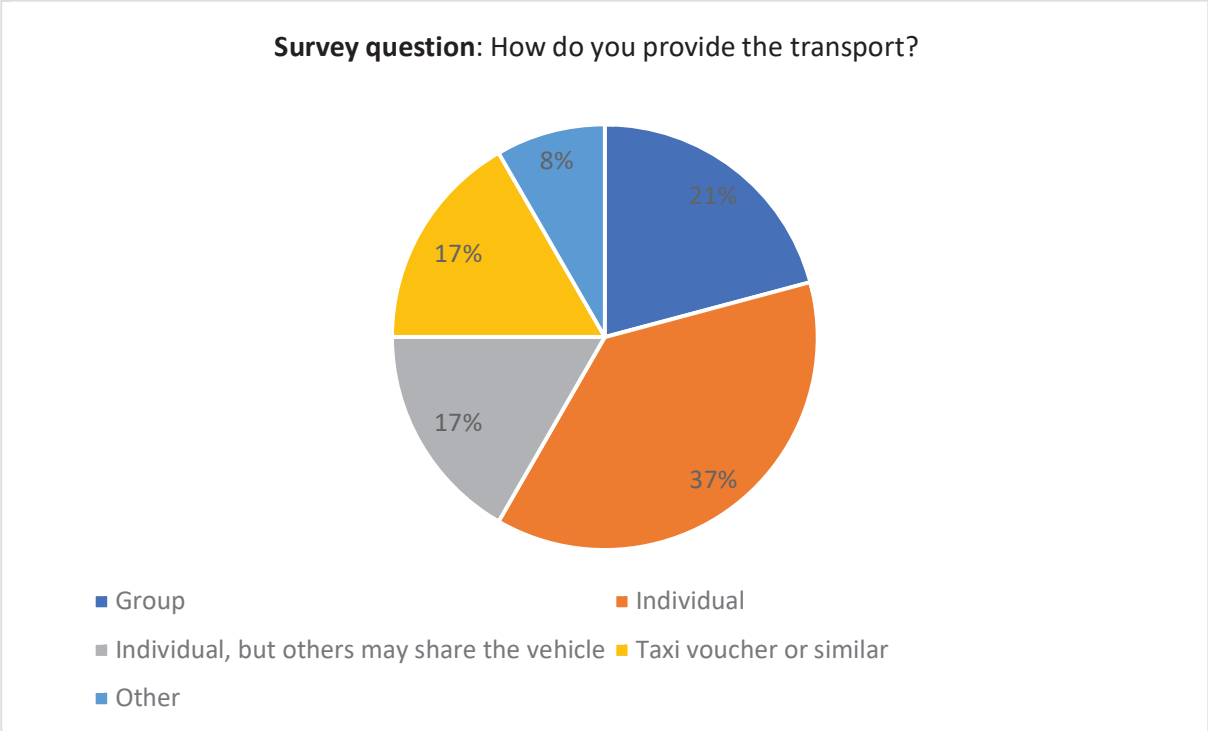


Figure 9. How community transport services are provided to passengers

Organisational perceptions and understandings of transport disadvantage in Alice Springs

Strong perceptions about the problem of transport disadvantage in Alice Springs were observed across the organisations surveyed. Most organisations could identify groups and categories of people in Alice Springs which they consider to be transport disadvantaged and for which those organisations cannot provide transport services for (79%, n=15). Groups commonly identified include:

- People and families living with disability
- Households without private vehicles
- Elderly people
- Families with young children
- Town Camp residents

- New arrivals
- People with complex health needs
- People with limited access to bus networks near their homes
- Primary school aged children.

Organisations observe that people experiencing transport disadvantage have difficulty accessing a range of destinations. Destinations identified include school and preschool, shops, hospital and other medical appointments, visiting friends and family, and social or community events (**Figure 10**). It is important to acknowledge that the destinations, services and activities covered in organisational responses relate to people accessing and satisfying essential needs. Notably, reported instances of clients having difficulty accessing Congress medical appointments is relatively low, likely due to the client transport services provided through Congress health clinics. By comparison accessing school, shops, and hospital appointments are perceived by the surveyed organisations to be particularly problematic for transport disadvantaged people and families in Alice Springs. There is a similarly clear perception of access difficulties for people attending social or community events, visiting family or friends and attending entertainment, sports, and recreation activities.

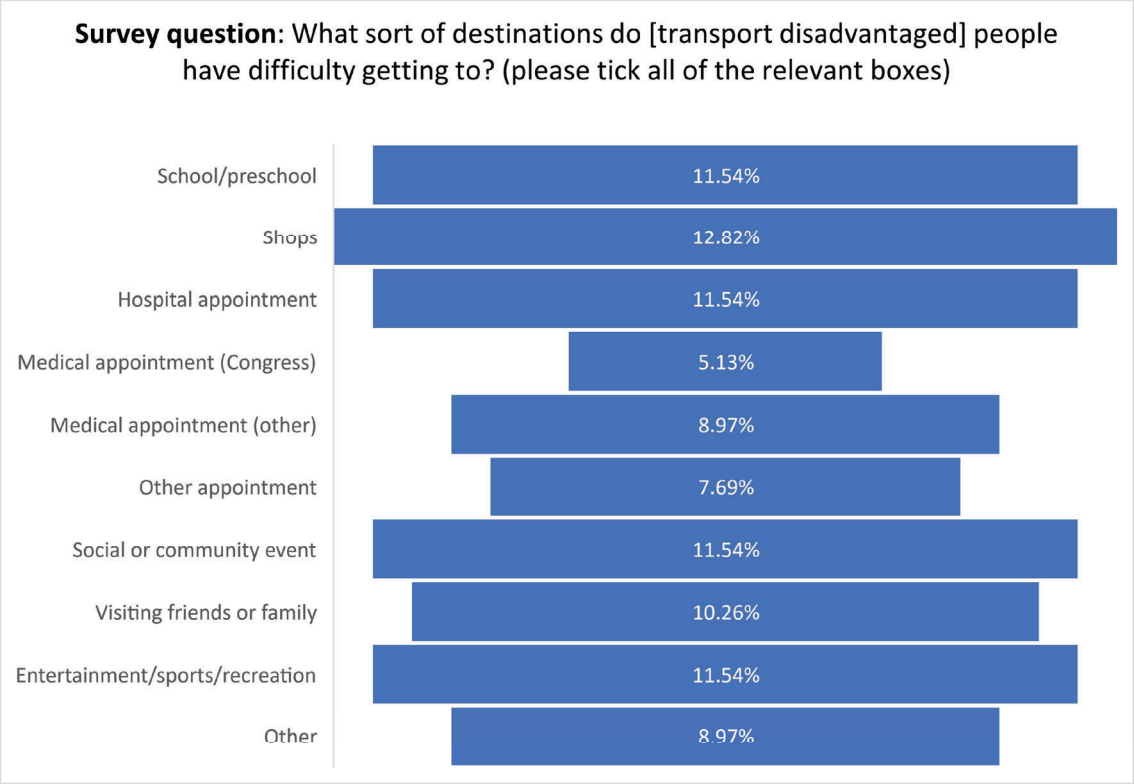


Figure 10. Organisational understanding of destinations which are difficult for transport disadvantaged people to access in Alice Springs

The survey collected organisational perceptions about the characteristics of people affected by transport disadvantage. Most respondents identified people affected by transport disadvantage as between 36-65 years, followed by those in the 17-35 age bracket. Respondents perceived lower levels of transport disadvantage among school aged children and the elderly, although these groups were identified as experiencing transport disadvantage in descriptive survey responses.

Several areas were identified across Alice Springs as places where people live with the experience of transport disadvantage. Town Camps were the places most reported as being affected by transport disadvantage including:

- Warlpiri Camp
- Larapinta Valley
- Hidden Valley
- Trucking Yards
- Charles Creek
- Morris Soak
- Little Sisters
- Old Timers
- Karnte
- Ilparpa, and
- Drive-In.

Other areas linked to experiences of transport disadvantage include the Town Centre, Larapinta (suburb), Amoonguna, Braitling, East Side, Sadadeen, The Gap, Flynn, and Gillen. This suggests an understanding at the organisational level of transport disadvantage being widespread across Alice Springs, and acutely felt within Town Camps.

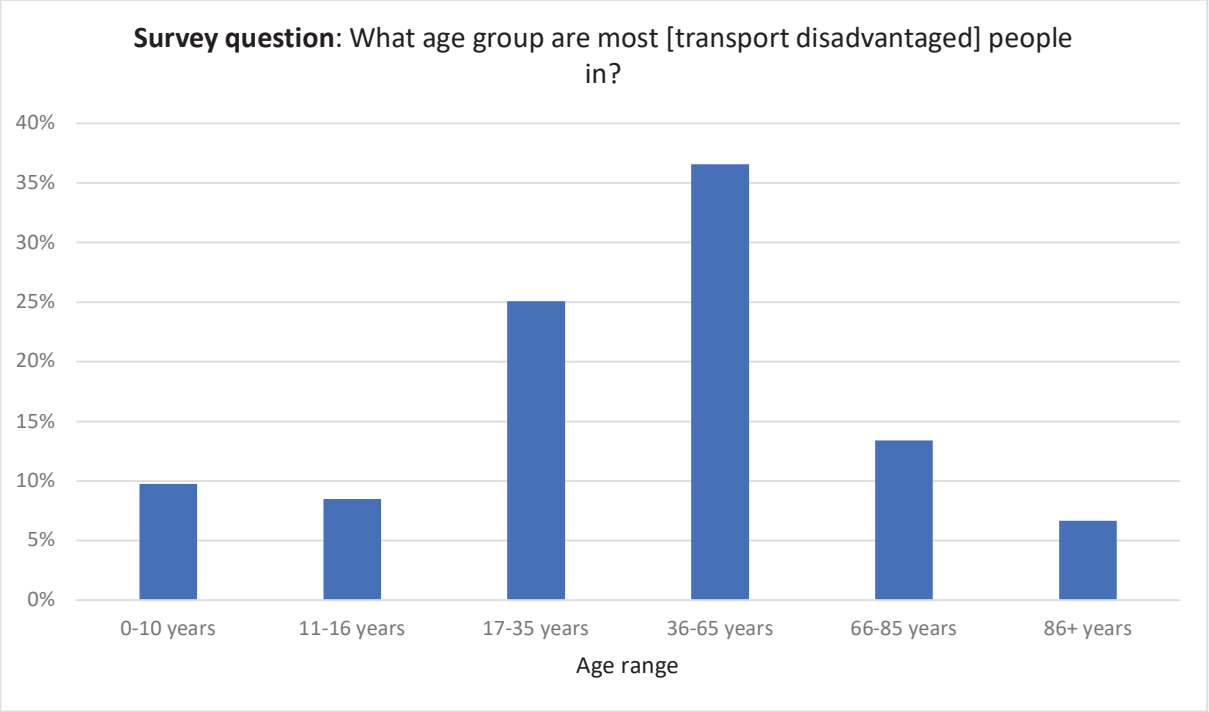


Figure 11. Organisational understanding of ages of people affected by transport disadvantage in Alice Springs

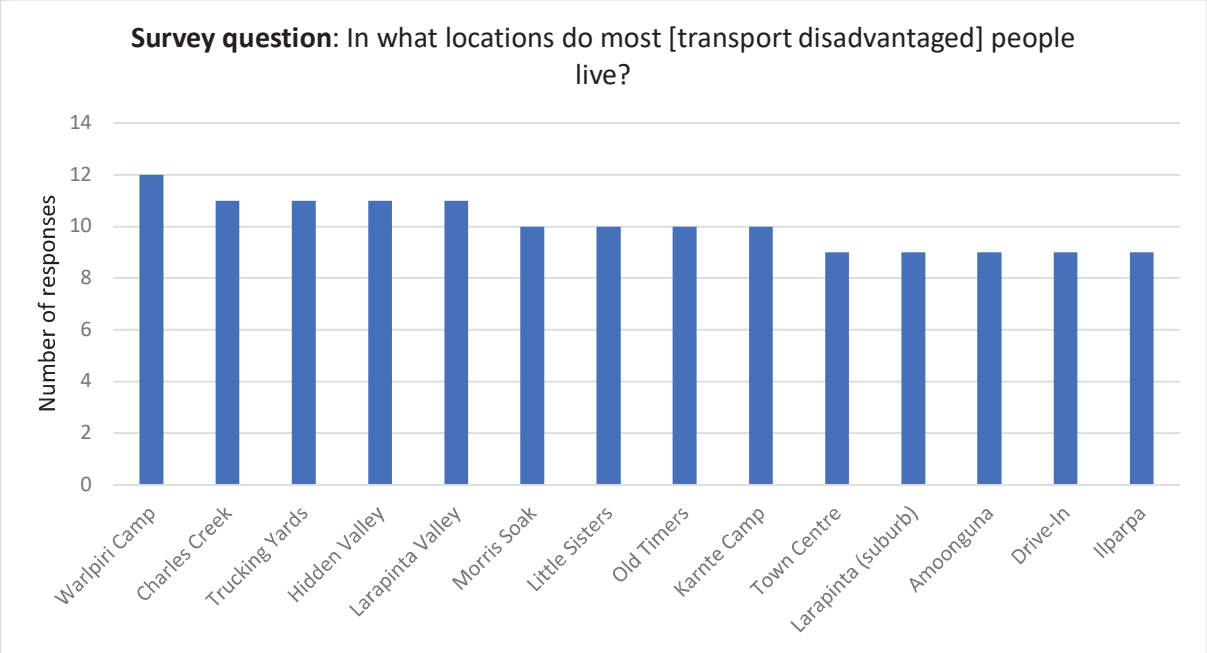


Figure 12. Organisational understanding of places where people are living with transport disadvantage in Alice Springs (10 most common responses shown)

3.5. Alice Springs public and school bus data analysis

This part of the report is separated into two sections. This first section discusses public bus use, and the second section addresses school bus use in Alice Springs. We provide links to the bus routes and timetables upon which our analysis is based in **Appendix 3**.

Public bus use

Key findings

- **Public bus usage in Alice Springs has declined since its peak in 2017-18, with numbers using public transport disrupted during the early pandemic**
- **Most people on public buses in Alice Springs are concession holders**
- **Routes 401 (via parts of Gillen, Araluen, Larapinta, Ciccone, and the Town Centre) and 301 (via parts of the Town Centre, The Gap, Ross and Ilparpa) are consistently the two most used bus routes**
- **Monthly passenger numbers across the Alice Springs bus network are not influenced by hot or cold temperatures, although Town Camp residents we spoke with reported avoiding use of public transport on hot and cold days due to factors including the distance to bus stops and long wait times**
- **Less passengers use bus stops located near Town Camps south of The Gap**
- **Whole community responses to improve public transport services can benefit from both general and community-specific insights about historical public bus use**

We analysed public bus usage data across the Alice Springs bus network from 2016-17 to 2021 (inclusive). These data sets were provided to us by DIPL. In some cases, we have been able to supplement and enrich quantitative findings with qualitative insights about people's experiences of public bus use in Alice Springs.

We find that the number of passengers travelling on public buses in Alice Springs has declined across the data period. Public bus usage peaked in 2017-18 with 121,634 passengers during that year. In 2019-20 there were 108,243 passengers and this dropped to 79,676 passengers during the disruption of the pandemic in 2020-21. Total public bus usage across each year is depicted in **Figure 13**.

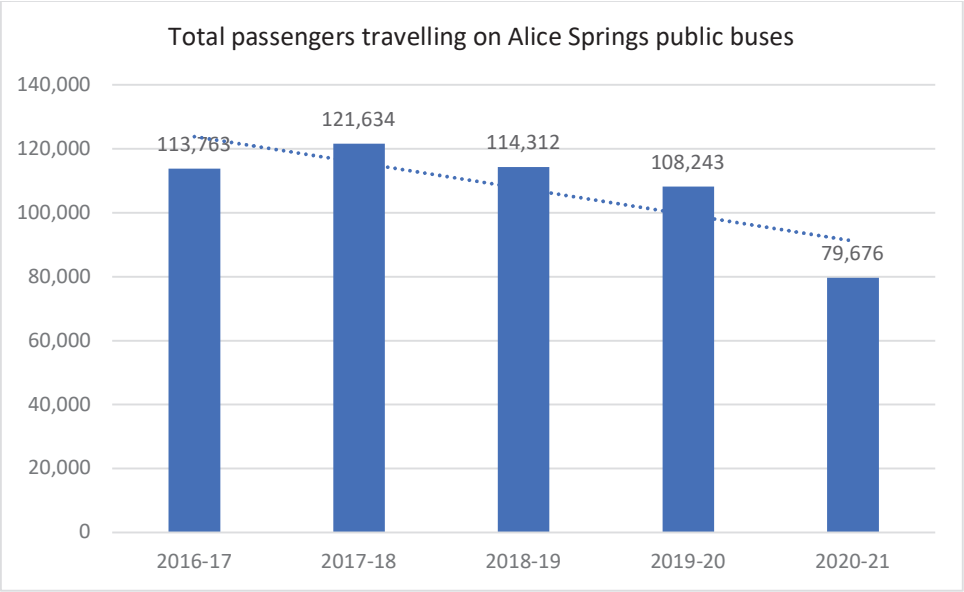


Figure 13. Public bus use in Alice Springs

Comparing total passenger numbers by fare type, we find that most people using public buses in Alice Springs are concession holders. Typically, >80% of bus users are paying concession fares (**Table 3 and Figure 14**). This group includes (amongst others) students, seniors, pensioners, BasicsCard holders, and those with Health cards (NT Government, 2020). These findings indicate that costs of using public buses in Alice Springs are substantially subsidised. Other initiatives such as free public bus travel from 1 November to 31 December 2022 in Alice Springs indicate NT Government support for expanded use of public transport across the community (NT Government, 2022a). Given that public transport costs are already broadly subsided, solutions that build upon network accessibility and increasing levels of use would be valuable to explore.

Table 3. Percentage of total public bus passengers by fare type

Percentage of total passengers by fare type (%)			
Year	Concession	Full Fare	Other (e.g., special event)
2016-17	83.23	16.60	0.17
2017-18	86.04	13.54	0.42
2018-19	84.30	15.50	0.20
2019-20	70.30	29.60	0.10
2020-21	83.50	16.30	0.20

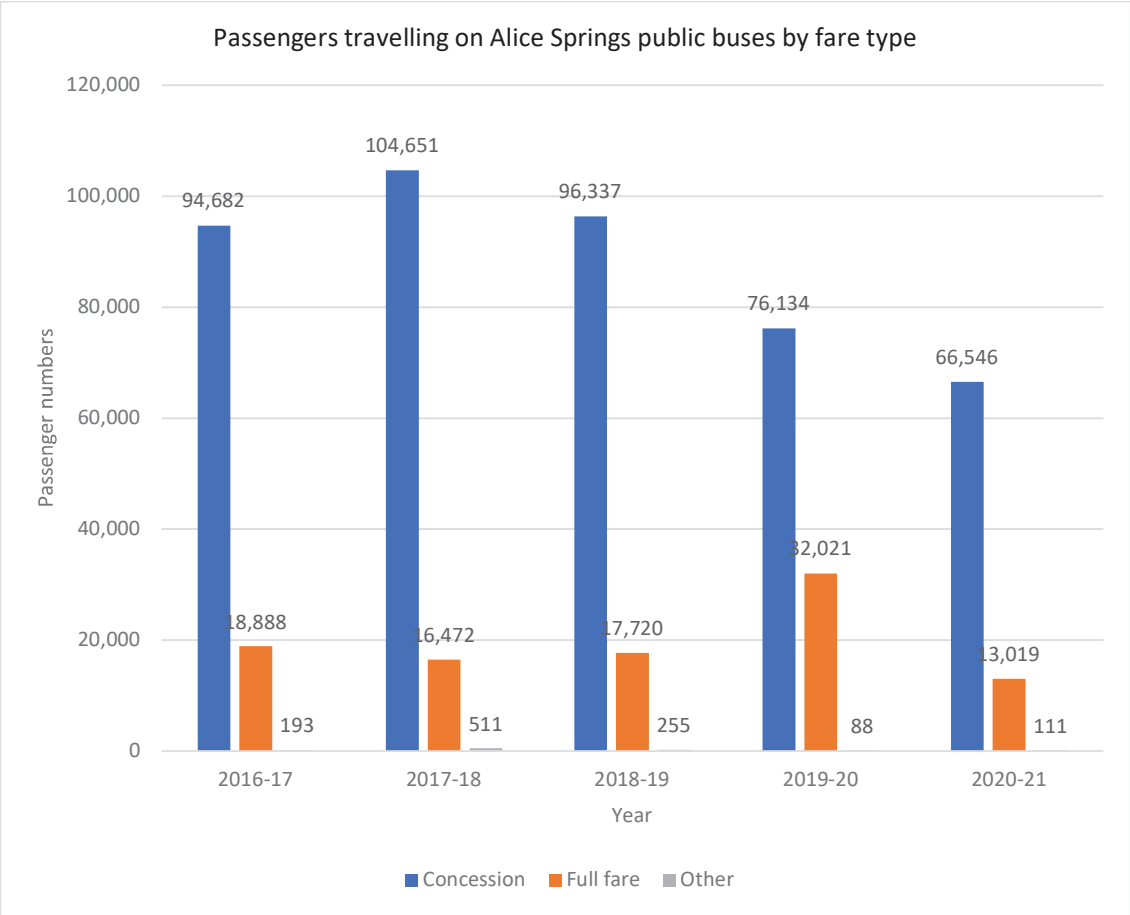


Figure 14. Public bus use by fare type in Alice Springs

We observe distinct trends in the numbers of people using public buses by bus route (**Figure 15**). The two most utilised routes (based on passenger boardings) are the 401 (via parts of Gillen, Araluen, Larapinta,

Ciccone, and the Town Centre) and 301 (via parts of the Town Centre, The Gap, Ross and Ilparpa). Bus routes 400 (via parts of the Town Centre, Gillen, Araluen, and Larapinta) and 200 (via parts of parts of the Town Centre, East Side and Sadadeen) also show higher use compared to other routes (**Table 4**).

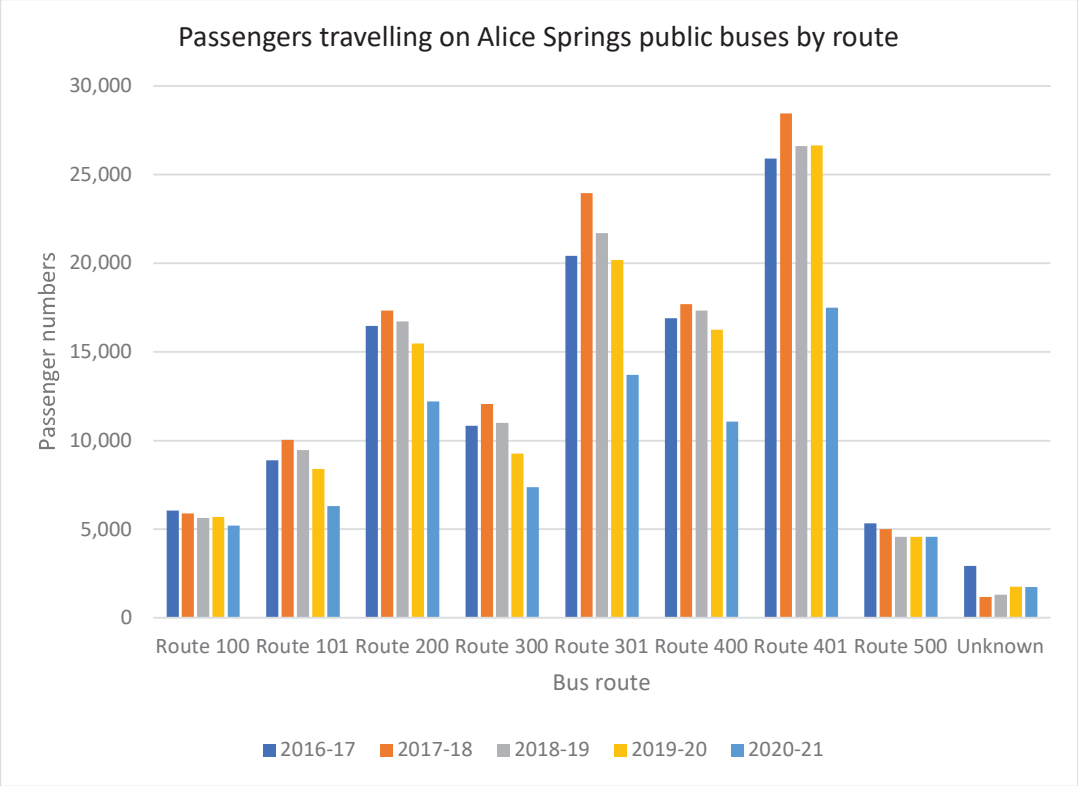


Figure 15. Public bus use by route in Alice Springs (boardings)

Table 4. Most utilised public bus routes in Alice Springs by year (boardings)

Route Ranking (in order of most to least used)	2016-17	2017-18	2018-19	2019-20	2020-21
1	401	401	401	401	401
2	301	301	301	301	301
3	400	400	400	400	200
4	200	200	200	200	400
5	300	300	300	300	300
6	101	101	101	101	101
7	100	100	100	100	100
8	500	500	500	500	500

Investigation of the impact of hot and cold temperature extremes on public bus use is relevant in Alice Springs, where summer temperatures are routinely above 35°C and mean minimum temperatures in winter months fall below 4°C (BOM, 2022). We analysed monthly passenger numbers across the datasets and compared them with mean monthly temperatures in Alice Springs using data from the Bureau of Meteorology (BOM, 2022). Perhaps surprisingly, we find no association (at the level of monthly data) between temperature and monthly

passenger totals (**Figure 16**). This finding suggests that most passengers using public buses are dependent upon them for at least some of their transport needs, and bus use is not influenced, from month to month, by temperatures in Alice Springs.

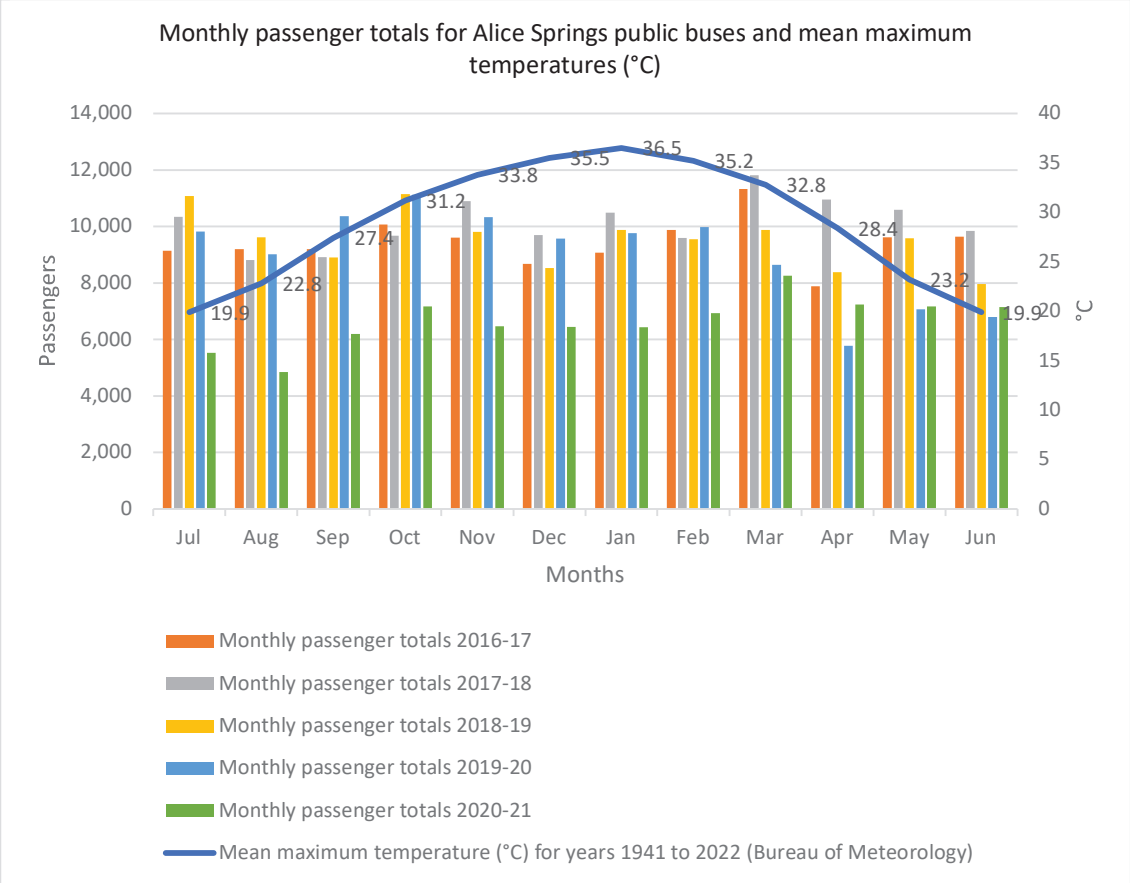


Figure 16. Monthly passenger totals and mean maximum temperatures in Alice Springs

Given the findings that transport disadvantage acutely impacts Town Camp residents, we analysed use of bus stops located near Town Camps (see **Appendix 2**). We recognise that many factors influence passenger use of bus stops (e.g., distance from home, service frequency, safety) and passengers using bus stops identified in this part of the analysis may live in Town Camps, other nearby residential areas and/or be associated with nearby businesses and destinations. With this caution in mind, we observe generally low passenger numbers using stops located near Town Camps compared to the total number of passengers using public buses in Alice Springs. Details of passenger boardings/alightings at specific stops are included in **Appendix 2**. We include data showing approximate distances from Town Camps to the nearest bus stops below (**Table 5**), ranging from 0.3 km to 2.1km. Government stakeholders provided feedback during our roundtable process that existing bus routes were defined in partnership with the previous public bus operator, which sought to bypass Town Camps due to perceived risks about taking passengers carrying alcohol into alcohol prohibited areas. Experts consulted separately informed us that, in some cases, current lack of road and road-side infrastructure in Town Camps makes it difficult or impossible for buses to enter and leave given minimum vehicle requirements for stopping and turning. This highlights some of the underlying factors to be explored and addressed in efforts to improve public bus network coverage in Alice Springs.

Table 5. Distance from Town Camps to nearest public bus stop

Town Camp	Stop ID	Bus	Max. walking distance to nearest bus stop (km)
Morris Soak	1065: Lovegrove Drive	401	0.3
Charles Creek	1022: Ulpaya Road	100, 101	0.3
Drive In	1086: Op Heath Road	300, 301	1.2
Palmer's Camp	1018: Basso Road	100, 101	0.3
Hidden Valley	1037: Sadadeen Road	200	1.4
Ilparpa	1084: Stuart Highway	301	0.5
Warlpiri	1017: Dalgety Road	100, 101	0.8
Old Timers	1079: Old Timers	300, 301	0.4
Little Sisters	1089: Commonage Road	300, 301	0.8
White Gate	1033: Undoolya Road	200	1.6
Basso's Farm	1018: Basso Road	100, 101	0.8
Karnte	1086: Op Heath Road	300, 301	2.1
Hoppy's Camp	1022: Ulpaya Road	100, 101	1.1
Mount Nancy	1018: Basso Road	100, 101	0.4
Abbotts Camp	1091: Gap Road	300, 301	1.0
Trucking Yards	1066: Smith Street	401	0.7
Larapinta Valley	1062: Larapinta Drive	400, 401	0.8
Ilpeye-Ilpeye	1033: Undoolya Road	200	1.0

Several stops located near Town Camps have distinct and notable patterns of use. For example, we observe that the bus stop located near Old Timers Camp (stop 1079) is relatively well used. In 2019-20, the numbers of boardings and alightings at this stop totalled 4,231 passengers, accounting for 3.9% of all yearly passengers. Across the same period the stops located near Little Sisters Camp (stop 1089) and Larapinta Valley (stop 1062) were also relatively well used, accounting for 1.7% and 1% of all yearly passengers respectively. Notwithstanding the disruption of the pandemic, use of the stop near Old Timers Camp remained relatively high with 2,739 total passengers using the stop across 2020-21, accounting for 3.4% of total passengers using Alice Springs public buses in that period. Likewise, use of the stops near Little Sisters and Larapinta Valley remained proportionately consistent with previous year figures. Passengers using the stop near Little Sisters accounted for 1.8% of total numbers using the public bus system and passengers using the stop near Larapinta Valley represented 1% of total numbers in 2020-21.

Boardings and alightings from the bus stops located near Old Timers and Larapinta Valley are provided below (**Figures 17 and 18**).

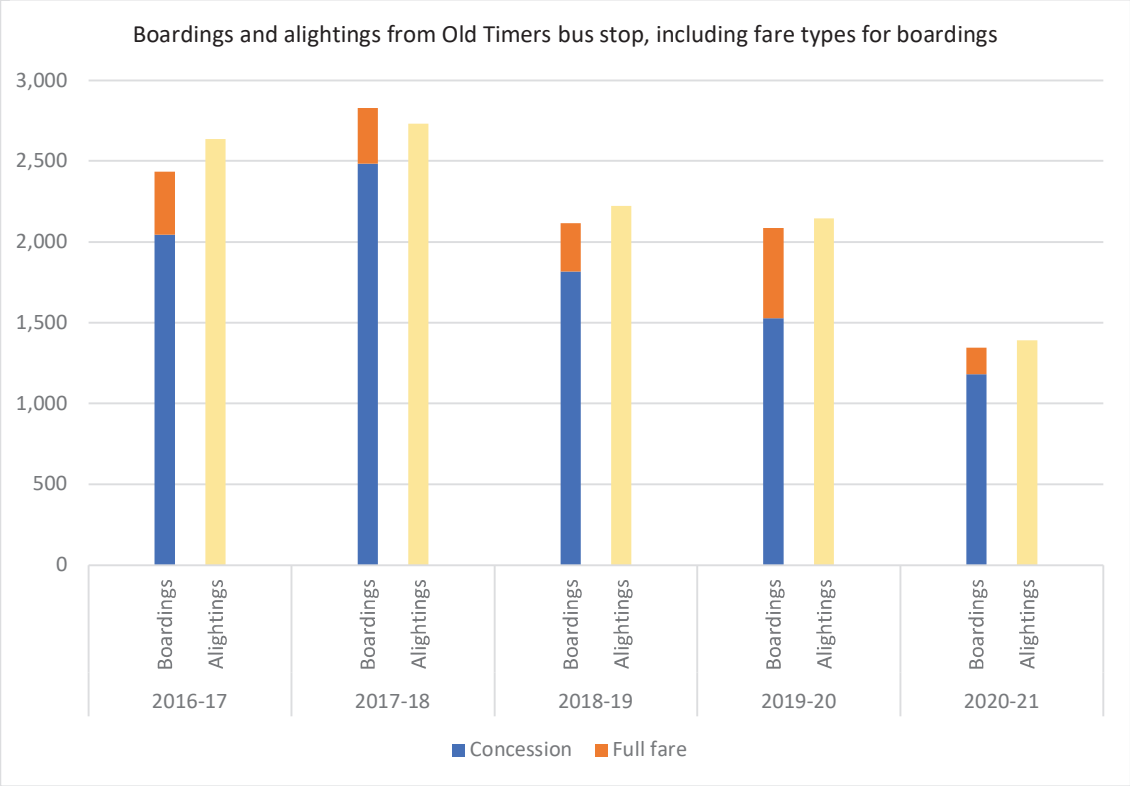


Figure 17. Public bus use at bus stop 1079 located near Old Timers Camp

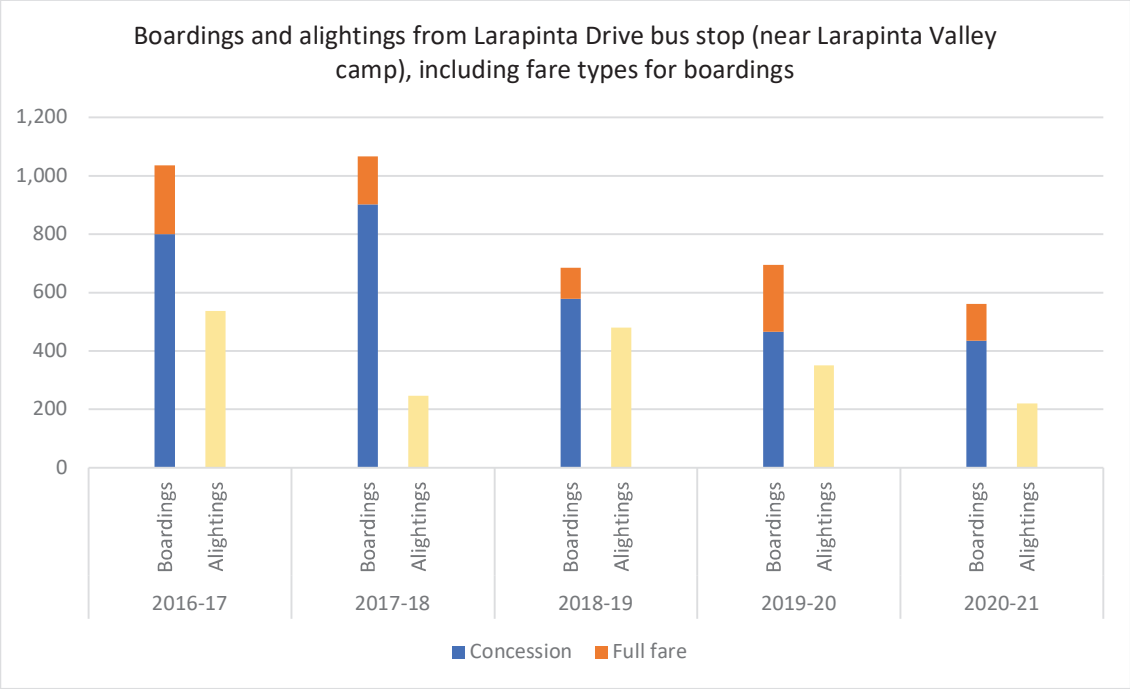


Figure 18. Public bus use at bus stop 1062 located near Larapinta Valley

We observe generally low numbers of passengers using bus stops located near Town Camps south of The Gap, including Drive In, Karnte, White Gate and Ilpeye Ilpeye Camps (**Figures 19-21**). This finding supports Guenther's observations that people living south of The Gap are disproportionally impacted by limited public transport options and facilities (Guenther, 2019). We also observe low passenger numbers associated with the bus stop near Warlpiri Camp, the northern-most Town Camp. Despite low overall usage, it is interesting

to observe that substantially higher numbers of passengers *alight* buses at this stop than they do *board* buses there. This suggests that passengers use the public bus to return home more commonly than they are catching the bus from this stop.

Given Warlpiri Camp's location and the quantitative findings about passenger numbers, we subsequently explored how residents of Warlpiri Camp experience public transport access in a community workshop context using semi-structured interviews. Warlpiri Camp residents identified the distance of the nearest bus stop from their homes and wait times for buses as significant barriers limiting use of public transport particularly on hot and cold days.

"Our camp is a long way from everything that's in the town area, and when you have no car it's hard to go for any of our appointments with Centrelink, hospital, or any other appointments. When it's winter we must wait till it gets warmer and then we walk along to catch the bus, sometimes younger people and middle-aged people just keep walking to go to town if they wait too long … When it's summertime we must start early to beat the heat to go into town if we are walking. Or if we want to catch the bus we go early and sit in the shade waiting for the bus. If it's hot and starts to burn in the morning, we only walk to the nearest bus stop and wait." – Warlpiri Camp community members

We also explored these questions with residents of Karnte Camp, which is one of the southern-most located camps in Alice Springs. Karnte Camp residents shared with us that experiences of transport disadvantage are felt profoundly within their community and use of public transport is similarly limited due to distances to the nearest bus stop.

"When we need to catch public transport, we must walk a long way to the nearest bus stop, on the other side of the old Drive-In area across the road from Pioneer Park Racecourse … During summer we must beat the sun or the sealed and the dirt road gets very hot to walk on. Elderly people and other residents who have chronic illness just must wait for anyone with a car or taxi to get a ride into town, or the other choice is to wait for any Tangentyere vehicle to catch a ride." – Karnte Camp community members

This type of detailed, stop-specific understanding of how the public bus network is currently utilised in Alice Springs could be used more broadly to inform the design of strategies to improve public bus routes and services, drawing on the perspectives and needs identified by the community.

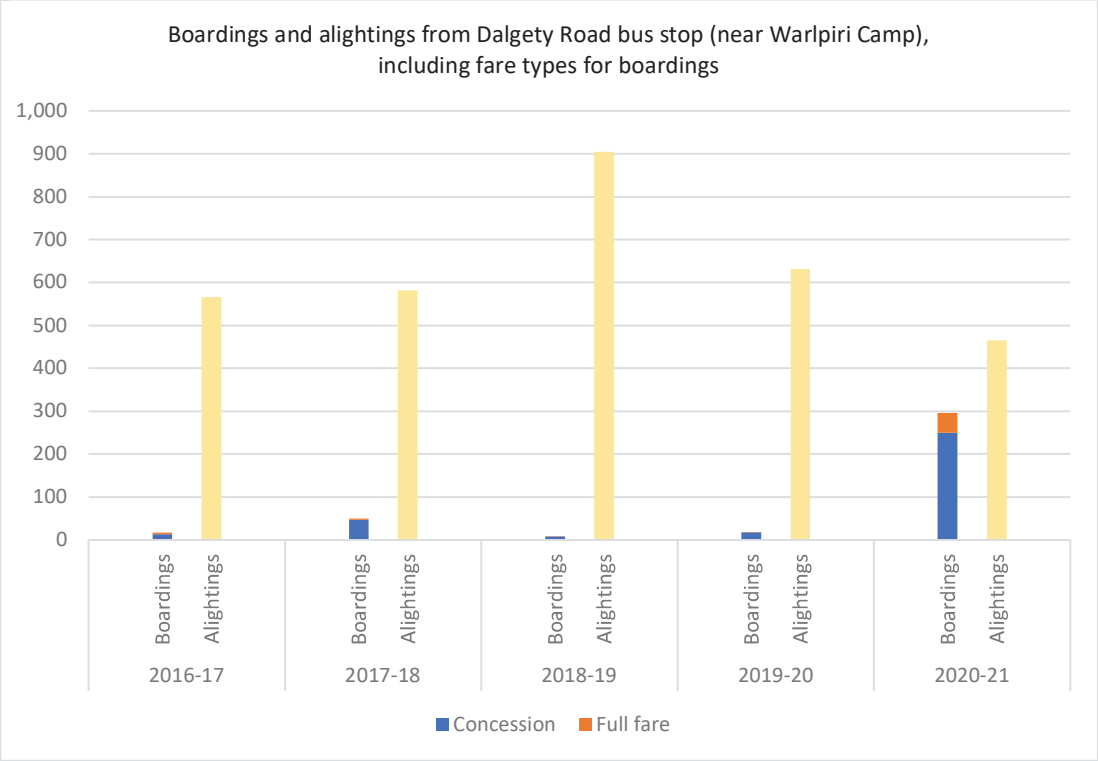


Figure 19. Public bus use at bus stop 1017 located near Warlpiri Camp

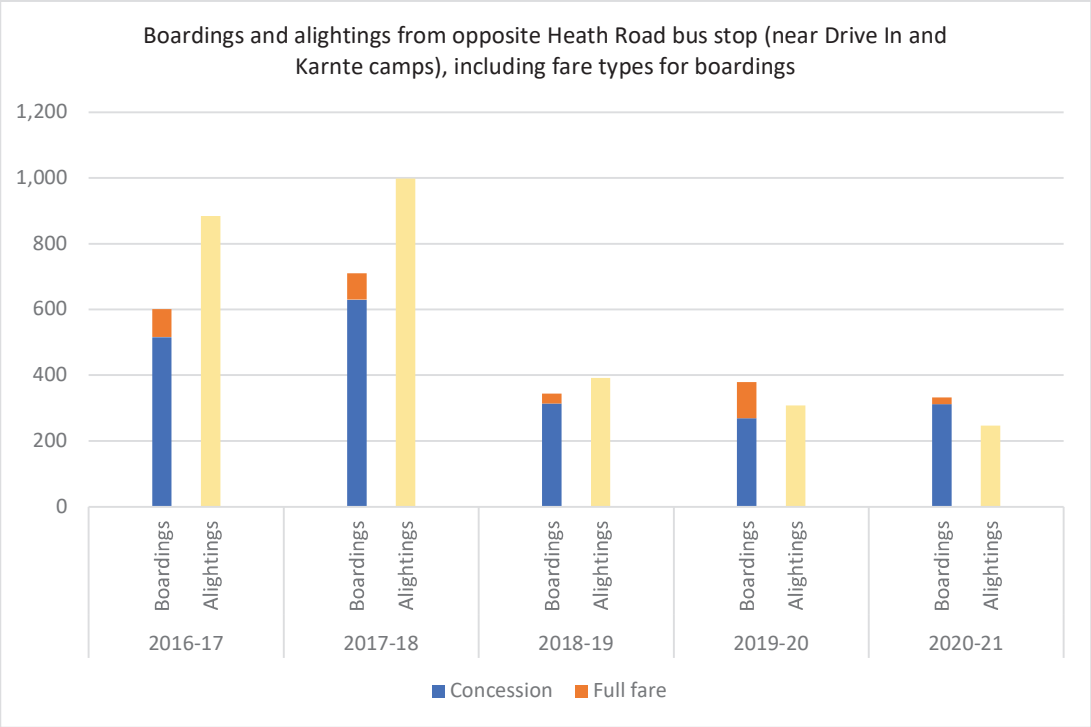


Figure 20. Public bus use at bus stop 1086 located near Drive In and Karnte Camps

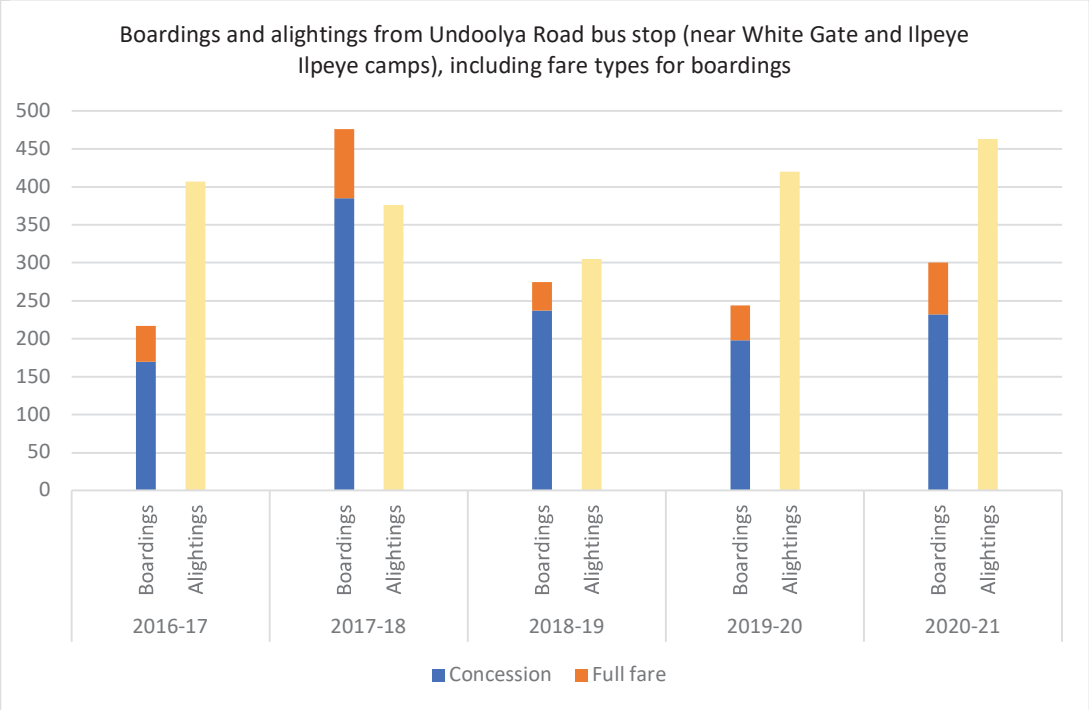


Figure 21. Public bus use at bus stop 1033 located near White Gate and Ilpeye Ilpeye Camps

School bus use

Key findings

- **Total passengers for 2020 (282,635) were significantly less than for 2021 (732,879), likely reflecting the combination of the disruption of the early pandemic and a reduced dataset for 2020**
- **Across all routes, afternoon buses are more used than morning buses**
- **Routes 6-9 are the most used school bus routes, which mainly serve private and senior schools[5]**
- **Quantitative insights from school bus stops located near Town Camps are provided, supported by some qualitative insights**

We analysed school bus usage data across the Alice Springs bus network for 2020 and 2021. We note that due to rolling changes to priority enrolment areas for Government primary school starting from 1 January 2022, patterns of usage across the different school bus routes may be impacted. Understanding transport disadvantage among school students in Alice Springs would be supported by ongoing analysis of school bus data as these changes take place. Qualitative investigations of the experiences of young people using school buses would also be valuable; here, we provide insights from Warlpiri and Karnte Camp residents about how their children use school buses.

Student passengers using school buses differ greatly between the two datasets. In 2020, the total number of students travelling on school buses was 282,635 compared to 732,879 in 2021 (**Table 5**). The lower overall passenger numbers in 2020 are likely associated with the disruption of the early pandemic and the smaller dataset collected for that year, covering March to early December. The 2021 dataset covers travel from February to the end of the school year in mid-December 2021.

We observe that across the two years of collected data, afternoon buses are more used than morning school buses. During 2020, passengers using school buses in the mornings totalled 120,245 (43% of total passengers) compared to 162,390 (57% of total passengers) using school buses in the afternoon. This difference is also

[5] Our Lady of the Sacred Heart Catholic College (OLSH) and Centralian Senior College (CSC).

observed in the 2021 data where total passengers in the mornings numbered 307,750 (42% of total passengers) compared to 425,129 passengers in the afternoons (58%) (**Table 6**). Factors influencing these results could include early school bus arrival times, distance from home to the school bus stop, parents and caregivers providing students with morning school drop-offs before work, and family safety concerns for younger students travelling without accompanying adults in the mornings.

Table 6. Overall school bus use for 2020 and 2021 in Alice Springs

Year:	**2020**	**2021**
Total students (morning)	120,245	307,750
Total students (afternoon)	162,390	425,129
Overall total	282,635	732,879

In 2020, average daily school bus passenger numbers were reasonably consistent across morning and afternoon schedules, with reduced passenger numbers in April likely associated with Easter school holidays and pandemic impacts (**Figure 22**). There was slightly more variation between average daily school bus passenger numbers across morning and afternoon travel in 2021 (**Figure 23**), however the trend for higher numbers of passengers in the afternoons remained consistent.

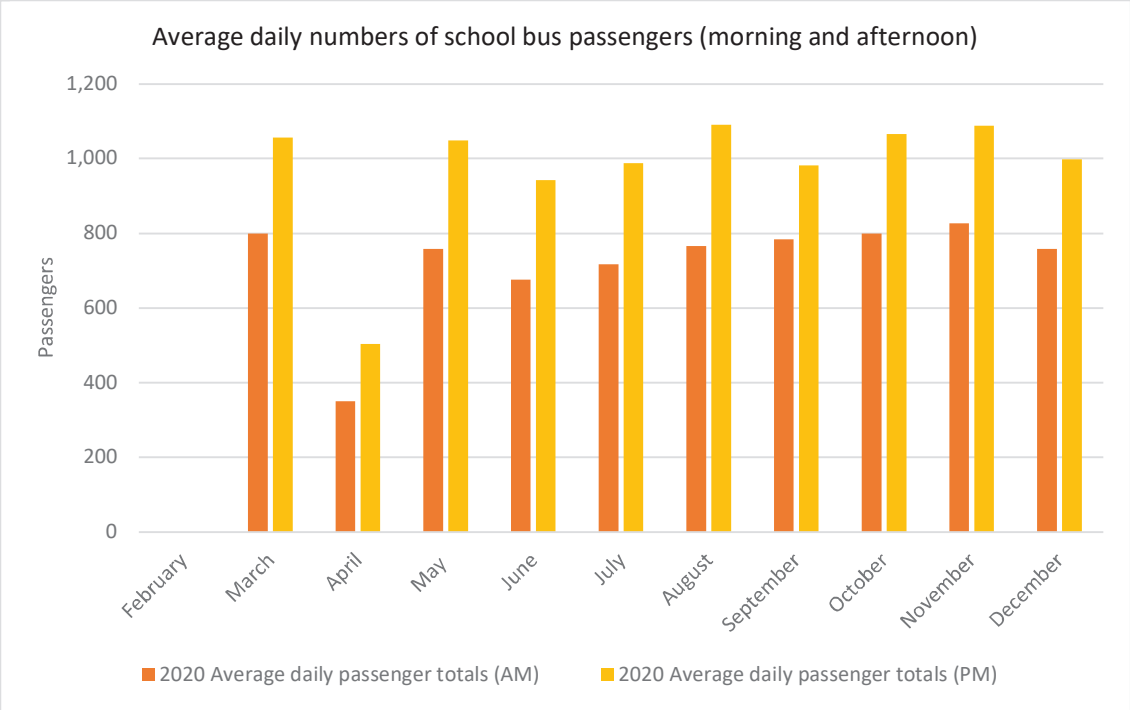


Figure 22. Average daily school bus passenger totals by month (2020)

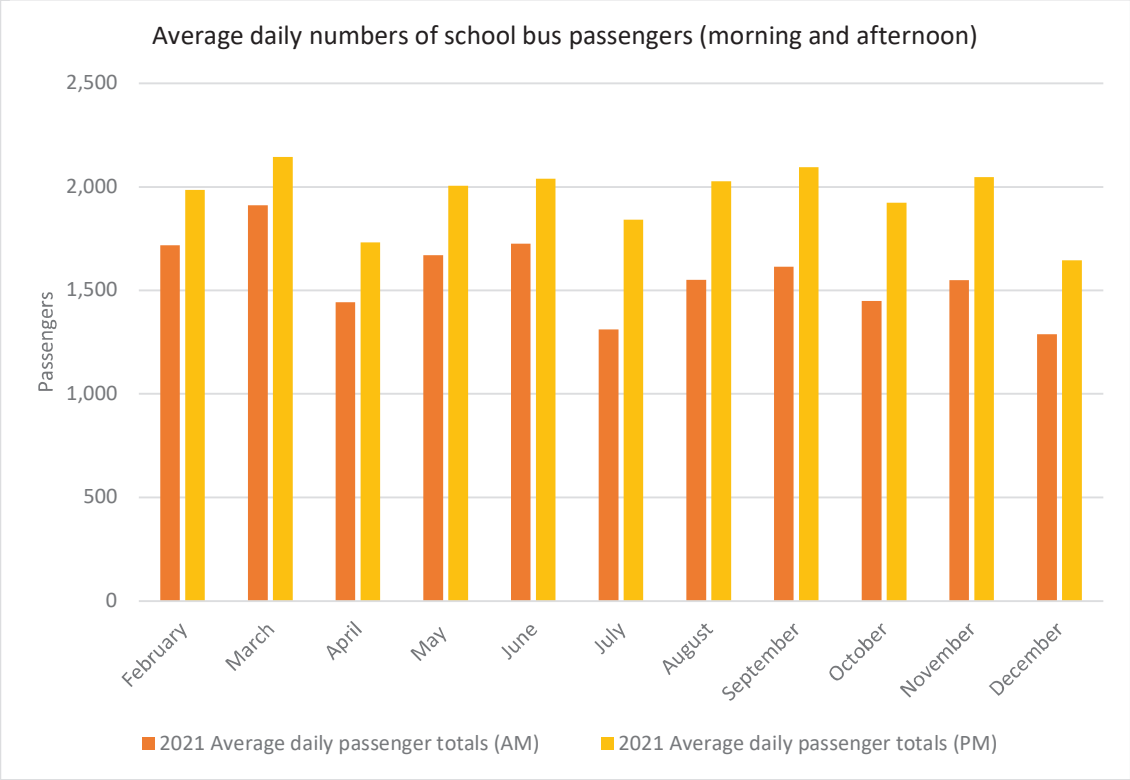


Figure 23. Average daily school bus passenger totals by month (2021)

We analysed passenger numbers by school bus route, finding that Routes 6-9 were the most used for both 2020 and 2021 (**Figures 24 and 25**). These routes primarily take students to senior and private schools, including Centralian Senior College, St Philip's College, and Sacred College, but also provide school transport options for students from Abbotts Camp, White Gate, and Ilpeye Ilpeye Town Camps (NT Government, 2022b).

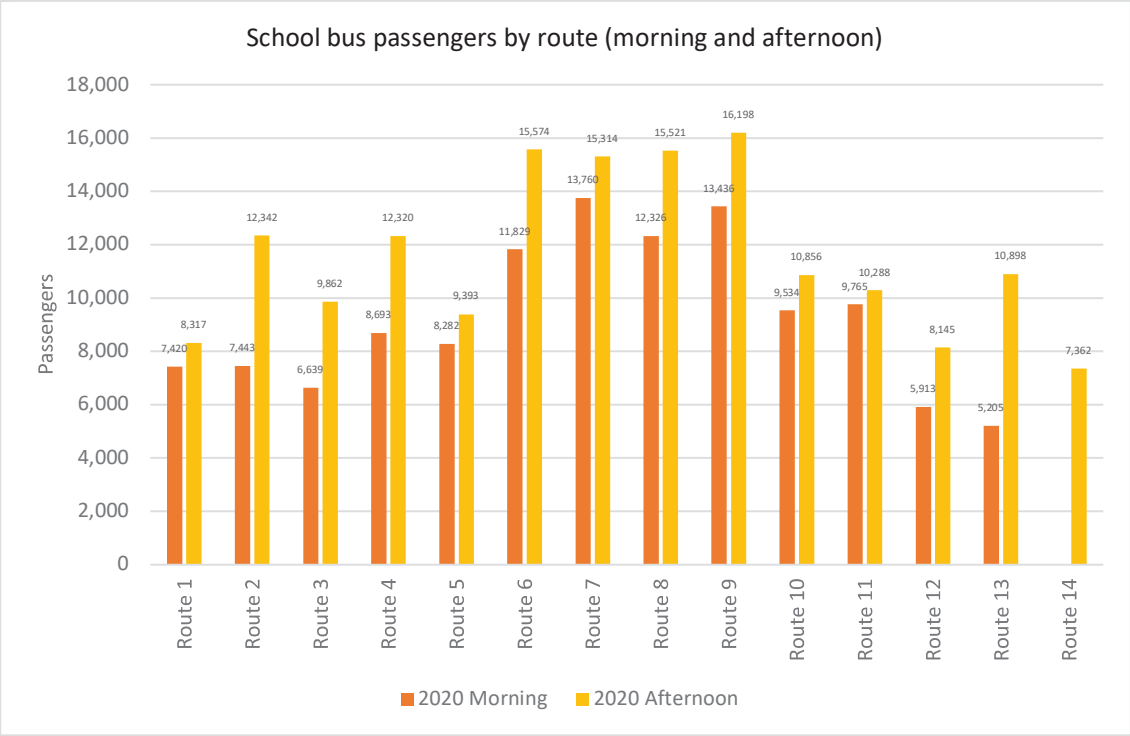


Figure 24. School bus passenger totals by route (2020)

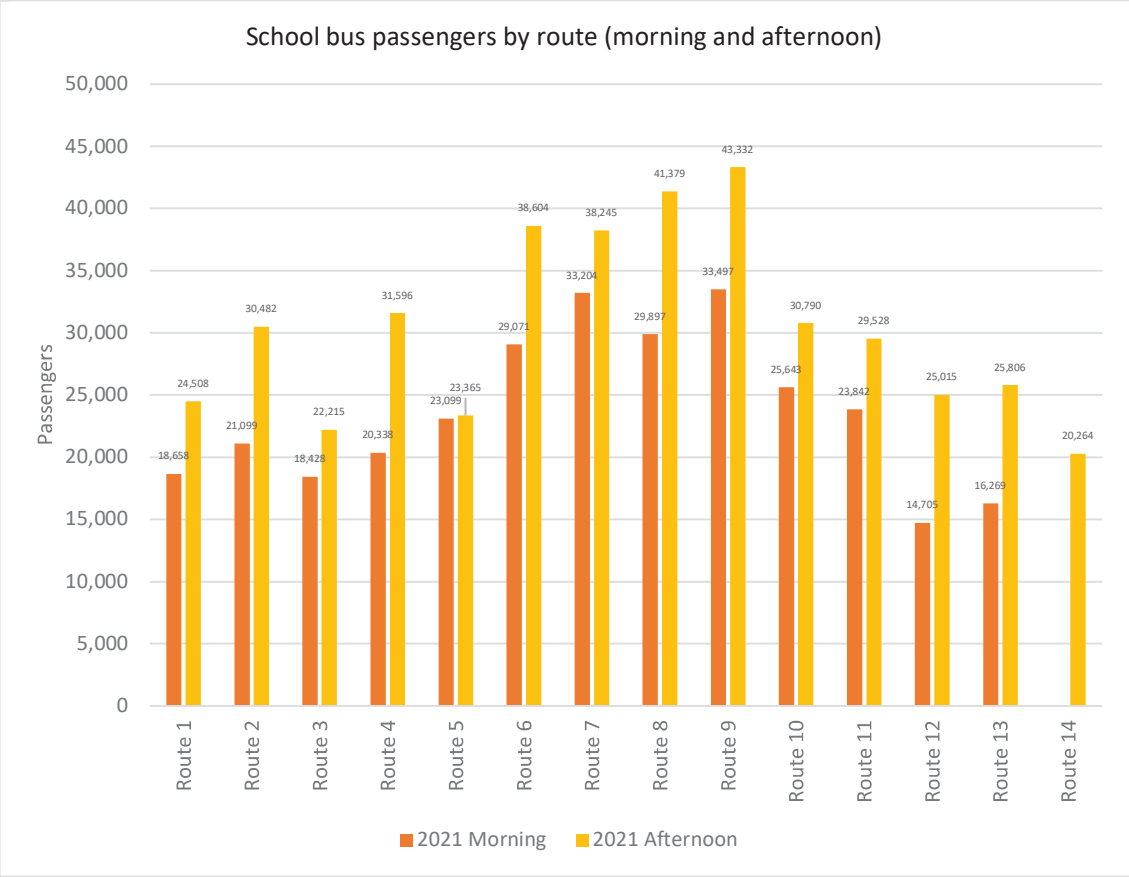


Figure 25. School bus passenger totals by route (2021)

Analysis of school bus passenger numbers at stop located near Town Camps was undertaken. The same cautions apply to this part of the analysis as identified for public bus data above. In 2020 for morning school buses, we provide summaries of bus number, departure time, total travel time before school starts, passenger totals, and daily maximum passengers boarding on any day across the year. The same indicators were available for afternoon school bus use in 2020 except the numbers of alightings at individual stops could not be calculated from the data provided (**Table 8**). For 2021, it was possible to extend our analysis to cover numbers of afternoon alightings at individual stops (**Table 9**).

We include maximum walking distances from Town Camps to the nearest school bus stops, noting that school bus stops in some cases differ from nearest public bus stops (**Table 7**).

Table 7. Distance from Town Camps to nearest school bus stop

Town Camp	Stop ID	Bus	Max. walking distance to nearest bus stop (km)
Morris Soak	Morris Soak	4, 14	0.3
Charles Creek	Ulpaya Road	12, 1	0.3
Drive In	Karnte Road 1	1	0.3
Palmer's Camp	Basso Road	9, 1	0.3
Hidden Valley	Hidden Valley	8	0.7
Ilparpa	Ilparpa	1	0.5

Town Camp	Stop ID	Bus	Max. walking distance to nearest bus stop (km)
Warlpiri	Dalgety Road	9	0.8
Old Timers	Percy Court	2, 1	1.1
Little Sisters	Commonage	3	0.8
White Gate	Spearwood Road	8	1.6
Basso's Farm	Basso Road	9, 1	0.8
Karnte	Karnte Road 2	1	0.2
Hoppy's Camp	Ulpaya Road	12, 1	1.1
Mount Nancy	Basso Road	9, 1	0.4
Abbotts Camp	Shanahan Close	6	1.0
Trucking Yards	Lovegrove & Smith	4, 14	0.7
Larapinta Valley	Larapinta Valley	5, 10	0.8
Ilpeye-Ilpeye	Ilpeye-Ilpeye	8	TBC

Generally, we observe low use of school bus stops located near Town Camps. We make the following, stop-specific observations:

- The most used school bus stops near Town Camps are those located near Morris Soak, Abbotts Camp, Trucking Yards, White Gate and Ilpeye Ilpeye
- There is minimal use of school bus stops located near Town camps in the far north (Warlpiri) and far south (Karnte, Ilparpa) of Alice Springs, likely influenced by factors such as walking distances to stops (in the case of Warlpiri Camp – 0.8 km) and travel times (see **Tables 8 and 9**).
- The school bus stop located near Larapinta Valley in the far west of Alice Springs demonstrates low use, also likely influenced by factors such as walking distances to the nearest stop (0.8 km) and travel times (1 hour in the morning). Larapinta Valley is also a large area (>90ha) and this influences distances from individual homes to the nearest bus stop (i.e., some homes are at a considerable distance, while other homes are comparatively closer).
- The school bus stop located near White Gate in the far east of Alice Springs demonstrates higher use, despite significant travel times to (59 mins) and from (42 mins) school. The walking distance from White Gate to the nearest school bus stop is 1.6 km, and the number of young people and students living in White Gate intermittent. Therefore, we infer that the stop is likely to attract use by other students from nearby households in Sadadeen and (new) East Side.
- Morning school bus use at the stop located near three northern town camps (Palmer's, Basso's Farm and Mount Nancy) decreased in 2021 (150 total boardings) from 2020 (281 total boardings), reversing the general trend of increased school bus use from 2020 to 2021.

We sought insights from Warlpiri Camp residents to explore family experiences about school bus access. Community members shared with us that children attending Yipirinya School (preschool – Year 10) have access to a school-operated bus service. This service offers two pick-up times responding to community needs.

> **"For our children they go to Yipirinya School, and they have a bus service, and the bus picks up the kids for school. Sometimes if the bus comes around early like 8.00am kids miss out, but they make another pick up round at 9am then the kids will be waiting for the second round for the bus to pick them up. – Warlpiri Camp community members." – Warlpiri Camp residents**

Karnte Camp residents also shared with us their experiences of school bus access for their community. The early departure times for school buses significantly impact children and families and their ability to access school transport services.

> **"During winter we must get the kids at 5am in the morning to get them ready and walk with them to the bus stop to catch the bus for school. It's hard on our kids and for any elder who is a career to walk that far early in the morning on a cold day … [During summer] the school children … must get up early and try to beat the heat to catch the bus to go to school. If a child's carer or parent cannot walk with them to the bus stop in the early hours and the child walks alone, there are concerns for their safety. What can we do? A lot of things go around in our head thinking why I didn't walk them to the bus stop, I should have been there you know, but a lot of times it's hard for us parents, carers, and the children as well." – Karnte Camp residents**

Table 8. School bus passenger totals for stops located near Town Camps (2020)

Town Camp	Stop ID	Bus (AM)	Departs (AM)	School start	Travel time	Maximum daily	Total boardings	Bus (PM)	School finish	Arrives (PM)	Travel time	Maximum daily	Total alightings
Morris Soak	Morris Soak	4	7:33	8:30	57 mins	9	490	14	2:50	3:31	41 mins	10	No data
Charles Creek	Ulpaya Road	12	7:39	8:30	51 mins	<5	113	1	2:50	3:00	10 mins	7	No data
Drive In	Karnte Road 1	1	7:40	8:30	50 mins	<5	6	1	2:50	3:37	47 mins	<5	No data
Palmer's Camp	Basso Road	9	7:35	8:30	55 mins	6	281	1	2:50	2:55	5 mins	9	No data
Hidden Valley	Hidden Valley	8	7:27	8:30	63 mins	10	75	8	2:50	3:29	39 mins	9	No data
Ilparpa	Ilparpa	1	7:26	8:30	64 mins	<5	<5	1	2:50	4:17	87 mins	<5	No data
Warlpiri	Dalgety Road	9	7:33	8:30	57 mins	8	18	9	2:50	3:30	40 mins	7	No data
Old Timers	Percy Court	2	7:38	8:30	52 mins	8	119	1	2:50	3:33	43 mins	12	No data
Little Sisters	Commonage	3	7:44	8:30	46 mins	5	70	3	2:50	3:28	38 mins	9	No data
White Gate	Spearwood Road	8	7:31	8:30	59 mins	7	370	8	2:50	3:32	42 mins	13	No data
Basso's Farm	Basso Road	9	7:35	8:30	55 mins	6	281	1	2:50	2:55	5 mins	9	No data
Karnte	Karnte Road 2	1	7:42	8:30	48 mins	<5	<5	1	2:50	3:35	45 mins	<5	No data
Hoppy's Camp	Ulpaya Road	12	7:39	8:30	51 mins	<5	113	1	2:50	3:00	10 mins	7	No data
Mount Nancy	Basso Road	9	7:35	8:30	55 mins	6	281	1	2:50	2:55	5 mins	9	No data
Abbotts Camp	Shanahan Close	6	7:39	8:30	51 mins	12	477	6	2:50	3:45	55 mins	No data	No data
Trucking Yards	Lovegrove & Smith	4	7:34	8:30	56 mins	8	451	14	2:50	3:33	43 mins	15	No data
Larapinta Valley	Larapinta Valley	5	7:30	8:30	60 mins	<5	11	10	2:50	3:25	35 mins	<5	No data
Ilpeye-Ilpeye	Ilpeye-Ilpeye	8	7:35	8:30	55 mins	7	19	8	2:50	3:36	46 mins	<5	No data

Table 9. School bus passenger totals for stops located near Town Camps (2021)

Town Camp	Stop ID	Bus (AM)	Departs (AM)	School start	Travel time	Max. daily	Total boardings	Bus (PM)	School finish	Arrives (PM)	Travel time	Max. daily	Total alightings
Morris Soak	Morris Soak	4	7:33	8:30	57 mins	10	361	14	2:50	3:31	41 mins	15	476
Charles Creek	Ulpaya Road	12	7:39	8:30	51 mins	8	291	1	2:50	3:00	10 mins	7	745
Drive In	Karnte Road 1	1	7:40	8:30	50 mins	9	108	1	2:50	3:37	47 mins	<5	13
Palmer's Camp	Basso Road	9	7:35	8:30	55 mins	10	150	1	2:50	2:55	5 mins	5	267
Hidden Valley	Hidden Valley	8	7:27	8:30	63 mins	7	141	8	2:50	3:29	39 mins	12	586

Town Camp	Stop ID	Bus (AM)	Departs (AM)	School start	Travel time	Max. daily	Total boardings	Bus (PM)	School finish	Arrives (PM)	Travel time	Max. daily	Total alightings
Ilparpa	Ilparpa	1	7:26	8:30	64 mins	9	107	1	2:50	4:17	87 mins	5	190
Warlpiri	Dalgety Road	9	7:33	8:30	57 mins	<5	6	9	2:50	3:30	40 mins	7	275
Old Timers	Percy Court	2	7:38	8:30	52 mins	5	97	1	2:50	3:33	43 mins	12	695
Little Sisters	Commonage	3	7:44	8:30	46 mins	<5	69	3	2:50	3:28	38 mins	6	192
White Gate	Spearwood Road	8	7:31	8:30	59 mins	8	517	8	2:50	3:32	42 mins	11	631
Basso's Farm	Basso Road	9	7:35	8:30	55 mins	10	150	1	2:50	2:55	5 mins	5	267
Karnte	Karnte Road 2	1	7:42	8:30	48 mins	5	10	1	2:50	3:35	45 mins	10	317
Hoppy's Camp	Ulpaya Road	12	7:39	8:30	51 mins	8	291	1	2:50	3:00	10 mins	7	745
Mount Nancy	Basso Road	9	7:35	8:30	55 mins	10	150	1	2:50	2:55	5 mins	5	267
Abbotts Camp	Shanahan Close	6	7:39	8:30	51 mins	6	400	6	2:50	3:45	55 mins	No data	No data
Trucking Yards	Lovegrove & Smith	4	7:34	8:30	56 mins	14	621	14	2:50	3:33	43 mins	17	1,054
Larapinta Valley	Larapinta Valley	5	7:30	8:30	60 mins	5	62	10	2:50	3:25	35 mins	15	195
Ilpeye-Ilpeye	Ilpeye-Ilpeye	8	7:35	8:30	55 mins	<5	60	8	2:50	3:36	46 mins	13	206

3.6. Insights from service provider interviews

Key findings

- **Organisations we spoke to recognised Aboriginal families, migrants, people living with disabilities, and single mums as those most affected by transport disadvantage in Alice Springs**
- **Stakeholders advocated for an expansive understanding of transport disadvantage in Alice Springs given the town's role as a regional service hub for remote communities**
- **Stakeholders characterised transport disadvantage in Alice Springs as multidimensional, with key drivers being the compound effects of limited transport options and high transport costs for low-income households**
- **Most of the organisations we spoke with do not provide formal community transport services**
- **There was stakeholder interest in a community transport initiative, but broader organisational decisions about the form and extent of involvement would be required**
- **Stakeholders identified a need to improve transport services across Alice Springs, based on a collaborative, whole community approach**
- **Stakeholder recommendations include:**
    - **improved public transport routes and service frequency (including weekends)**
    - **more free public transport services**
    - **reviewing existing community transport services**
    - **piloting flexible, on-demand community transport options**
    - **providing travel subsidies for priority groups e.g., for new arrivals, and new parents attending health appointments and programs.**

Building on the Alice Springs Transport Survey, we approached a range of community-based service providers and six of these organisations agreed to participate in semi-structured interviews exploring in closer detail issues relating to transport disadvantage in Alice Springs. The organisations interviewed provide a range of

services within their communities including financial support, accommodation services, health-related services, and family and early childhood services.

Our topics of discussion focused on five key questions:

1. What groups in the community experience the most transport disadvantages?
2. What things make it hard for people to get to places and services in Alice Springs?
3. What transport services do you provide?
4. Would your organisation be interested in helping to set up, implement, or operate a community transport service?
5. Do you have any recommendations to improve transport service, and access in Alice Springs?

We discuss our qualitative research findings below.

Organisational perceptions of groups affected by transport disadvantage in Alice Springs

Each of the organisations interviewed identified Aboriginal families as those most affected by transport disadvantage in Alice Springs. One stakeholder described how transport disadvantage affects both Aboriginal people within Alice Springs and remote-living Aboriginal people needing to access services located in Alice Springs. This demonstrates Alice Springs' role as a regional service hub and the need to understand transport disadvantage in Alice Springs within its broader, regional context.
Other affected groups identified by stakeholders include migrants with CALD backgrounds, people and families living with disabilities, and single mums. Some stakeholders discussed how transport disadvantage intersects with other sources of disadvantage for people and families they have contact with. The interactions they observe involve transport disadvantage, poverty, poor housing, overcrowding, energy insecurity and food insecurity. One stakeholder discussed the high cost of groceries at the local community store and how families have difficulty accessing the Foodbank and bigger supermarkets, where food is usually cheaper, due to limited, affordable transport options.

Significantly, stakeholders observed that children and families in Alice Springs, particularly Aboriginal families, were missing out on early education experiences due to transport disadvantage. Early childhood education and care (ECEC) is recognised by the Australian Government as "an essential part of Australia's education system" that "provides a foundation for our children's future well-being and success" (Productivity Commission, 2023). Further, the National Aboriginal Community Controlled Health Organisation (NACCHO) describes "the availability and resourcing of appropriate culturally-safe ECEC services for Aboriginal and Torres Strait Islander children and families [as being] key to meeting the early childhood targets under the National Agreement on closing the Gap" (NACCHO, 2023, p. 5). Part of providing *accessible* ECEC involves ensuring that families' transport needs are met. Yet, transport has been identified as a key barrier to accessing ECEC for Aboriginal and Torres Strait Islander children and their families in the literature and in our discussions with stakeholders (NACCHO, 2023; NIAA, 2021). Consistent with stakeholders' perspectives, NACCHO has emphasised that transport is part of the essential community infrastructure that contributes to the social and emotional wellbeing of children, saying:

"… children who grow up in a safe household and community where they have a sense of belonging are more receptive to learning and, later on, engaging with school. Evidence shows that children thrive when they live with their families in safe, inclusive communities. Well-developed community infrastructure, such as transport, decent housing, recreational and play spaces, an appropriately resourced early learning centres and schools create communities where parents/carers can support the social and emotional wellbeing of their children." (NACCHO, 2023, p. 14)

Factors driving transport disadvantage in Alice Springs

In our interviews, organisations described multiple factors contributing to the experience of transport disadvantage for people and families they have contact with. Key issues identified by all stakeholders are the interactions between limited transport options in Alice Springs and the affordability of available transport options for low-income households and people/families experiencing poverty. One stakeholder observed that:

"If you take away buses and taxis, there's not any other form of transport. People just rely on taxis and then if they don't have the funds to pay for them, then they're unable to go out and do the things that they need to do." – Organisational stakeholder

The costs of transport for low-income households are recognised as a defining problem by stakeholders. They described how individuals and families who can't afford to own a car are forced to choose between expensive taxis and minibuses, or public buses with routes that don't match their needs and services that are not regular enough to provide them with a safe and dependable form of transport. Other factors identified as contributing to individual and family experiences of transport disadvantage include:

- Lack of a car/driver's licence and ID documents to obtain a licence
- Lack of a registered car
- Lack of public transport network coverage
- Inefficient public and school bus routes
- Limited frequency of public bus services
- Lack of bus services across the weekend, including on Sundays
- Early school bus arrival times
- Time taken to use public transport
- Walking distance to bus stops
- Safety concerns about using public and school buses, including exposure to experiences of racism, shame, and fear
- Difficulty using public buses, including boarding with shopping bags and pushers
- Lack of information about public transport services that are available, including information for CALD groups
- Lack of awareness of public transport services that are available, including how to use the services
- Distance of specific communities from the Town Centre and services accessible there
- Temperature impacts e.g., comfort using public transport on very hot and cold days particularly when there is a substantial walk to and from the bus stop.

One stakeholder observed that their clients often miss appointments, or need to reschedule appoints, due to difficulties accessing transport. They described that a major contributing factor is the time it takes to use public transport. Commonly, bus services are indirect, and clients need to use connecting services to attend their appointments. Factoring in connection times:

"…it can take up to two hours to get to an appointment in Alice Springs. [Just] because there's a bus stop out the front [of the office people assume] you can get public transport right to the front door, but it actually doesn't work very well from certain parts of town." – Organisational stakeholder

Several organisations emphasised how families with young children experience specific barriers to accessing public transport. They identified the difficulty for parents walking with young children and babies in pushers to bus stops in the heat, getting pushers on and off the bus, and keeping young children happy and safe on the bus. It was observed that attendance at appointments often forms part of family Centrelink obligations and transport disadvantage impacts their ability to attend appointments and meet those obligations. Additionally, some appointments can't be attended with children, which creates childcare issues additional to transport challenges.

The difficulties faced by people from CALD backgrounds were also highlighted. CALD communities represent a fast growing and significant proportion of the overall Alice Springs population. ABS 2021 Census data indicates that approximately 26.2% of the population, or 6,793 people, were born overseas and over 2,100 people living in Alice Springs speak languages other than English and Australian Indigenous Languages at home (ABS, 2022). One stakeholder observed that:

"[it can be] very daunting if you've come from another country and you've just sort of turned up in Alice Springs. [People] may not even feel [public transport] is safe from their experiences in their own country… For some women from other countries even going in a taxi is not considered a safe thing to do on your own … [so] how do you support people to use our services?" – Organisational stakeholder

Organisations described to us that many new community members do not understand the public transport system in Alice Springs due to language barriers and problems accessing transport information and timetables. These difficulties were articulated by a participant in MCSCA's Living and Working in the Red Centre: Migrants in Alice Springs report, who expressed their concerns that:

"Communication, transportation issues, limit[ed] types of work/jobs, [and] children's education are big issues. They forget about migrants. More tailor-made consideration for migrants may be needed." (MCSCA, 2021)

Organisations observed that some CALD community members, especially those with young children, feel unsafe waiting at bus stops or on the street for taxis due to concerns associated with media reports, lack of knowledge of the town, lack of welcome and orientation, and extreme weather. The infrequency of public transport, unreliable timetables, and inadequate routes make bus travel unsuitable for many of their clients, particularly on weekends. These barriers to accessing transport are felt acutely by young people with working parents across CALD communities, with impacts for their ability to participate in community, sporting, and social events. Organisations also identified the limited number of driving schools and options for formal driving lessons as barriers for CALD community members who are seeking employment in locations or with shifts that necessitate use of a private vehicle. These barriers are compounded for those on low incomes. Older people in CALD communities were identified as being particularly affected by transport scarcity, given they cannot easily walk or cycle as alternatives to private vehicles and public transport and cannot afford the costs of commercial transport options such as taxis.

The experience of transport disadvantage for CALD community members was also described in a broader context. Some CALD community leaders observed that, while members of their own cultural communities are in paid work with access to a car, they have different experiences of transport disadvantage relating to the geographical remoteness of Alice Springs and the costs of maintaining family and cultural connections that may be interstate or overseas. In the MCSCA Report on Migrant Experience in Alice Springs 2021 (unpublished) it was observed that:

"Expensive transport costs were raised by many migrants. It is also an issue for the entire community in Alice Springs. However, considering 'linking back to home country' is critical for migrants as reported in the survey, the transport issue understandably becomes more important for migrants than for some others. Airfares are considered too expensive which acts as a barrier for migrants to travel back to their home countries and return with their friends and relatives to Alice Springs. In this regard, expensive transport costs are a key concern."[6]

Community transport services

Most of the organisations we spoke with do not offer community transport services. One organisation (a community-based government agency) provides transport for young children and their families using a small bus, with access to other vehicles on an ad hoc basis. The service is provided on-demand and is responsive to family needs. Stakeholders informed us that some of the locations that families need help accessing are preschool, school, medical appointments, hospital, banks, Foodbank, and home drop-offs. Transport is recognised as a priority for the organisation because it supports children during their early years.

Another organisation we spoke with provides transport services to clients living in supported accommodation. In such cases, transport services are funded through clients' NDIS plans. Stakeholders observed that a transport service gap exists for their clients who receive in-home services but are not funded for transport

[6] Report extract provided by MCSCA.

services. We were told that this group can face substantial difficulties accessing programs and social activities outside of the home.

One stakeholder emphasised that uncoordinated, informal transport services offered by community-based organisations can effectively mask the depth of transport disadvantage experienced by individuals and families across Alice Springs. They identified a need to properly understand the range of community transport services offered and coordinate them where possible.

All stakeholders expressed interest in supporting a community transport service but indicated that the extent and form of any involvement would need to be determined at the organisational level.

Recommendations for improved transport services

"There needs to be more transport services for people struggling" – Organisational stakeholder

All organisations we spoke with recognised a need for improvements to transport services in Alice Springs. Stakeholders emphasised the importance of prioritising whole community approaches to decision-making about transport to enable strategies based on participation and community-identified needs. Complementing this, stakeholders identified the need for collaboration between organisations, departments, and agencies to enable collaborative rather than siloed decision-making. In our roundtable process, government stakeholders provided feedback that solutions for transport disadvantage should recognise the need for partnership between government and non-government organisations, acknowledging that the NT Government can only work in partnership with community organisations to plan, implement and achieve solutions. One stakeholder said that a transport strategy for Alice Springs must prioritise and support access, relationships, and connections within and across communities.

Stakeholders provided recommendations about ways to improve transport access in Alice Springs. Their suggestions group into five (5) categories:

1. Improve public transport routes and service frequency, including on weekends
2. Introduce more public transport services
3. Review existing community transport services
4. Pilot flexible, on-demand community transport options
5. Introduce targeted travel subsidies for priority groups e.g., for new parents attending health appointments and support programs.

Addressing on-demand community transport options, stakeholders recognised a need for flexible transport options that are wheelchair accessible, have adequate space for mums and parents with pushers, and provide inclusive spaces for people of different cultural backgrounds. One stakeholder described the role of on-demand transport services as "going around the corners that the bus cannot reach".

"If you miss the bus, then what do you have? There's a huge price difference between a taxi and a bus … Even if you call a taxi, you can be waiting 45 minutes, especially in peak times on Saturdays, so we definitely need more transport options that are affordable" – Organisational stakeholder

Stakeholders discussed improving transport affordability by introducing more free bus travel. One stakeholder suggested trialling a free loop bus service operating on a regular schedule connecting Town Camps directly to and from the Town Centre. Generally, the costs of travel were described as prohibitive, even for concession holders using public buses:

"Even if it is just a dollar or two, it's probably still hard for some people to have that change, when they need it… We know that payments for people aren't enough to pay for everything, and even just a dollar or two for the bus [can be too much], or if you've got how many kids [it can all add up]." – Organisational stakeholder

Some stakeholders recommended travel subsidies for priority groups e.g., new parents and new arrivals as ways to increase social cohesion and reduce cultural barriers and isolation. For new parents a dedicated

transport service enabling health visits and participation in playgroups and support groups could help families to feel more safe, secure, and connected without the pressures of public buses or taxis.

Understanding what community transport services exist and how they might be better coordinated was identified as a priority. Stakeholders proposed coordinating community transport services according to service types e.g., the potential for a food bus helping people to access major supermarkets and the Foodbank, and a family bus for attending health visits and programs.

3.7. Insights from Town Camp interviews and workshops

Key findings

- **Town Camp residents told us that transport disadvantage adversely impacts their daily lives**
- **For Town Camp residents, experiences of transport disadvantage are closely associated with energy and food insecurity**
- **There are multiple barriers to using public transport, including distances to bus stops and fears of being exposed to racism at bus stops and while travelling on buses**
- **Community-identified solutions for overcoming transport disadvantage within Town Camps include improvements to public transport and community-operated transport services.**

We undertook a series of semi-structured interviews and workshops with Town Camp residents to enrich the quantitative insights gained about transport disadvantage from the Town Camp Wellness Survey. In these discussions, we focused on five topics:

1. How community members perceive their access to transport
2. How experiences of transport disadvantage impact community members (e.g., older people, school aged people)
3. Factors that influence transport disadvantage for Town Camp residents
4. Safety concerns of Town Camp residents associated with public transport
5. How access to transport for Town Camp communities could be improved.

Our qualitative findings are provided below. Where available, we complement Town Camp residents' lived experiences with evidence from the literature.

How transport disadvantage impacts Town Camps in Alice Springs

Town Camp community members who participated in our interviews and workshops described the experience of transport disadvantage as pervasive in their daily lives. Contributing factors identified by residents included poverty, the geographic location of their Town Camp, lack of a private car or driver's licence, lack of public transport options, and lack of services near their homes. Community members emphasised the difficulty of attending appointments and meeting other essential needs in the absence of reliable, affordable, and culturally safe transport options. They shared with us that while some older people receive transport assistance as part of their aged care services, others "got to find their own way around to do their things". In a workshop held at Warlpiri Camp, the northern-most Town Camp in Alice Springs, community members described the cascading effects of transport scarcity across their community:

"… for older people it's hard if you or any other family don't have any car to get a ride in. Even if families have a car no one has a licence, or the car is unregistered or has no fuel. Or sometimes people don't want to help at all because they get greedy with their car. When we don't have any car, we would walk along to catch the Alice Springs bus which is cheaper than a taxi or a minibus. The nearest bus stop is near the truck stop, and another is just a bit further there is a bus stop outside Mt Nancy camp." – Warlpiri Camp community members

Workshop participants from Karnte Camp located south of The Gap described how their community is a long way from all the services in the CBD area and surrounding areas. Karnte Camp community members identified that most households don't have a car, a licenced driver, or where there are cars, they may be unregistered. Other transport options are limited due to the distance to the nearest bus stop and expense of catching a taxi or minibus into town. This forces people to rely on help from family who are visiting with a car, or from their Community Centre Coordinator. Karnte Camp residents explained that the uncertainty about access to transport in their lives makes it very difficult for people to organise their food shopping, medical appointments, banking, and Centrelink business. Community members feel confident about attending appointments made by Congress because in these cases the Congress bus picks people up to attend their appointments. For other medical appointments, there is less certainty:

"If the appointment is made for 9am and residents don't have a car they start walking, by the time they reach their destination someone else has already placed in their time frame, so they are told to come back another time. But this is what they don't understand for us that have to walk all the way from our camp to be on time for an early appointment, it doesn't work. They need to make the appointments for around 11am onwards, it's OK to make an early appointment for people who have cars, who will be able to make it on time." – Karnte Camp residents

Limited access to Centrelink services can also have profound ramifications for community members:

"Trying to make it to Centrelink appointments is hard, 'cause if we don't make it in time for our appointment our payments will be cut off and we have no money, especially if it's before the weekend or public holidays and long weekends. We will have no power, no food the whole weekend, must wait until the weekend is over to sort out our Centrelink payments back on track again. Especially from the camp where we live, we cannot make it in time before the office closes and we can't do anything after that. Not all of us are savvy on technology where you can lodge anything over the phone. We need someone to explain to us in person when we lodge our form, and to get a new basic card. We can't read or write or understand the language to complete or lodge a form on the phone, we need someone to help and show us in the main office." – Karnte Camp residents

Transport disadvantage intersects with other inequities

We heard that for Town Camp residents, transport disadvantage closely interacts with experiences of food insecurity and energy insecurity with common underlying drivers including poverty, poor health, geographic remoteness, and temperature extremes. People spoke of being unable to travel to the nearest community store to buy food and prepaid electricity credit for their homes due to poverty and the lack of transport options which meet their needs. Impacts are felt acutely by older community members with underlying health conditions, who described their experience of intersectional disadvantage in this way:

For us old people when we are diabetics and have other health problems, we need to keep the house warm in winter. When our power runs out, it's hard for us to climb the hill or walk along the creek bed to collect firewood to keep us warm and to cook our meals and we worry a lot. In summer it's OK if we can sit under a tree and make a fire outside to cook. When our power runs out in our houses we struggle to go and pay for more power. The nearest shop where we can get power is the Northside IGA, it's still a long way from our camp. And when we are in debt, we can't afford a taxi or a minibus to go back and forth because we only have enough to pay our debt off for when it first ran out. What we do is wait if any family to come with a car or any Tangentyere workers with a car and we ask them for help to take us to get power. – Warlpiri Camp elders

Karnte Camp residents described that transport scarcity means they have difficulty accessing affordable food:

"All the little shops that are closer are good if you need little things like a power or top up or other food items, but it is so expensive to do a big food shopping. That is why we would like to go to Coles, it's a lot cheaper and we get more food from there. It's so cheap that we walk out with 5 or more plastic bags full of

food. But the little shops like Heavitree Gap, Piggly Wiggly's and Ivy's that are close to us are very expensive, we only walk out with 2 or 3 bags and no change." – Karnte Camp residents

Community members describe these smaller shops as their closest options, but we note they are still a significant distance from Karnte Camp – ranging from over 5 to 7 km from their households. Travelling to these shops for essentials means arranging a ride or using expensive commercial transport options. Community members from Karnte Camp describe this experience when it comes to buying prepaid power for their homes:

"When a person doesn't have a car in the camp and needs to come into the nearest shop to get power, we wait for someone to come back in the taxi and then we jump on it to get off at the nearest shop. A lot of time our power runs out and we must pay off the debt to reconnect our power on again. The taxis and minibus drivers charge us more than we must pay off our debt for the power. So, we have enough money to go to the nearest shop and must hang around and ask families to chip in to make the amount to cover the cost of our debt and just a little until we can put more money into the power cards. Very expensive and hard if you don't have a vehicle and live in a camp that's a long way from shops and the town area." – Karnte Camp residents

The close associations between transport disadvantage and other sources of inequity have received attention in the literature (Lowans et al., 2023, 2021; Martiskainen et al., 2021; Mattioli et al., 2018, 2017; Sovacool and Furszyfer Del Rio, 2022; Upham et al., 2022). A recent study focused on the lived experience of food insecurity for remote communities in the Northern Territory and Queensland found that food insecurity was linked with both household energy insecurity and limited access to affordable and reliable transport (Booth et al., 2023). The authors heard that people could not access affordable and fresh food options due to lack of transport and often had to choose between buying food and prepaid credit at the local community store where food is more expensive and there are fewer options; prioritising food purchases ahead of prepaid credit risked food spoilage and further expense for families, as well as the broader disruption caused by being disconnected from essential electricity services (Booth et al., 2023, p. 5). In their study of energy and transport poverty amongst vulnerable households, Upham, Sovacool and Monyei comment that "it makes little sense to view energy and transport poverty in isolation not only from each other, but also from other forms of poverty. People who struggle to pay for energy and transport also tend to struggle to pay for other 'basic' (non-discretionary) services" (Upham et al., 2022, p. 12). Here, transport and energy poverty are synonymous with transport disadvantage and energy insecurity. Other types of non-discretionary costs identified by the authors include rent and food costs, consistent with the experiences of Town Camp residents in Alice Springs. Generally, the literature urges for better recognition of the groups at greatest risk of experiencing intersecting forms of poverty, for example concurrent transport disadvantage, food insecurity and energy insecurity, and for removing traditional policy silos in order to design effective solutions (Martiskainen et al., 2021).

Safety on public transport

During interviews, some Town Camp residents identified barriers to using public transport for people in their communities. Several physical barriers were identified, including the physical impacts of long walking distances to bus stops on hot days and having to wait for buses in the heat. Psychological barriers were also discussed, including fears about safety using public transport systems. People spoke about fears of experiencing racism onboard buses or while waiting at interchanges and bus stops. These experiences range from subtle to overt and interact with prior experiences of racism in public spaces in Alice Springs and elsewhere. People also shared their feelings of shame and stress when travelling on public buses with loud or unhappy kids, which can attract negative attention from other passengers.

Community members raised issues of safety for their young kids on school buses. Some described being reluctant to allow their younger kids to walk unaccompanied to the school bus stop, or to travel unaccompanied on early morning school buses (for example, see Section 3.5 above). In Alice Springs and across the Northern Territory, a Code of Conduct operates to establish standards of behaviour and safety on school buses (NT Government, 2022c). One requirement of the Code is that adults, including parents/carers, are not permitted to travel on school buses. While this type of rule is common to many school bus systems, we observe that it contradicts the principles inherent in the Department of Education's Families as First Teachers framework (NT Government, 2022d) and impacts upon Town Camp families' perceptions of safety for their young children on school buses. One community member told us they would not allow family

members younger than 10 years on the school bus alone. In Alice Springs, school buses transport students of different ages and schools to the Gillen Interchange, and from there onto school destinations. The result is that younger children from Year 1 onwards at times catch the same bus as Year 12 students. Conceivably, this compromises feelings of safety for both young kids and their families.

Prior research findings relating to safety on public transport correspond with the concerns expressed by Town Camp community members. A national survey study undertaken by Western Sydney University identified that most experiences of racism in Australia happen on public transport or in the street, and that half of all Aboriginal and Torres Strait Islander respondents have experienced racism in these settings (Blair et al., 2017). Indigenous respondents were roughly 25 percentage points more likely to experience everyday racism in the form of disrespectful treatment (40%), lack of trust (34%) and name-calling (39%) than non-Indigenous respondents (Blair et al., 2017). In a study from the United States, researchers found that among students aged 10 to 18 years feelings of compromised safety while travelling to school in the morning are common (Wiebe et al., 2013). Approximately 59% of students interviewed reported feeling less than very safe at some point while travelling to school, while nearly a quarter of students felt reduced safety immediately upon leaving home. Researchers found the likelihood of students reporting feelings of safety > 8 (1 = very unsafe, 10 = very safe) when on a public bus was lower than while in a car, on foot, or when accompanied by an adult. The findings indicates a need for policy efforts to overcome situational risk factors experienced by students on public transport, including initiatives to "help children feel safe over their entire school travel routes" (Wiebe et al., 2013, p. 54).

A recent international study found that familiar places and routine behaviour have no effect on perceptions of crime and safety during public transport travel (i.e., being in familiar places does not reduce fears for safety) (Abenoza et al., 2018). Among young Australians, research identifies that "feelings of anxiety and discomfort associated with travelling with people you do not know is the most influential factor driving negative feelings of personal safety on public transport" (Currie, 2007, p. 1).

As a strategy to reduce inappropriate behaviour and fear of criminal activity for public transport, the NT Government uses closed circuit television (CCTV) throughout the school and public bus system (NT Government, 2022c). An Australian study reviewing the international literature points out that CCTV is recognised as ineffective in reducing fear of crime (Gardner et al., 2017). Women in particular "consistently dismiss CCTV as effective, largely out of scepticism in regards to the level of monitoring" (Gardner et al., 2017, p. 11). Strategies to overcome fears of harassment that were identified as potentially effective in the Australian context include public awareness campaigns and improved reporting mechanisms (Gardner et al., 2017). An example is the 'Racism. It Stops With Me' campaign of the Australian Human Rights Commission, which aims to increase awareness of racism and reduce its incidence in Australia (AHRC, 2022).

In 2023, the NT Government amended the *Public Transport (Passenger Safety) Act 2008* (NT) enabling transit officers to use reasonable force to maintain safety and security on buses, bus interchanges and bus stops including the use of capsicum spray and approved restraints.[7] The use of capsicum spray is described by government as "an effective, last resort tool for officers who are dealing with anti-social or violent behaviour – and at risk of physical threat" (NT Government, 2023). However, currently there are no guidelines for use of capsicum spray by transit officers or clarity on oversight mechanisms. NT Government has stated that transit officers will be "trained on the use, carriage, storage and reporting of OC [capsicum] spray, including decontamination of affected people. The course would also cover the appropriate use of force, de-escalation and conflict resolution" (Averill, 2023). However, professional associations, advocacy groups and unions have expressed concerns that the new rules could escalate difficult and tense situations and make some passengers feel targeted or unsafe, with increased clarity needed from government about transit officers' rights and responsibilities (Averill, 2023). The changes are also concerning based on our qualitative findings about Town Camp community members' existing perceptions of safety on public transport. We recommend that the Transport Working Group continue to monitor the issue, and how It applies to Alice Springs' public transport system, because fear associated with the increased powers of transit officers may present additional barriers for groups with already limited transport options.

[7] Ss 27A-27D.

Community-identified solutions

Town Camp residents shared with us solutions for improving transport in their communities. Community-identified solutions include extending public bus routes into Town Camps and providing community transport options. Warlpiri Camp residents told us:

"We need the Alice Springs bus to come into our Town Camp and do pickups, to be able to make it easier for all old people and for all of us living in the Town Camp. Have a roundabout so the bus could come into our camp. Truck stop is still a bit long way to walk to even the Mt Nancy bus stop." – Warlpiri Camp residents

Discussing community transport options, Town Camp residents said that their communities need small, accessible buses run by their own organisations covering transport services for school students and food shopping. Community members recalled transport services provided previously by Tangentyere Council:

"When Tangentyere was running the food order bus and school bus ran it was a good, it worked. In the morning they would pick up the kids and drop them off to school, then when [the kids were] in school they would do the food order run until 3.00pm. Tangentyere should bring back that program, it really helped all of us in all the Town Camps." – Town Camp residents

3.8 Insights from CALD community surveys

Key findings

- **We surveyed CALD community members (n = 5) about their experiences of accessing transport in Alice Springs**
- **Participants included people from Filipino, South Sudanese, Indonesian and Nepalese communities of Alice Springs**
- **All individuals surveyed own or have access to a private vehicle, so do not directly experience transport disadvantage in their daily lives**
- **A limited number reported additionally using public transport, cycling or walking**
- **Several participants identified the need for safer transport options in Alice Springs and support for their community members in accessing driving lessons and navigating driver's licensing systems**

We conducted a short online survey in collaboration with MCSCA to better understand how members of CALD communities access transport in Alice Springs. Five surveys were completed within the allocated timeframe with participants from a range of cultural backgrounds, including Filipino, South Sudanese, Indonesian and Nepalese. Acknowledging the small sample size and limited number of questions, we offer our findings as initial insights that can help shape the direction of future investigation of the transport access for CALD communities in Alice Springs.

Importantly, all individuals surveyed own or have access to a private vehicle and not directly experience transport disadvantage in their daily lives. A limited number of respondents also use public transport, cycle or walk, or report that other members of their cultural communities use these modes of transport.

Some respondents reported feeling unsafe when using transport in Alice Springs. Examples provided include while driving at night, or for children when walking or using public transport in the evenings or on weekends.

Respondents identified several ways of improving transport services for their community members. These include:

- More accessible information about public transport
- More safe, reliable, frequent and affordable public transport options, particularly to meet the needs of children
- Support for community members with driving lessons and navigating the driver's licensing system.

While all respondents had access to a private vehicle, they identified other experiences of transport disadvantage due to the remoteness of Alice Springs and associated costs of interstate travel for medical appointments or maintaining cultural connections. One respondent shared with us that in Alice Springs there are:

> **"Not enough buses and people waiting too long and creates a shiver on you – you don't know what will come to your mind. If [buses arrived] every 5-10 minutes people would use it most. Children and young people at school [have limited options] because when parents are at work it's hard for them to get around. Alice Springs is like a 'nowhere'. To get anywhere else is very expensive. This creates difficulty to get to SA or Vic for medical appointments. It costs everything you've got. People come here to make a home but want to be able to travel for medical or family or socialising. But to go anywhere is cut off from the rest of Australia. It is a big question mark that has no answer." – CALD community member**

3.9 Commercial Passenger Vehicles (CPV) data

To identify solutions for transport disadvantage it is necessary to better understand the services provided by commercial passenger vehicles (CPVs) as part of the overall transport service matrix in Alice Springs. We reviewed the policy and regulatory framework for CPVs and the results are included in **Appendix 1**. To enrich our findings, DIPL provided us with data showing the number and type of CPVs operating in Alice Springs and Tennant Creek as a basis for comparison. While the data covers all CPV types, we focus primarily on taxis and minibuses because they represent the two main types of commercial transport services used by groups experiencing transport disadvantage in Alice Springs. We draw on comparative data for Tennant Creek because, despite having a smaller population, it faces similar challenges to Alice Springs due to geographical remoteness, sociodemographic indicators, and limited transport options available community members. Additionally, it is an example of a NT town where a fee-based, door-to-door community bus has operated for five years (see **Appendix 1**) (Tennant Creek Transport Inc, 2022). Comparative numbers of taxis and minibuses are important in assessing the feasibility of equivalent fee-based community bus for Alice Springs, as any such service would need to operate alongside (or compete with) CPVs to be sustainable.

Table 10. DIPL data showing type and number of CPVs operating in Alice Springs and Tennant Creek, NT (March 2023)

CPV category	No. in Alice Springs	No. in Tennant Creek	Comment
Taxi	23	0	—
Multiple Purpose Taxi	10	0	Multiple purpose taxis can carry more than 4 passengers and are often referred to by passengers as Maxi Taxis.
Wheelchair Accessible Taxi	10	0	—
Minibus	2	0	—
Minibus Operators	2	1	—
Wheelchair Accessible Minibus	1	2	—
Private Hire Car	7	0	—
Private Hire Car Operators	6	0	—
Motor Omnibus (Point to Point)	107	2	These vehicles operate entirely on a booking system and all journeys must be pre-booked (i.e., drivers cannot respond to hails).

CPV category	No. in Alice Springs	No. in Tennant Creek	Comment
Motor Omnibus (Point to Point) Operators	22	2	—
Ride Share Vehicle (Point to Point)	3	0	—
Ride Share Vehicle (Point to Point) Operators	3	0	—

Comparative observations: Alice Springs and Tennant Creek

Focusing on taxis and minibuses, the data shows there are 23 standard taxis and 10 multipurpose/wheelchair accessible taxis currently operating in Alice Springs. Additionally, 3 minibuses operate and one of these is wheelchair accessible.

By comparison, no taxis currently operate in Tennant Creek. Two wheelchair accessible minibuses are operated on a fee-for-service basis and in the absence public transport options by the Tennant Creek Transport Inc (TCT), a non-profit community association. The service runs Monday to Fridays from 8 am to 4 pm and fees range from $10 (waged) to $8 (concession holders) and $4 (children aged 5-12 years) (Tennant Creek Transport Inc, 2022).

We observe that TCT's operations address an important gap for transport services in Tennant Creek. However, the context in Alice Springs is notably different, with existing taxis, minibuses and public transport options in place. On balance, it is unlikely that a fee-for-service community bus could operate sustainably in the context of existing transport systems in Alice Springs. Our recommendations in Section 5 (below) thus draw together and build upon the community-identified solutions which focus on transport improvements suitable for Alice Springs.

4. Town Camp infrastructure needs

Our literature and regulatory review (**Appendix 1**) identified that:

Roads and roadside infrastructure in Town Camps are inadequate to support safe public transport access and fail to meet minimum standards which apply in other areas of Alice Springs.

Consequently, Town Camp residents are more likely to experience difficulty accessing public transport and services, often having to walk long distances to and wait at bus stops outside Town Camps without shelter during extreme heat (Tucker et al., 2022). To better understand the issues, we conducted expert interviews and questionnaires to better understand the interactions between insufficient community infrastructure and experiences of transport disadvantage amongst Town Camp residents.

Experts consulted include:

Dr Chris Tucker from the University of Newcastle, who has conducted annual architecture studios within Town Camps since 2017 and is currently facilitating the development of a Guide to Housing and Infrastructure Standards for Town Camps in conjunction with Tangentyere Council.

Representatives of NBN Co, who have visited Town Camps aiming to improve digital access. As identified in our literature and regulatory review, digital inclusivity may ameliorate some of the impacts of transport disadvantage by increasing access to services within affected groups.

We present insights from the expert interviews below.

Expert interview—Dr Chris Tucker

In our interview, Dr Chris Tucker described how the lack of access to public transport in Alice Springs Town Camps is influenced by the lack of adequate community infrastructure, such as sealed roads, gutters, kerbs, footpaths, and street lighting. Without road and roadside infrastructure that meets the minimum

requirements applying in nearby Alice Springs suburbs, bus routes commonly bypass Town Camps and residents often need to walk substantial distances to access public transport.

The Draft Guide to Housing and Infrastructure Standards for Town Camps identifies that:

"Having to walk along busy roads is a safety risk, more so in the evenings and at night. The lack of viable public transport alternatives also limits employment opportunities and limits the ability to act independently" (Tangentyere Council and University of Newcastle, 2022).

Standards applying in other parts of Alice Springs require public transport facilities (e.g., bus shelters) "to provide easily accessible, safe and clean public transport settings that encourage patronage through the day" (NT Government, 2010, p. 17). The logic behind this is that "[w]ell sited and designed public transport settings, that are well managed and regularly maintained, create a safe environment for community members. This encourages use of the public transport system, and contributes significantly to vibrant and lively activity centres, and also to environmental sustainability" (NT Government, 2010, p. 17).

Dr Tucker supports the application of these principles to Town Camps, saying that modest changes that bring community infrastructure up to prevailing standards can have a profound impact, enhancing dignity, wellbeing, and public transport access within communities. The priority is for community projects to reflect community and resident aspirations and support self-determination.

Solutions identified in the Draft Guide addressing public transport include review the location of bus stops and public transport routes in relation to Town Camps against the standards in the NT Government's Community Safety Design Guide. Proposed locations of bus shelters for each Town camp, as well as basic design elements, have been identified through community consultation and are included in the Draft Guide.

Insights from NBN Co representatives

We spoke to NBN Co representatives to better understand the relationship between digital access and transport disadvantage. Main points of intersection include that:

- Existing infrastructure deficiencies within Town Camps are common drivers of disadvantage across both spheres; and
- Improved digital access has the potential to ameliorate some of the adverse impacts of transport disadvantage for Town Camp residents.

We expand on these topics below.

Digital access in Town Camps

Digital access differs across Town Camps in Alice Springs, with a mix of different technologies currently in place. Some Town Camps located closer to the town centre have access to fixed line infrastructure while others located further away have satellite access. However, this does not guarantee that each household has digital access due to high costs of individual connections. To address this, TCAC has worked with providers including NBN Co to provide free community Wi-Fi within Town Camps, but the service is so far limited to individual hotspots within the Town Camps. Comprehensive free community Wi-Fi would make access to the Internet available across communities without individual households having to pay.

Satellite internet is the only service available to Town Camps south of The Gap, Ewyenper Atwatye/Hidden Valley and in Amoonguna. Somewhat incongruously even where Fibre To The Premises (FTTP) or Fibre To The Node (FTTN) is available on Town Camps closer to Alice Springs most households can only access satellite services due to the poor quality of Town Camp infrastructure (no kerbside to bury cable). While these technologies do not offer the speed and reliability of fixed line services, representatives informed us that NBN Co focuses on improving each category of technology to increase speeds and data allowances to the maximum possible in each context.

Infrastructure limitations

Infrastructure deficiencies experienced in Town Camps are drivers of both transport disadvantage and the lack of digital inclusivity amongst community members. The costs of extending digital infrastructure into Town Camps is also prohibitive, as costs must be borne by individual households in the absence of existing connections. In some cases, lack of road and roadside infrastructure has contributed to digital access

limitations because service vehicles and crews rolling out digital infrastructure require good quality roads to access their work locations.

Opportunities

Our findings indicate that improved digital access across Town Camps has the potential to ameliorate some of the adverse impacts of transport disadvantage for Town Camp residents. Digital access creates opportunities for select services to be accessed from within the community, for example opportunities for online shopping and delivery of goods. Yet, to be successful this approach would need to be part of an overall strategy incorporating community infrastructure upgrades and transport solutions because without road and roadside upgrades, delivery of goods direct to homes may not be possible and not all essential needs can be met through online services. Further, not all residents may wish to engage with online services, preferring in person interactions and service. Nevertheless, digital inclusion for Aboriginal and Torres Strait Islander people is an important component in achieving equal access to information and services that enable participation informed decision-making regarding their own lives, as recognised in Target 17 of the Closing the Gap Agreement.

5. Final recommendations

We propose 10 key recommendations to improve transport services and accessibility in Alice Springs. The recommendations draw from the evidence base and prioritise community participation in decision-making.
The recommendations are:

1. Acknowledge that transport disadvantage affects individuals and families across Alice Springs, in particular Town Camp residents, remote-living Aboriginal people who access services in Alice Springs, low-income households, young families, new arrivals, some CALD community members, and people living with disabilities
2. Commit to achieving improved transport services in Alice Springs through a whole community transport strategy
3. Commit to centring community and community-identified needs within the transport strategy proposed in Recommendation 2
4. Improve public transport routes, service frequency (including on weekends), public transport settings, and community awareness of public transport services
5. Introduce additional free public transport services
6. Review existing community transport services offered by Alice Springs-based organisations as formal parts of their operations through partnerships between government and key community organisations
7. Pilot flexible, on-demand and free community transport options through partnerships between NT Government and community organisations
8. Introduce targeted travel subsidies for priority groups e.g., for new parents attending health appointments and support programs
9. Support community infrastructure upgrades in Town Camps and Amoonguna, recognising that crucial infrastructure needs interact with and amplify transport disadvantage for priority communities
10. Support digital inclusivity for Town Camps and Amoonguna, recognising that online access to services can help mitigate transport disadvantage for priority communities.

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Mparntwe (Alice Springs) Transport Disadvantage Research Project

Literature and Regulatory Review

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31 October 2022

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Introduction

This paper has been prepared as part of the project, Investigating the dimensions and responses to transport disadvantage in Mparntwe (Alice Springs) being undertaken by Tangentyere Council on behalf of the Transport Working Group.

The purpose of the project is to better understand transport disadvantage in Alice Springs, its impacts on children and families, and to identify strategies that can improve community transport options for affected groups. Within Australia and internationally, transport disadvantage is linked to social exclusion, diminished access to essential goods and services, increased barriers to education and employment opportunities, and adverse impacts on health and wellbeing (Delbosc and Currie, 2011a; Hine and Kamruzzaman, 2020; Nutley, 2003; Quilty et al., 2019; Romero Gutiérrez and Olivares González, 2021). Prior scoping work suggests that in Alice Springs, the groups and areas most impacted by transport disadvantage include Aboriginal people living in Town Camps and Amoonguna, people from culturally and linguistically diverse backgrounds, low-income families, young people, and the elderly (Guenther, 2019). Recognising the culturally-connected population movement that occurs between remote communities and larger regional service centres in the territory, transport disadvantage can also make it harder for remote-living people when they visit Alice Springs to access services and visit family (NT Government, 2019a). The experience of transport disadvantage intersects with, and compounds, other sources of disadvantage for those affected, necessitating policy solutions that are premised upon culturally informed, place-based and integrated approaches (NT Government, 2019a; Stanley and Stanley, 2011).

The purpose of this paper is to provide a review of transport disadvantage in the literature, and to examine regulatory and policy issues influencing the occurrence of transport disadvantage in Alice Springs.

The first section reviews the literature on transport disadvantage, particularly addressing how transport disadvantage impacts children and families in regional and remote areas. It also highlights strategies that have been used to improve community transport options and reduce transport disadvantage amongst affected groups.

The second part describes policy and regulatory issues affecting transport disadvantage in Alice Springs, including the regulation of Commercial Passenger Vehicles (CPV), school bus and public transport network access and scheduling, private vehicles and driver licensing, and community infrastructure such as roads and street lighting.

1. Literature Review

1.1. Defining Transport Disadvantage

Transport disadvantage can be defined as a lack of access to transport options required to meet essential individual and family mobility needs.

Essential needs are fundamental building blocks that every child and family require to thrive (SNAICC, 2017). Amongst these, transport is essential for securing and maintaining employment, accessing education and healthcare, and participating in social activities (Cullen et al., 2017; Guenther, 2019). Lack of sufficient transport options can exacerbate inequalities and social exclusion by creating barriers to accessing core needs (Clifton and Lucas, 2004; Hine and Mitchell, 2017; Kenyon et al., 2002; Lucas, 2012). Here, social exclusion broadly refers to limits on participating in society and accessing necessary social support (Delbosc and Currie, 2011a).

Transport disadvantage is prevalent in places where car dependence is high and public transport options inadequate.

In Australia, transport disadvantage can involve both difficulty accessing public and private transport, and maintaining private transport, due to the costs associated with purchase and upkeep of private vehicles (Currie et al., 2009; Rosier and McDonald, 2011). Amongst Aboriginal and Torres Strait Islander people there may be difficulties in accessing quality, affordable cars, maintaining vehicle registrations, and obtaining driver's licences, with the result that issues of transport disadvantage and criminal justice pathways often interact (Cullen et al., 2017; Helps and Moller, 2007).

Transport disadvantage is a multidimensional concept, typically resulting from the interaction of different societal and personal factors.

Factors that may contribute to transport disadvantage include geographic location, proximity to services, inadequate transport, the absence of necessary infrastructure to support transport options, and socioeconomic status (Combs et al., 2016; Currie and Delbosc, 2011). Individual factors (e.g., health, safety) and systemic factors (e.g., racism, discrimination) also interact (Helps and Moller, 2007). Some of the elements which contribute to experiences of transport disadvantage are depicted in **Figure 1**.

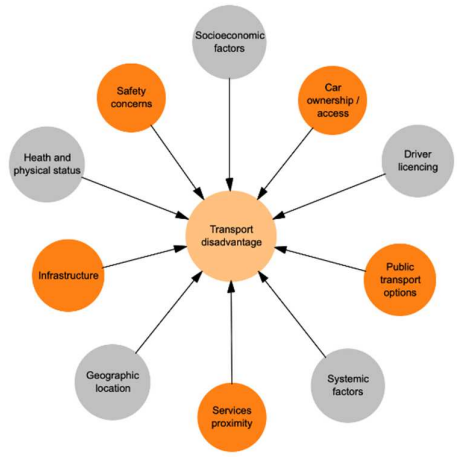

Figure 1: Factors contributing to transport disadvantage, based on (Currie and Delbosc, 2011).

Local and neighbourhood environments are important determinants of transport accessibility

Communities lacking adequate road and roadside infrastructure such as sealed roads, speed signs, kerbs and gutters, footpaths and street lighting, face a greater likelihood of being bypassed by public transport (Kenyon et al., 2002; Tucker et al., 2022). Here, systemic inequalities contribute to transport inequalities; without basic community infrastructure needs being addressed, "neighbourhoods become 'no go' and 'no exit' communities" (Kenyon et al., 2002, p. 211). Research conducted in Sydney about the effects of the neighbourhood environment upon transport disadvantage found that neighbourhood cohesion is linked to lower transport disadvantage, while neighbourhood aesthetics and neighbourhood social environment strongly influence subjective wellbeing (Ma et al., 2018). This research implies that improved community infrastructure and facilities can have co-benefits for transport disadvantage, social participation and inclusion, and overall wellbeing. In this context it is worth noting that standards for roadside infrastructure in urban Alice Springs do not directly apply in Town Camps and Amoonguna because they arise from local government requirements whereas the NT Government has responsibility for roads and roadside infrastructure in the discrete communities (Alice Springs Town Council, 2011; Cth Government, 2017). This situation has created disparities between standards of community infrastructure within Town Camps and Amoonguna, and those in the rest of Alice Springs, with direct implications for accessibility and mobility amongst disadvantaged groups (Tucker et al., 2022). The NT Government commissioned the NT Town Camps Review in 2016. The findings of this review included an estimate by Aurecon that over $8 million was required for Alice Springs Town Camp roads to achieve the minimum standard (Deloitte, 2017). This investment has not yet been made by the NT Government.

1.2. Vulnerable Areas and Groups

Transport disadvantage disproportionately affects people living in certain areas and people from certain groups.

In Australia, transport disadvantage predominantly affects people living in the fringes of large urban areas and throughout regional and remote areas (Currie et al., 2007). However, even in areas with good accessibility, certain groups can face higher risks of restricted mobility and transport disadvantage (Currie, 2007; Currie and Senbergs, 2007; Dodson et al., 2004; Pollack, 2001). Areas and groups most vulnerable include:

- neighbourhoods of low socioeconomic status
- urban peripheries
- regional and remote areas
- low-income earners
- unemployed people
- people with underlying health issues
- Aboriginal and Torres Strait Islanders
- culturally and linguistically diverse groups
- single parents
- young people
- women
- the elderly

(AIHW, 2020; Clifton and Lucas, 2004; Dodson et al, 2004; Hine and Mitchell, 2017).

Within these areas and groups, the experience of transport disadvantage interacts with and reinforces other dimensions of exclusion and disadvantage.

In a VCOSS survey of 45 young women with children, 70% reported being unable to attend social activities or visit family and friends, and 56% had difficulty getting to medical appointments, due to difficulty using public transport (Fritze, 2007). Difficulties in accessing local shops, study and Centrelink were also identified (Fritze, 2007). The literature emphasises that people from poor neighbourhoods are likely to have complex sources of social exclusion and higher incidence of inadequate transport, with low levels of car ownership, insufficient road links, and limited public transport options (Kenyon et al., 2002). In such circumstances, people without cars may spend more time and effort to getting to places they need to, reinforcing other dimensions of exclusion (Delbosc and Currie, 2011b; Fransen et al., 2019). These considerations are relevant in Alice Springs, as transport disadvantage intersects with and compounds other underlying inequities for residents of Town Camps, low-income earners, and members of migrant/refugee communities (Guenther, 2019).

1.3. Impacts of Transport Disadvantage

Transport disadvantage creates barriers to accessing health and other services.

Lack of transport and distance of travel to services are commonly reported by Aboriginal and Torres Strait Islander people as barriers to accessing health care when needed (AIHW, 2020). Equally, transport is crucial for remote-living people to access health services unavailable in their own communities. For example, provision and funding of transport was identified through community consultation as an essential service for Aboriginal people with lived experiences of kidney disease (Bateman et al., 2022). Without adequate transport, families with young children, single parents, and the elderly also struggle to access essential health services and support programs (Browning and Sims, 2007; Guenther, 2019).

Lack of transport options adversely impacts health and wellbeing.

Inadequate access to healthcare creates risks of poorer health outcomes, and increased costs for the public health system, due to exacerbation of preventable hospitalisations and demands for emergency care (AIHW, 2020; Quilty et al., 2019). Prior research demonstrates that mobility is highly related to wellbeing; people who are unable to

undertake activities due to lack of transport have reduced subjective wellbeing (Currie et al., 2010). Further, subjective wellbeing is significantly lower for people who experience both transport disadvantage and social exclusion (Delbosc and Currie, 2011a). For young people, access to adequate means of transport to attend school or work, visit friends and participate in activities is associated with greater psychological autonomy and reported wellbeing (Delbosc and Vella-Brodrick, 2015). Amongst older people, transport is a key determinant of health and wellbeing, by enabling access to services, social connectedness, and contributing to overall quality of life (Browning and Sims, 2007).

Transport disadvantage creates, and perpetuates, barriers to education and employment.

Lack of access to transport compounds the impacts of a range of barriers to gaining and maintaining employment, with severe impacts for the economic security and wellbeing of individuals and families. Prior quantitative research from Europe demonstrates that limited access to transport options for reaching jobs that align with individual preferences and skills is associated with long-term unemployment, and disadvantage is exacerbated for job seekers who are migrants and/or aged 55 years and over (Fransen et al., 2019). Cullen et al. indicate that low rates of licence participation, and associated transport disadvantage, contribute to lower educational and employment opportunities amongst Aboriginal people in New South Wales (2016). Intersecting factors such as disability, class, race, ethnicity, and gender can have a significant impact on transport choices, particularly for women and children (Grant-Smith et al., 2017). For communities where transport options are already limited, these factors can create significant barriers to both education and employment amongst those most disadvantaged (Fritze, 2007; Grant-Smith et al., 2017).

Transport disadvantage exacerbates social exclusion.

Transport and social disadvantage interact dynamically, often resulting in those affected being locked out of access to goods, services, and decision-making, which can lead to further exclusion, and sources of transport disadvantage (Lucas, 2012). For example, voter participation in elections may be inhibited by transport disadvantage, with disproportionate impacts upon racial and ethnic minorities and associated disempowerment in political processes with direct social impacts (Alex and Rowangould, 2021). These types of interactions directly link to the literature on place-based discrimination. Place-based discrimination refers to stigmatisation or discrimination due to geographical place of residence and once institutionalised has severe impacts for individual and community health and wellbeing (Klerck, 2022; Morello and Jesdale, 2006; Tabuchi et al., 2014). Within Alice Springs, the stigmatization of Town Camps and remote communities such as Amoonguna occurs through public perceptions about poverty, crime, poor housing conditions and community amenity and is formalised by the exclusion of these communities from (1) the Alice Springs Town Council Subdivision and Development Guidelines; (2) access to Fibre To The Node (FTTN) internet; (3) universal and reliable postal services; and (4) accessible public transport, among other things (Klerck, 2022; Tucker et al., 2022). The transport disadvantage experienced in Alice Springs Town Camps and Amoonguna emerges as a direct consequence of place-based discrimination, as defined in the literature.

Transport costs can cause serious economic stress amongst low-income households, particularly in locations with high levels of car dependence.

Mullen et al. observe that "people with low incomes have relatively little control over the locations of their homes and the accessibility of those location" (2020, p. 4). Transport costs represent just one of the competing pressures for households of limited means and may interact with and compound other deprivations such as household energy and food insecurity (Mattioli et al., 2018). Consideration of these issues is highly pertinent in the context of Alice Springs Town Camps, and Amoonguna, where residents face high levels of household energy insecurity associated with the use of prepay metering (Klerck, 2020; Longden et al., 2022; Wright-Pedersen, 2020), food insecurity (NTCOSS, 2022; Wright-Pedersen, 2020), the prospect of the proposed new rent framework that seeks to increase household rents for remote public housing residents (Markham and Klerck, 2022) and other cost of living pressures, in addition to increasing transport costs (NT Government, 2022a; NTCOSS, 2022).

Limited public and community transport options and forced car use can lead to higher participation with criminal justice pathways, particularly amongst Aboriginal and Torres Strait Islanders.

Aboriginal and Torres Strait Islander communities have low rates of licence participation and high incarceration rates for vehicle and driving offences (Cullen et al., 2017; Helps and Moller, 2007). Prior research from 2012 found that, across the Northern Territory, vehicle and driving offences accounted for 25% of NT prisoners and most were Aboriginal (97%) (Anthony and Blagg, 2012). Complex factors contribute to unlicensed driving amongst remote-living Indigenous people, including lack of identification documents, limited access to licensing and testing facilities, limited access to driving programs, the cost of driving lessons, language barriers, and limited access to appropriate vehicles and driving supervisors (Cullen et al., 2017). Insufficient access to reliable internet and online services may be another factor.

Community organisations are left to support individuals, families and communities lacking adequate transport options.

In 2010, NTCOSS highlighted that community organisations "receive regular requests to transport people for essential tasks such as shopping and banking, or to get to medical services" (NTCOSS, 2010, p. 1). Some are unable to assist because transport services are outside their scope of funding, while provision of transport can deplete limited resources for those organisations that can help (NTCOSS, 2010). Further, organisations with limited operating hours may be unable to assist out-of-hours, in emergencies, or at times when families and young people have mobility needs (Tennant Creek Transport Inc, 2022).

1.4. Transport Disadvantage in Urban Australia

In urban locations, transport disadvantage is most pronounced at the periphery.

Dodson et al. point out that "[m]any Australian metropolitan areas have developed in the absence of coherent and coordinated, infrastructure and transport planning" with the result that "public transport remains underdeveloped" (Dodson et al., 2006, p. 434). These factors coincide with strong political advocacy for private vehicles as the dominant mode of transport in urban contexts and the shift of poor and disadvantaged people to housing at the urban fringe, creating circumstances where mobility and access is inhibited for already vulnerable social groups (Dodson et al., 2006). Research from Melbourne and Sydney indicates that this has forced car ownership upon those least able to afford it (Currie et al., 2010, 2009; Dodson et al., 2004). Young families are amongst those most impacted. Low-income households without private vehicles experience greater difficulties with transport, yet perceive benefits from the avoided costs of car ownership where there are alternatives to satisfy their transport needs (Currie et al., 2010).

1.5. Transport Disadvantage in Regional and Remote Australia

Transport disadvantage is typically more pronounced in regional and remote areas than in urban areas.

Australia is characterised by vast regional and remote areas with low population densities, which present challenges to transport, accessibility, and service provision (Nutley, 2003). Survey-based research comparing the subjective wellbeing of residents across city, outer suburban, urban fringe, and regional locations in Victoria, found that the relationship between transport disadvantage and wellbeing was strongest in regional areas, however social exclusion had a greater overall influence on wellbeing than transport disadvantage (Delbosc and Currie, 2011a). The authors cautioned that policy exclusively targeted at increasing mobility may prevent co-benefits arising from more integrated approaches. Health-focused research, in the remote setting of Katherine, identified complex, intersectional disadvantages and inequities faced by community members who were frequent attenders to the Katherine Hospital Emergency Department (Quilty et al., 2019). Amongst this group, 80% had little or no transport, but also experienced challenges associated with food insecurity, domestic violence, housing issues and/or overcrowding. Where intersectional disadvantage exists, there are tangible opportunities to improve

outcomes for communities, families and children—provided sources of complexity can be identified and adequately addressed (Delbosc and Currie, 2011a; Delbosc and Vella-Brodrick, 2015; Guenther, 2019).

In regional and remote areas, transport disadvantage disproportionately affects Aboriginal and Torres Strait Islander people.

Without access to a car, transport options within remote Indigenous communities can be extremely limited (Currie and Senbergs, 2007). In the latest available survey data from 2014-15, 59.8% of Indigenous people in the Northern Territory aged 15 years and over reported being able to get to the places they needed to easily, compared to 88.3% of non-Indigenous Australians. Crucially, 18.2% of Indigenous people living in the Northern Territory aged 15 and over reported being unable to get to places they need to, never going out, or being housebound, compared to only 1.1% of non-Indigenous Australians (AIHW, 2020). The NT results of the 2014-15 survey about transport difficulty are shown in **Figure 2**.

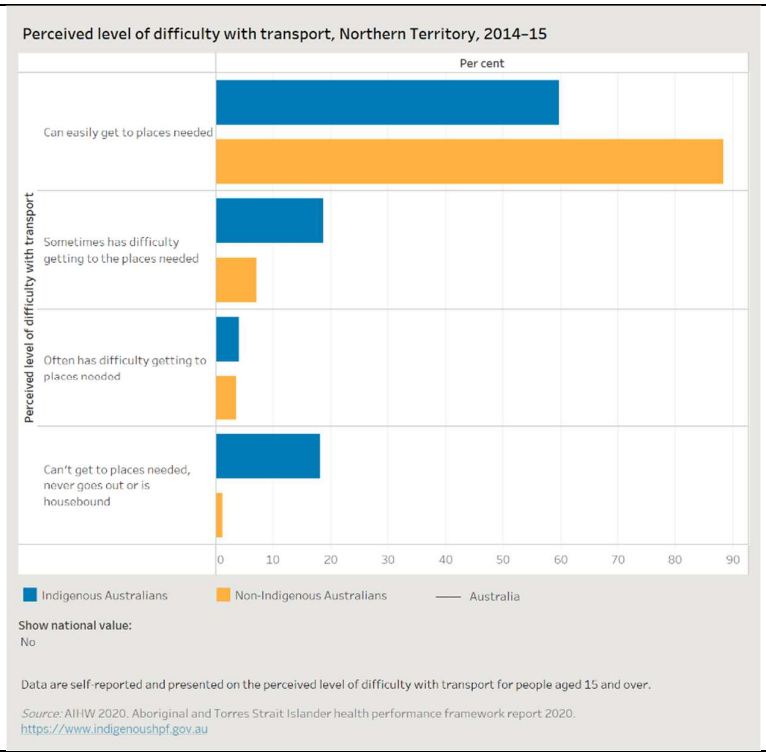

Figure 2: Perceived level of difficulty with transport within the Northern Territory 2014-15, sourced from (AIHW, 2020).

Further, remote-living Indigenous people may experience transport disadvantage when they visit urban areas or regional hubs to access services and fulfil family, kinship, and cultural obligations.

Increasingly, Aboriginal people from remote communities are accessing medical treatments in key urban and regional centres (AIHW, 2020). Town Camps provide permanent housing for many Aboriginal families but also support remote-living visitors who are accessing such services and/or maintaining family, kinship and cultural connections (Centre for Remote Health and Tangentyere Council, 2011). For people travelling from remote communities, the experience of transport disadvantage may arise in the context of movement to, from, and within, the location being visited (NT Government, 2019b; Spandonide, 2016), particularly when people have longer stays or are stranded in town (Centre for Remote Health and Tangentyere Council, 2011).

1.6. Existing knowledge about transport disadvantage in Alice Springs

In Alice Springs transport disadvantage particularly affects low-income Aboriginal families in Town Camps and Amoonguna.

The initial report for Child Friendly Alice identified that "while for the majority of people living in Alice Springs there are good job opportunities, low housing stress and relatively good transport options, for those living in Town Camps issues of transport, employment, housing quality and provision of basic infrastructure are all significant concerns" (Guenther, 2019, p. 19). Guenther's report estimated that people living south of The Gap are disproportionally impacted by limited public transport options and facilities, with about 1,700 people living 1.8km or more from the nearest bus stop (Guenther, 2019). An earlier collaborative study by Baker IDI Heart and Diabetes Institute and Senior Aboriginal Researchers from Tangentyere Council surveyed 131 permanent Town Camp residents to understand local indicators of transport disadvantage that create barriers to accessing healthcare (Baker IDI Heart & Diabetes Institute and Tangentyere Council, 2015). The study found that only 20% of permanent Town Camp residents had access to a car for transportation in an emergency and only 60% had telephone access for an emergency. A summary of the key results is provided below (**Table 1**).

Table 1: Description of Town Camp residents surveyed and factors that determine health care access, sourced from (Baker IDI Heart & Diabetes Institute and Tangentyere Council, 2015)

	Male	Female	All
Number (%)	40 (30.5)	91 (69.5)	131 (100)
Age (mean, SD)	41.7 (12.5)	41.9 (14.2)	41 (32-53)
Paid employment (n, %)	1 (2.5)	2 (2.2)	3 (2.3)
Financial security (ran out of money in last two weeks (n, %))	21 (53)	34 (37)	55 (42)
Current driver's licence (n, %)	11 (28)	19 (21)	30 (23)
Vehicle access for emergency (n, %)	8 (20)	17 (19)	25 (19)
Telephone access for emergency (n, %)	23 (58)	57 (63)	80 (61)

The availability of adequate transport options intersects with food security needs.

A 2020 assessment of food security needs in Alice Springs identified that 17.6% of Aboriginal people and 23.4% of people from culturally and linguistically diverse backgrounds are at high risk of facing food insecurity (Wright-Pedersen, 2020). Contributing to this is the "abundance of outlets selling majority unhealthy items that are easier to access than outlets selling majority healthy items, especially in lower socioeconomic areas" (Wright-Pedersen, 2020, p. 6). Transport disadvantage is recognised as a contributing factor for food insecurity at the household and community levels. Recommendations are made to improve healthy food accessibility by increasing the frequency of public transport, bringing bus stops within disadvantaged areas, and improving community awareness of public transport options.

Community organisations have long advocated for transport disadvantage to be addressed.

In 2010, NTCOSS highlighted that:

> The lack of availability of public and community transport forces low-income people to rely on other more expensive forms of transport, such as taxis and minibuses, to meet their everyday needs. It can be particularly hard for mothers and their babies to get into town for shopping and accessing services, when

they do not have access to public transport … There are also significant issues for people getting home from hospital, particularly late at night, who often have mobility issues (NTCOSS, 2010).

1.7. Strategies to overcome transport disadvantage

Policies to overcome transport inequities recognise the needs of disadvantaged groups and multidimensional aspects of transport disadvantage.

Within the literature, place-based solutions that address transport disadvantage and related social exclusion, through inclusive and integrated approaches, are preferred (Currie et al., 2010; Quilty et al., 2019; Stanley and Stanley, 2011). These types of strategies encompass transport initiatives (e.g., improved public transport and other transport options), land use initiatives (e.g., design to improve mobility and access), as well as outreach (e.g., bringing services to communities) (Stanley and Stanley, 2011).

Transport affordability and accessibility are identified as key areas of importance.

A number of studies propose that pricing of passenger transport options must consider the circumstances of disadvantaged groups, who may otherwise pay a larger proportion of their income towards transport services than more advantaged groups (Manaugh et al., 2015; Zhao and Zhang, 2019). This perspective aligns with NTCOSS' statement that "[a]ffordable and accessible bus services are essential for disadvantaged Territorians to obtain essential services, seek and maintain employment, and simply do their weekly shopping" (NTCOSS, 2010, p. 1). However, the literature recognises there can be economic tensions for governments, particularly in rural and remote contexts, between providing reliable and accessible public transport services and inexpensive transport options for individuals and families (Manaugh et al., 2015; Nutley, 2003).

Part of the solution may involve improvements to inadequate public transport networks.

The literature recognises that improving public transport options can contribute to increased mobility, particularly in situations where existing services bypass disadvantaged communities (Kenyon et al., 2002). However, community consultation around the feasibility and design of route changes and service improvements is crucial to ensure changes align with community needs and to avoid unintended outcomes, such as meagre uptake of new services (Grant-Smith et al., 2017).

Community transport options can address transport disadvantage for targeted populations, however in smaller and discrete communities more innovative solutions are required.

In NSW, the Community Transport Program funded by the NSW Government and delivered by community transport organisations has been used to assist individuals experiencing transport disadvantage due to physical, social, cultural and/or geographic factors (Battellino, 2009; NSW Government, 2017). In Tennant Creek, a local community transport organisation was established in 2018 to address gaps in local transport services by providing a door-to-door minibus service on weekdays for a flat fee (Denmark, 2012; Tennant Creek Transport Inc, 2022). This model of community transport service is essentially in competition with Commercial Passenger Vehicles i.e., minibuses, yet the community organisation's operational costs are likely to be significantly higher than its competitors due to the administrative burden of operating as an incorporated association and charitable organisation (ACNC, 2022). While its reported revenue was $395,830 for 2020/21 its expenses were $421,380 for the same period, indicating an operating loss. The literature recognises that in complex settings, flexible and innovative solutions may be required based on the community development model, that empowers communities and affected groups to identify their transport needs and co-design solutions (Battellino, 2009). Along these lines, VCOSS observes that expanding access to school buses can help some young people, particularly in rural settings, but addressing transport disadvantage requires "more services, better connections and integration between services, improved accessibility and a clearer understanding of the needs of different communities" (VCOSS, 2021).

Digital inclusivity may ameliorate some of the impacts of transport disadvantage by increasing access to services within affected groups.

Kenyan observes that "people who experience social exclusion are highly likely to also be excluded from access to the Internet and that, without access to the Internet, disadvantage and exclusion will be further reinforced" (Kenyon et al., 2002, p. 215). Due to an increasing emphasis on online service delivery, in Australia and internationally, improved transport "may not provide a fully viable or sustainable solution to mobility-related exclusion" (Kenyon et al., 2002, p. 219). Achieving digital inclusivity amongst disadvantaged communities can mitigate against some of the difficulties experienced due to transport disadvantage by 'bringing services to communities' (Stanley and Stanley, 2011). However, this approach also introduces risks of further isolation by removing the imperative for integrated approaches to improving infrastructure, community environments, and community-informed transport solutions. Currently, Tangentyere Council is mapping the extent of digital access within Alice Springs Town Camps and preliminary results indicate significant variation between communities with respect to both the technology and service levels available (Tangentyere Council, 2022). For the majority of Town Camp households and all Amoonguna households the only option for private internet at present is satellite and not Fibre To The Node (FTTN) or better, which are available in urban Alice Springs (Tangentyere Council, 2022). As a technology option, satellite is more expensive and has greater limitations. Where a change of technology is available the cost of the change of technology has been benchmarked at $35,000 (Tangentyere Council, 2022). Less is known about the status of digital access for residents of low-income households in urban Alice Springs.

2. Policy and Regulatory Review

2.1. Commercial Passenger Vehicles

Commercial passenger vehicles (CPVs) are vehicles permitted to charge for transporting passengers.

CPVs operating in Alice Springs include taxis, minibuses, private hire cars, limousines, and rideshare vehicles (NT Government, 2021a). They are regulated under the *Commercial Passenger (Road) Transport Act 1991* (NT), subsidiary legislation and codes. This section focuses primarily on the rules for taxis and minibuses, which have been identified through initial scoping work as forms of transport commonly relied upon by groups experiencing transport disadvantage in Alice Springs. The Northern Territory Department of Infrastructure, Planning and Logistics is the government agency responsible for CPV regulation.

2.1.1. Regulatory Framework: Taxis and Minibuses

Within Alice Springs, taxis and minibuses are regulated, but to different extents.

The regulatory framework for taxis and minibuses is established by the following legislation and subsidiary instruments:

- *Commercial Passenger (Road) Transport Act 1991* (NT)
- *Commercial Passenger (Miscellaneous) Regulations 1992* (NT)
- *Minibus Regulations 1998* (NT)
- *Taxis Regulations 1992* (NT)
- Code of Conduct (including Taxi Code of Conduct and Minibus Code of Conduct) –Commercial Passenger Vehicle Information Bulletin CPV32 dated July 2019.

Other relevant policy and regulatory information includes:

- Commercial Passenger Vehicles Information Bulletin – CPV20 'Taxi Fares' dated 27 September 2022
- Determination of Maximum Fares and Charges for Taxis – NT Government Gazette No. G39, 28 September 2022
- Commercial Passenger Vehicles Information Bulletin – CPV21 'Northern Territory Transport Subsidy Scheme and Life Incentive Scheme' dated 1 July 2020
- Commercial Passenger Vehicles Information Bulletin – CPV35 'Complaints Reporting' dated December 2017.

The regulatory framework creates declared areas, where taxis and minibuses are licensed to operate.[1]

In Alice Springs, the declared area includes Town Camps but excludes Amoonguna (Cth Government, 2017; NT Government, 2012a) (**Annexure 1**). Inside the declared area taxi fares are regulated, but outside it fares are unregulated. All minibus fares are unregulated; however, fares must be displayed in vehicles and made available to a person upon request.[2]

[1] *Commercial Passenger (Road) Transport Act 1991*, ss 16 (Taxi areas) and 38 (Minibus areas).
[2] *Minibus Regulations 1998*, s 7 (Fares).

A summary of key regulatory requirements for taxis and minibuses is provided below (**Table 1**).

Table 1: Summary of taxis and minibuses regulations in Alice Springs

CPV	Passengers	Accept hails	Fares	Prepaid fares	Hire basis	Electronic payment surcharge	Public register – operators	Code of conduct
Taxi	Up to 15	Yes	Regulated (Taxi Area) Unregulated (Outside Taxi Area	Yes, Fri-Sat between 10pm-5am	Exclusive (single fare)*	Max. 5% of fare	No	Yes
Minibus	9-15	Yes	Unregulated	Unregulated	Non-exclusive (multiple fares)	Unregulated	No	Yes

* Except for multiple hiring, where individual passengers provide their consent: *Taxis Regulations 1992* (NT), ss 8-9.

2.1.2. Taxis

Within the Alice Springs taxi area fares are regulated, with maximum fares determined by the NT Government.

For journeys wholly within the Alice Springs taxi area, passengers must not be charged more than the fare displayed on the taximeter.[3] The taximeter must be turned on when such a hiring commences, be maintained while passengers are present in the taxi, and turned off when the hiring is completed or terminated.[4] For journeys partly within the Alice Springs taxi area, regulated fares apply within the taxi area and drivers may negotiate the fee for any part of the journey outside the taxi area or use the taximeter for the whole journey (NT Government, 2022b).[5] For journeys entirely outside the declared area, drivers may choose to negotiate the fee or use the taximeter (NT Government, 2022b).

Taxi fares within the Alice Springs taxi area increased effective from 30 September 2022.

Current regulated maximum taxi fares for Alice Springs are set out below (**Table 2**). Taxi drivers are permitted to add a maximum 5% surcharge, in addition to the base fare, on non-cash payments (NT Government, 2022c, 2016).

Taxi drivers are entitled to request prepaid taxi fares during peak periods on weekends.

Prepaid fares can be applied on Friday and Saturday between 10pm and 5am.[6] If a passenger refuses to prepay their estimated fare upon request, the driver may refuse the hire with the exception of airport pickups and persons registered for the Northern Territory Transport Subsidy Scheme (NT Government, 2022c).[7] The schedule of estimated taxis fares in the Alice Springs area is provided below (**Table 3**).

[3] *Commercial Passenger (Road) Transport Act 1991*, s 26 (Determination of fares and charges).
[4] *Taxi Regulations 1992*, s 24 (Operation of taximeter).
[5] *Taxi Regulations 1992*, s 11(3) (Hiring).
[6] *Taxi Regulations 1992*, s 11A (Taxi fare pre-payment scheme) and Taxi Code of Conduct, paras 30 and 31.
[7] *Taxi Regulations 1992*, s 11A (8) (Taxi fare pre-payment scheme).

Table 2: Regulated flagfall and taxi rates in Alice Springs, adapted from (NT Government, 2022d, 2022b)

Tariff	Flagfall	Rate per km	Waiting time	High occupancy (5 or more)
Daytime rate 6am – 6pm Mon – Fri (Tariff 1)	$5.30	$2.09	10c per 6.1 sec	Daytime flagfall + $3.14 per km (Tariff 3)
Night, weekend & public holiday rate 6pm – 6am Mon – Fri (Tariff 2)	$6.60	$2.48	10c per 6.1 sec	Night-time flagfall + $3.72 per km (Tariff 4)

Table 3: Regulated flagfall and taxi rates in Alice Springs effective from 30 September 2022, sourced from (NT Government, 2022e)

Distance	Up to 4 passengers Estimated Fare	5 or more passengers Estimated Fare
5km	$18.50	$24.70
10km	$30.90	$43.30
15km	$43.30	$61.90
20km	$55.70	$80.50
25km	$68.10	$99.10
30km	$80.50	$117.70
35km	$92.90	$136.30
40km	$105.30	$154.90

Taxis operate on an exclusive hire basis (single fare) except where passengers' consent to multiple hiring.[8]

An example of multiple hiring is where unrelated passengers agree to travel in the same taxi for convenience and are dropped off at different places, with separate fares for each leg of the journey. In other cases, a taxi driver must not demand or collect separate fares from passengers who travel on the taxi together on the same hiring.[9]

[8] *Taxi Regulations 1992*, s 8 (Multiple hiring) and 9 (Separate hiring).
[9] *Taxi Regulations 1992*, s 9.

Taxi driver conduct is regulated.

Section 16 of the *Taxi Regulations 1992* (NT) requires taxi drivers to deal fairly with customers by:

- Taking the shortest practicable route to the destination requested unless the passenger specifies another route
- Providing potential passengers full and correct information concerning the fare payable in relation to a proposed hiring
- Displaying the maximum fares payable in a conspicuous position inside the taxi
- Allowing the passenger to see the amount payable on the meter prior to asking for payment.

Additional standards of service are provided in the Taxi Code of Conduct.

This code requires taxi drivers to be polite and courteous to all passengers and providing reasonable assistance in loading and unloading luggage and parcels, and to be understanding and sensitive to passengers with special needs.[10]

A complaints process is used by the NT Department of Infrastructure, Planning and Logistics to assist the monitoring of taxi drivers and operators.

CPV Information Bulletin CPV35 – Complaints Reporting sets out the process for making a complaint. Any person can lodge a complaint using the complaint form attached to CPV35, however only substantiated complaints will be investigated. The process to be followed by the Department in substantiating a complaint is unclear. For substantiated complaints, the Department may forward the complaint to other organisations for further investigation e.g., NT Police, NT Anti-Discrimination Commission, or the Office of Fair Trading. No requirements or timeframes are established for responding to complaints (Department of Infrastructure, Planning and Logistics, 2017). Taxi drivers must display an identity card and approved plate showing the number of the taxi in a conspicuous position inside the taxi for passengers to enable passengers to identify the driver and vehicle.[11] There is currently no requirement for a public register of taxi operators in the NT, however details of the two Alice Springs taxi operators are relatively easy to locate using an online search (13cabs, 2022; AST, 2022).

2.1.3. Minibuses

Within the Alice Springs minibus area fares are unregulated.

Minibus fares are set by operators; however, as stated above, fares must be displayed in vehicles and made available to a person upon request.[12] The NT Department of Infrastructure, Planning and Logistics' Minibus In-Service Maintenance Standards expand on the requirements in the *Minibus Regulations 1998*, stating at section 6.7 that:

> Signage indicating the fare charged by the operator of the minibus, calculated by distance or sector, must be affixed in a conspicuous position inside the vehicle, which is clearly visible from all passenger-seating positions. A second sign must be carried in the vehicle which must be produced on demand by anyone.
>
> It is acceptable to install a third sign externally to advertise the fares should an operator choose to do so (NT Government, 2021b).

[10] Taxi Code of Conduct, paras 1 and 4.

[11] *Taxi Regulations 1992*, ss 5 (Identity card or approved form if identification) and 31 (Plate to be displayed in taxi).

[12] *Minibus Regulations 1998*, ss 7 (Fares) and 7A (Driver not to charge more than operator indicates).

There are no guidelines for setting minibus fares, or indicative fares available on the Department's website (NT Government, 2021a). Example minibus fares copied from an individual minibus and included in Tangentyere Council's Interim Report are provided (**Annexure 2**).

Minibus drivers require payment of a passenger's fare before boarding and take fares from each passenger.

Given that minibus fares are unregulated (and unmetered), operators determine fare rules that apply. The example fare schedule in Appendix 2 indicates that various additional fees may apply, such as a waiting fee, bottle shop fee, surcharge on non-cash payments, and a high occupancy charge.[13]

Minibus drivers are not required to comply with the same fair dealing standards which apply to taxi drivers (because minibuses are unmetered), but standards of service for drivers are provided in the Minibus Code of Conduct.

The code requires minibus drivers to be polite and courteous to all passengers, and to be understanding and sensitive to passengers with special needs.[14]

A complaints process is used by the NT Department of Infrastructure, Planning and Logistics to assist the monitoring of minibus drivers and operators.

CPV Information Bulletin CPV35 – Complaints Reporting sets out the process for making a complaint about a minibus driver or operator. The same procedures apply to minibuses as those described for taxis in section 2.1.2 above. Minibus drivers must display identification and an approved plate showing the number of the minibus in a conspicuous position inside the minibus.[15] While this assists the passenger to identify their driver and vehicle, there is currently no requirement for a public register of minibus operators or for minibus fares to be publicly available and published online under the CPV regulatory framework. The result is a lack of transparency around Alice Springs minibus operators, their company details, services, fares and how many companies are operating in the local area. This informational and regulatory gap is concerning given the reliance of transport disadvantaged communities upon minibus services in Alice Springs.

2.1.4. Travel Incentive Scheme

Travel incentive schemes are available to assist with mobility costs for people with disabilities.

People with permanent disability or mobility restrictions that prevent them from using public transport may qualify for the Northern Territory Government's Transport Subsidy Scheme (TSS) or Lift Incentive Scheme (LIS) (NT Government, 2021c). TSS recipients receive 50% towards total fares for taxi and minibuses and, to be eligible, must be a resident of the Northern Territory and have a permanent or long-term disability (more than 6 months) that prevents their use of public transport (NT Government, 2021c). By contrast, LIS provides a $20 incentive to drivers of wheelchair accessible vehicles to provide journeys to people reliant on wheelchairs. Eligible persons who meet the criteria for TSS, and also rely on a wheelchair, can access up to 180 credits for journeys within each financial year (NT Government, 2021c). Unless there are exceptional circumstances, multiple purpose taxi drivers and wheelchair accessible minibus drivers must not refuse a request for hiring involving a wheelchair passenger.[16]

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[13] Note that the *Minibus Regulations 1998*, s 15 (Driver not to purchase intoxicating liquor) prohibit minibus drivers from accepting hires which would require them to buy alcohol for or on behalf of another person and from buying alcohol for a passenger during a hiring.

[14] Minibus Code of Conduct, paras 1 and 4.

[15] *Minibus Regulations 1998*, ss 4 (Identity card or approved form of identification) and 19 (Plate to be displayed in minibus).

[16] *Taxi Regulations 1992*, s 10A (Hiring by passenger with wheelchair) and *Minibus Regulations 1998*, s 7B (Hiring by passenger with wheelchair).

Additionally, these drivers must prioritise services to wheelchair passengers, by immediately accepting their hiring and picking them up before accepting any other passenger.[17]

2.2. Public Transport and School Buses

2.2.1. Public Transport Regulation and Fares

The NT Department of Infrastructure, Planning and Logistics has the primary regulatory role for public transport in the Northern Territory.

Relevant legislation and subsidiary instruments include:

- *Control of Roads Act 1953* (NT)
- *Traffic Act 1987* (NT)
- *Traffic Regulations 1999* (NT)
- *Public Transport (Passenger Safety) Act 2008* (NT)
- *Public Transport (Passenger Safety) Regulations 2008* (NT)

In Alice Springs, public and school bus services are operated on behalf of government by CDC Northern Territory (NT Government, 2022f).

Currently, there are five principle public bus routes (NT Government, 2022g). A map of the Alice Springs public bus network is provided (**Annexure 3**). As described in prior research (Guenther, 2019), bus stops are rarely located in Alice Springs Town Camps, and walking distances from communities to the nearest stops range from 0.4 to 2km. Further, bus services only operate Monday to Saturday (excluding public holidays). An overview of public transport accessibility from Town Camps is included below (**Table 4**). Amoonguna is located outside the public transport network (NT Government, 2012b).

Bus fares within Alice Springs are determined by NT Government.

Currently, the cost of a single trip is $3 full fare and $1 concession fare, entitling passengers to unlimited bus travel for 3 hours from purchase (NT Government, 2020). Daily trips cost $7 full fare and $2 concession fare, permitting unlimited bus travel until the last service. Details of these and other fare types are provided below (**Table 5**).

[17] Taxi Code of Conduct, para 7 and Minibus Code of Conduct, para 7.

Table 4: Overview of weekday public transport access from Alice Springs Town Camps, based on publicly available bus timetables and maps (NT Government, 2022g, 2012b)

Town Camp	Public Transport (Access to CBD)							
Name	CBD (km)	Max Distance to Stop (km)		Route	Buses	First	Final	Travel (Min)
Morris Soak	3.2	17 Lechleitner	0.7	R401	4	9:30AM	3:15PM	10
Charles Creek & Kunoth	1.7	6 Little Flower	0.4	R101	3	8:45AM	1:00PM	10
Drive In	8.2	15 Rubuntja	1.0	R300/301	10	7:00AM	5:30PM	37
Palmer's Camp	4.1	5 Untyeye	0.3	R100/101	9	7:00AM	5:30PM	16
Hidden Valley	2.5	17 Abbott	1.4	R200	9	7:00AM	5:30PM	20
Ilparpa	8.5	38 Goanna	0.4	R300/301	10	7:00AM	5:30PM	19
Warlpiri	5.2	23 Yipilijaji	0.6	R100/101	9	7:00AM	5:30PM	20
Old Timers	6.0	6 Marshall	0.8	R300/301	10	7:00AM	5:30PM	17
Little Sisters	5.0	27 Ntjalka	1.6	R300/301	10	7:00AM	5:30PM	18
White Gate	3.9	White Gate	0.8	R200	9	7:00AM	5:30PM	27
Basso's Farm	4.6	Scobie	1.6	R100/101	9	7:00AM	5:30PM	22
Karnte	9.0	21 Kurparu	2.0	R300/301	10	7:00AM	5:30PM	48
Hoppy's Camp	2.2	53 Ulpaya	1.1	R101	3	8:45AM	1:00PM	19
Mount Nancy	4.1	12 Shaw	0.3	R100/101	9	7:00AM	5:30PM	16
Abbotts Camp	2.6	12 Mpwetyerre	0.6	R300/301	10	7:00AM	5:30PM	13
Trucking Yards	2.8	13 Benno	0.7	R401	4	9:30AM	3:15PM	12
Larapinta Valley	4.1	30 Arrkwetyetherre	1.5	R400/401	9	7:00AM	5:30PM	30

Table 5: Summary of public bus tickets and fare types, based on (NT Government, 2020)

Ticket type	Full fare	Concession	Available on paper ticket / Tap and Ride card	Fare entitlements
Single	$3	$1	Paper ticket	Unlimited bus travel for 3 hours from purchase
Daily	$7	$2	Paper ticket	Unlimited bus travel until the last service of the day
Multi-trip	$20	$7	Tap and Ride card	10 trips - each trip gives you unlimited bus travel for 3 hours. Card does not expire.
Weekly	$20	$7	Tap and Ride card	Unlimited travel for 7 days including the day of purchase. Valid until the last service of the seventh day.

Concession fares are available to eligible cardholders.

Those eligible for concession fares include:

- NT tertiary students
- Pensioners
- Commonwealth Seniors Health Card holders
- BasicsCard holders
- Health Care Card holders
- white and orange Veterans' Affairs Card holders
- members of the NT Concession Scheme

(NT Government, 2020).

Local primary and secondary school students, and other eligible persons, can travel on public transport for free.

In addition to, school students, NT Seniors Card holders, gold Veterans' Affairs Card holders, and those with a Vision Impaired Travel Pass or Companion Card are also entitled to travel for free (and, in the case of Companion Cards, may entitle their companion or carer to travel for free) (NT Government, 2020).

The *Public Transport (Passenger Safety) Act 2008* (NT) establishes rules of behaviour which apply to travel on public buses and at bus interchanges.

Transit officers have powers to enforce the rules of behaviour, require a person to provide their name, address, and date of birth where they have committed an offence under the rules, require a passenger to get off the bus, and issue banning notices.[18] Infringement notices may be issued for contraventions, with fines of up to $3,240 (20 penalty units) for each offence.[19]

2.2.2. School Bus Regulation and Fares

Alice Springs School buses provide morning and afternoon transport for students to and from schools via Gillen Interchange.

The routes and school bus timetables require school students living in Alice Springs Town Camps to be ready for departure from bus stops as early as 7:23am (e.g., Hidden Valley) for a school start time of 8:30am with return trips finishing as late as 4:25pm (e.g., Ilparpa Camp) following a school finishing time of 2:50pm. Total daily travel times for school students to and from Town Camps range from just under 1 hour, up to 2.6 hours. Details of school bus access and travel time for Town Camps is provided (**Annexure 4**).

A school bus provides transport services for students from Amoonguna community.

This bus departs from the Amoonguna bus stop at 7:16am for a school start time of 8:30am, returning at 4:00pm following a school finishing time of 2:50pm (NT Government, 2022h). Travel time for students using school buses to and from Amoonguna is 2.4 hrs. The school bus route for these students is included (**Annexure 5**).

Travel is free for primary and secondary students on school buses.

The Code of Conduct for School Bus travel entitles students from years 1 to 12 attending primary, middle and senior schools in the NT to use the school bus network for travel to and from school (NT Government, 2022i). Behavioural standards are established under the code and actions can be taken for non-compliance, ranging from

[18] *Public Transport (Passenger Safety) Act 2008* (NT), ss 24 (Power to require statement of name, address, and date of birth), 26 (Power to require a person to get off bus and, on non-compliance, to remove forcibly), and 28A (Power to issue banning notice).
[19] *Public Transport (Passenger Safety) Act 2008* (NT), Part 3 Rules of behaviour; *Penalty Units Act 2009* (NT).

a warning for nuisance and offensive behaviour (e.g., swearing or racist language), to travel bans, claim for damages, and possible civil or police action for very destructive and dangerous behaviour (e.g., destruction of bus property) (NT Government, 2022i, p. 10).

2.3. Private Vehicles and Drivers Licensing

Northern Territory laws require drivers to be licenced to legally drive on public roads and drive only registered vehicles that correspond to their class of licence.

The rules that apply to road users are established by the following acts and subsidiary instruments:

- *Motor Vehicles Act 1949* (NT)
- *Motor Vehicles Regulations 1977* (NT)
- *Motor Vehicles (Fees and Charges) Regulations 2008* (NT)
- *Motor Vehicles (Standards) Regulations 2003* (NT)
- *Motor Vehicles (Standards) Regulations – Australian Vehicle Standards Rules*
- *Traffic Act 1987* (NT)
- *Traffic Regulations 1999* (NT)

To apply for a driver's licence, a person must be an NT resident and at least 16 years old.

Licensing applications are made through the Motor Vehicle Registry, and applicants are required to provide evidence of identity and NT residency. Satisfying these requirements can be problematic and burdensome for Aboriginal and Torres Strait Islander people (CAYLS, 2021; Cullen et al., 2017; Helps and Moller, 2007). To establish identity in the Northern Territory, a person must be able to produce:

1. One **category A document** (e.g., birth certificate or Australian passport) and two **category B documents** (e.g., Medicare card, NT Concession card, or student identity card with a photo or signature); or
2. Two category A documents and one category B document.

Additional requirements include: a signature on at least one of the three documents, consistency of the person's name (e.g., spelling, surname) between category A and B documents, date of birth on a category A document, the person's residential address on one of the documents, or other evidence of NT residency (NT Government, 2021d). All documents must be originals. Satisfying these requirements, including consistency of nomenclature, can be a challenge for many Aboriginal people due to the interaction between administrative inconsistencies, use of Skin Names, cultural mourning practices, and the absence of birth records in some cases (Helps and Moller, 2007).

Alice Springs residents can access the DriveSafe NT driver education training and licensing program.

This program provides education and training by qualified driving instructors and assessors, and is an alternative to self-supported learning in order to pass theory and practical tests to obtain a driver's licence (MVR, 2020). DriveSafe NT participants pay an upfront fee but are subsidised for other costs over the course of their training, including costs of the initial theory test required to obtain a learner licence. Costs due at different stages of obtaining and renewing a licence are described below (**Table 6**). It is worth noting that a dedicated program is available to remote residents, which is more tailored to the needs of Aboriginal and Torres Strait Islanders than the general program available in Alice Springs. For example, participants in the remote program can access advice and help providing evidence of identity and NT residency, support which is not available to Alice Springs participants (NT Government, 2021e).

Table 6: Driver licence fees, based on (NT Government, 2022j)

Licence type	DriveSafe NT enrolment (voluntary)	Theory test	Learner licence	Provisional licence	Open licence	Licence replacement
Car (C)	$110	$20*	$25*	$52 (<25) or $34 (> 25)*	$34 (1 year)- $179 (10 years)	$22

* Free for DriveSafe NT participants.

Conditions apply to learner drivers before they can qualify for a provisional licence.

Before changing from a learner to provisional licence, a learner driver must hold their licence continuously for at least six months and comply with the conditions of the licence, including having a fully licensed driver in the front passenger seat at all times while they are driving, having zero blood alcohol concentration while driving, displaying L plates, and not exceeding 80km per hour (NT Government, 2021f). After six months, a learner driver can take a practical driving test with an authorised driving examiner. Currently, there are five authorised driving examiners in Alice Springs, all of whom are male (NT Government, 2022k).

Substantial fines or imprisonment apply for driving unlicenced, driving while disqualified, or driving an unregistered vehicle.[20]

Penalties for driving while not licensed range from a traffic infringement notice to a maximum fine of $3,240 (20 penalty units) or 12 months' imprisonment. The penalty for driving while disqualified is 12 months' imprisonment and possible further licence disqualification. The penalty for driving an unregistered vehicle is $3,240 (20 penalty units) or imprisonment for 12 months. Considering that there are low rates of licence participation and limited access to registered vehicles amongst Aboriginal people in the NT, these penalties are likely to disproportionately impact Aboriginal drivers and invite higher levels of participation with criminal justice pathways amongst disadvantaged communities (Anthony and Blagg, 2012).

2.4. Community Infrastructure- Roads and Roadsides

The NT Government has responsibility for infrastructure within Alice Springs Town Camps.

This extends to fiscal responsibility for the provision of municipal and essential services (Cth Government, 2017) and currently exists within the context of the Housing Management Agreement between the Commonwealth Government and the NT Government. This responsibility will transition to back to Tangentyere Council as a consequence of the Local Decision Making Agreement between Tangentyere Council and the NT Government, which prioritises self-determination and community control of decision-making within Town Camps (Tucker et al., 2022).

The inadequacies of community infrastructure in Town Camps impact on provision of services within communities, including postal services.

A recent study using participatory mapping methods found that community infrastructure in Town Camps fails minimum standards, including basic requirements for sealed roads with speed signs, stormwater drainage, kerbs with gutters, footpaths, streetlighting, and pedestrian crossings (Tucker et al., 2022). These inadequacies create barriers to the provision of services that other Alice Springs residents take for granted, such as a daily postal service. Several Town Camps have never received postal services, while others currently receive only indirect

[20] *Traffic Act 1987* (NT), ss 31 (Driving while disqualified), 32 (Driving while not licensed) and 33 (Driving unregistered vehicle).

services. The availability of postal services depends on a range of factors, including sufficiency and safety of street and roadside infrastructure. Australia Post indicates that, as a minimum, infrastructure "must be safe and clear of impediment for delivery, [with] good clear footpaths, roadside, etc. A round assessment is done which includes but is not limited to whether the area is flat, foot-pathed, free of rough terrain, hanging branches, curb side impediments and [has appropriate] speed zones" (Australia Post, 2022).

Roads and roadside infrastructure in Town Camps are inadequate to support safe public transport access and fail to meet minimum standards which apply in other areas of Alice Springs.

Minimum standards for roads across the Northern Territory are established by the Performance and Design Standards for Northern Territory Government Roads (NT Government, 2017). Standards for kerbs and gutters within Alice Springs are provided in the Alice Springs Town Council Subdivision and Development Guidelines (Alice Springs Town Council, 2011). Tucker et al. found that community infrastructure is insufficient to support public transport access within Town Camps and can result in residents walking to and waiting at bus stops outside Town Camps without shelter during extreme heat (2022). These findings highlight the basic need for "community infrastructure that meets Australian Standards and local government development guidelines, and recognizes the resilience and authority that local decisions made in Town Camps have in shaping the future" (Tucker et al., 2022, p. 454).

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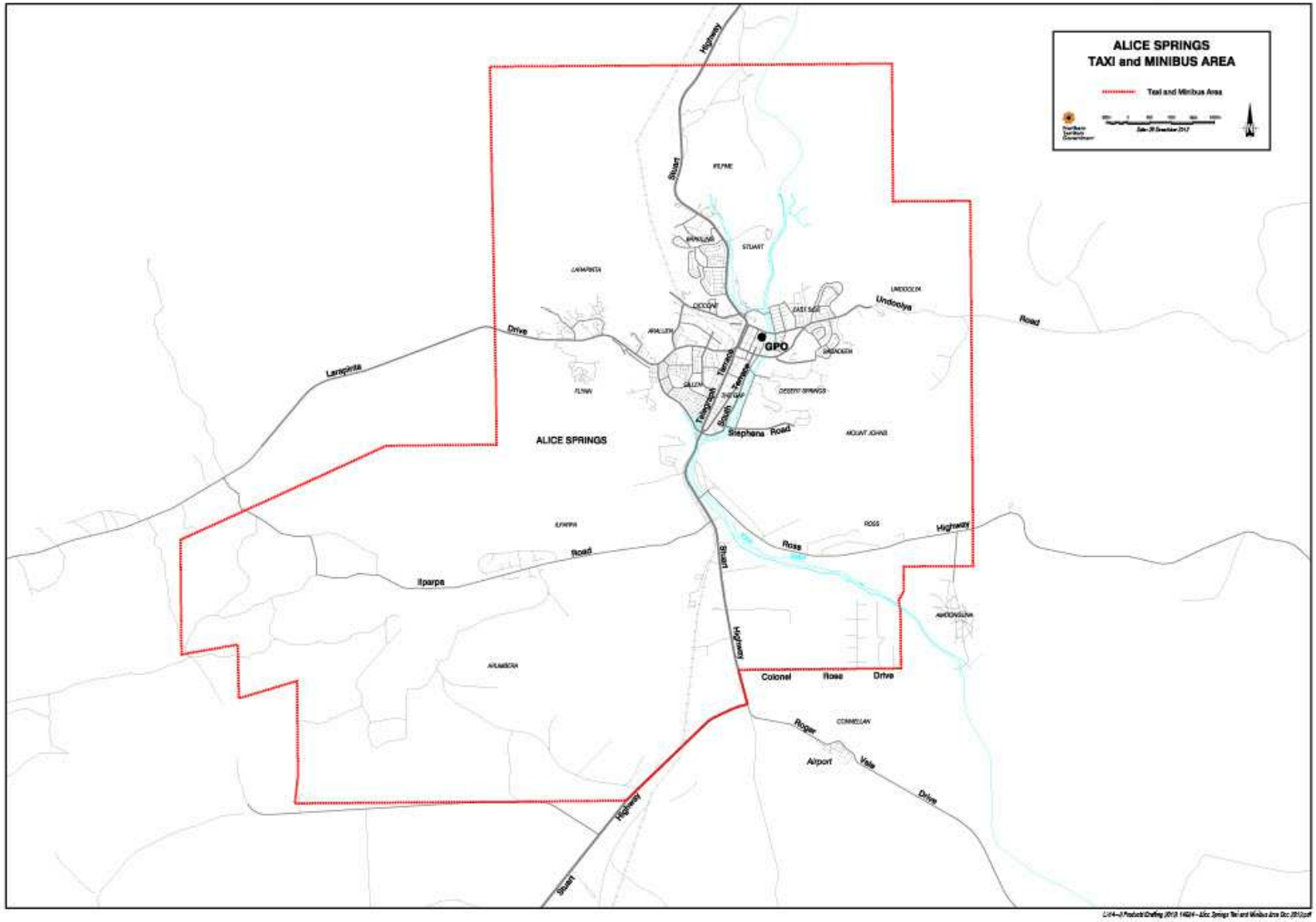
4. Annexure 1- Alice Springs and Minibus Area



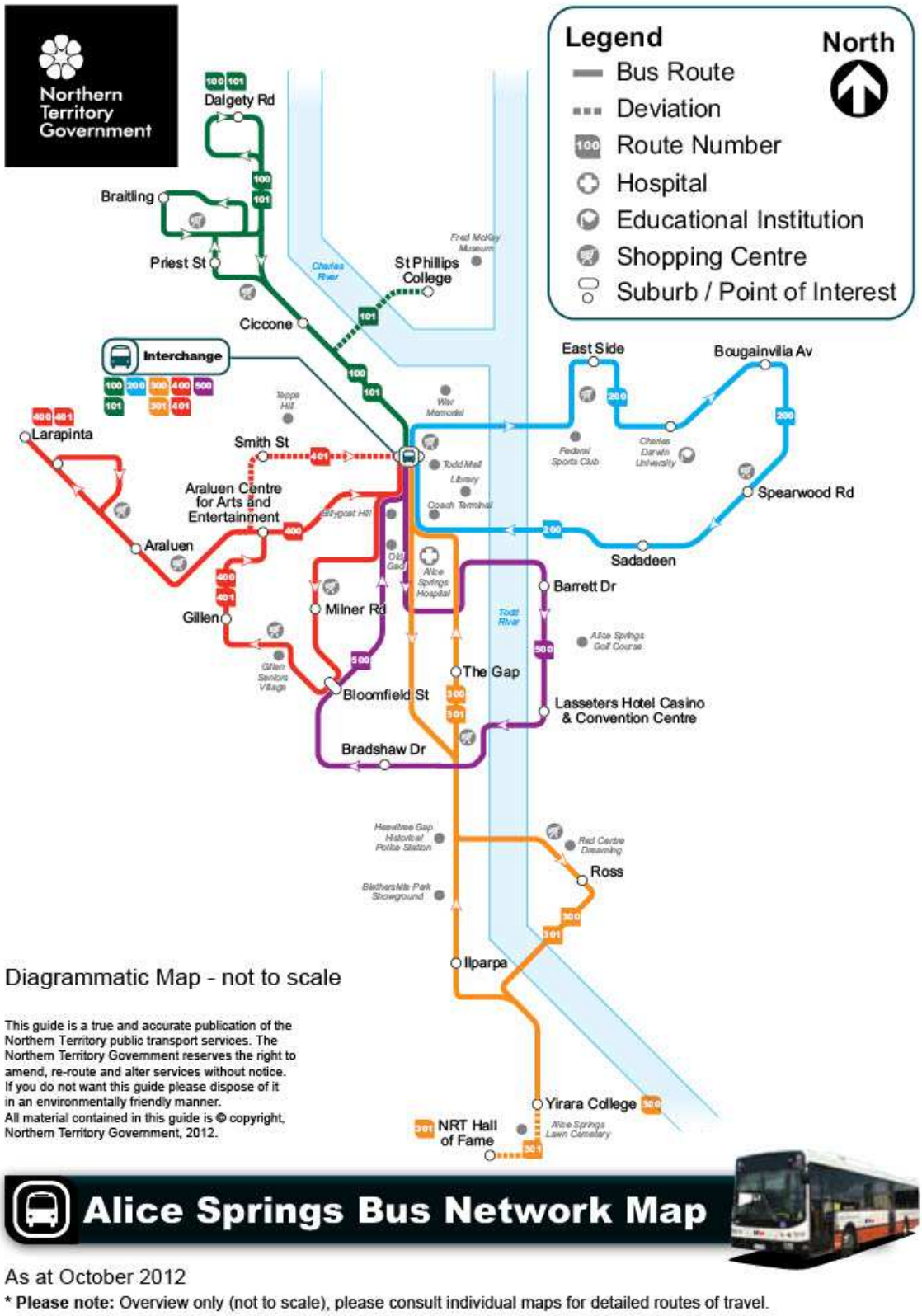
5. Annexure 2- Example Minibus Fares

The following table was copied from a price list in the window of minibus registration number MB3281 during October 2022. This vehicle had no visible mobile number or business registration details.

Minibus Fare from Town (Non-Stop)			
Charles Creek	$15	Hoppys Shop	$15
Nicker Crescent	$15	Ashwin Street	$15
Piggly Shop	$15	Hoppys Camp	$15
Elliott Street	$15	Yipirinya Hotel	$15
Keith Lawrie Flats	$15	Spearwood Road	$15
Bloomfield Street	$20	Mallam Crescent	$20
BJ Shop	$20	Nelson Terrace	$20
Gap View Hotel	$20	Larapinta Valley	$20
Hidden Valley	$20	Erumba Street	$20
Dixon Road	$20	Lackman Terrace	$20
Flynn Drive	$20	Ilpeye-Ilpeye	$20
Bradshaw Drive	$20	Mt Nancy	$25
Caravan Park (AJ's)	$25	Walpiri Camp	$25
Little Sisters	$25	Lyndavale Drive	$25
Old Timers (Camp)	$25	Visitor Park	$25
White Gate	$25	Albrecht Drive	$30
Karnte	$35	Ilparpa Camp	$35
Anthepe	$35	Airport	$40
Amoonguna	$35	Alice Springs Correction Centre	$80

- Waiting time - $1 per minute
- Bottle shop extra $5
- More than 5 people, $5 extra
- Extra $1 level on every card
- Fare first before getting in (unmetered bus)

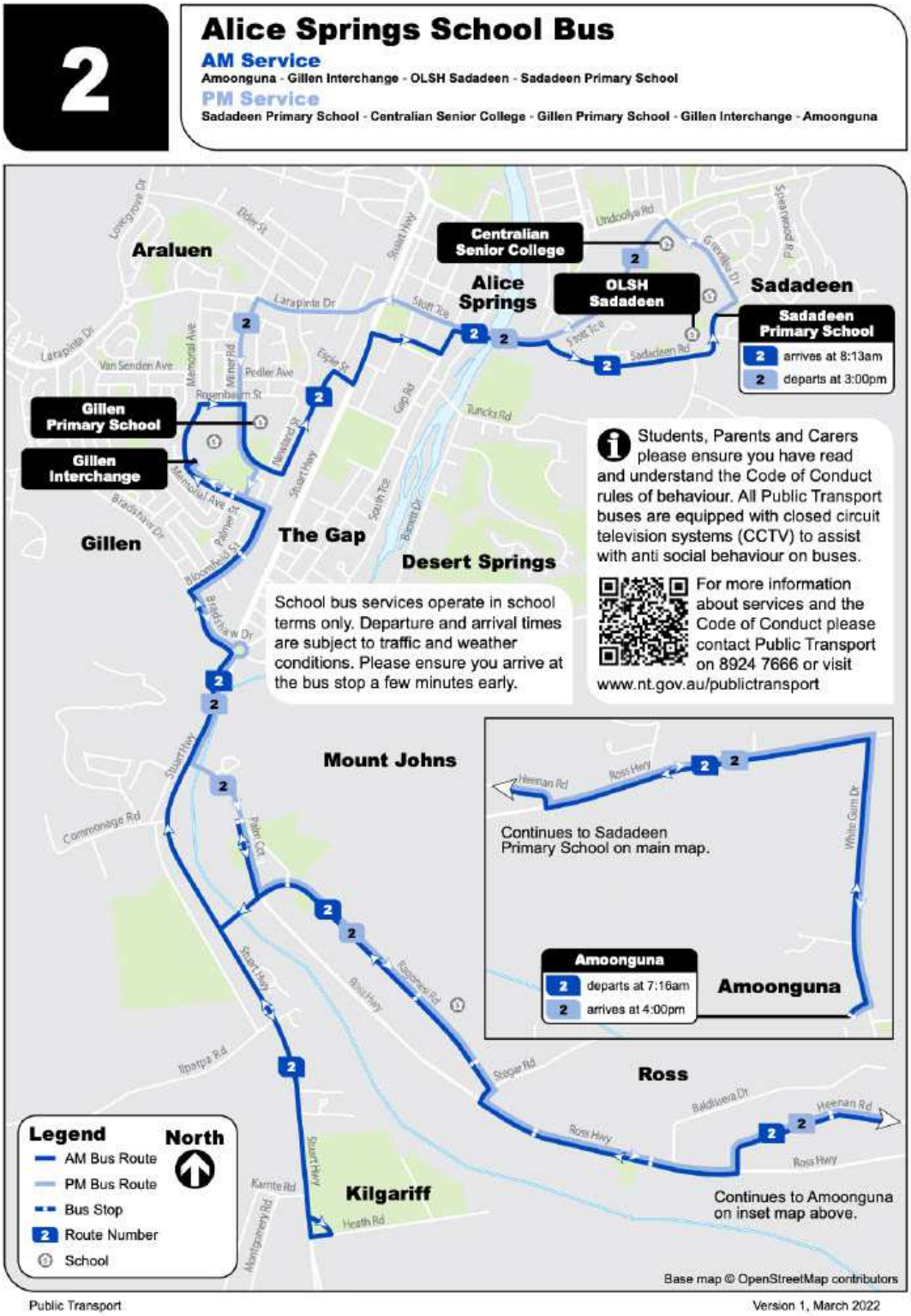
6. Annexure 3- Alice Springs Public Bus Network



7. Annexure 4- School Bus Access and Travel Time from Alice Springs Town Camps

Town Camp		Public School Transport															
Name	Suburb	Primary	km	Middle	km	Senior	km	Stop	Max km to stop	Departure	Start	Out	Interchange	Back	Finish	Return	Travel (min)
Morris Soak	Araluen	Bradshaw	2.3	CMC	2.4	CSC	4.4	Morris Soak	0.3 km	7:33AM	8:30AM	4	Gillen	14	2:50PM	3:34PM	101
Charles Creek	Stuart	Braitling	2.9	CMC	3.4	CSC	2.5	Ulpaya Rd	0.2 km	7:39AM	8:30AM	12	Gillen	1	2:50PM	3:05PM	66
Drive In	Arumbera	Gillen	6.7	CMC	6.8	CSC	9.8	Karnte Rd 1	0.3 km	7:40AM	8:30AM	1	Gillen	1	2:50PM	3:37PM	97
Palmer's Camp	Stuart	Braitling	1.8	CMC	6.1	CSC	5.1	Basso Rd	0.3 km	7:40AM	8:30AM	9	Gillen	1	2:50PM	2:55PM	55
Hidden Valley	Sadadeen	Sadadeen	0.6	CMC	4.6	CSC	1.4	Hidden Valley	0.7 km	7:23AM	8:30AM	8	Gillen	8	2:50PM	3:33PM	110
Ilparpa	Arumbera	Gillen	7.3	CMC	7.4	CSC	10.3	Ilparpa Camp	0.4 km	7:31AM	8:30AM	1	Gillen	1	2:50PM	4:25PM	154
Warlpiri	Braitling	Braitling	2.7	CMC	7.0	CSC	6	Shell Truck Stop	0.7 km	7:43AM	8:30AM	9	Gillen	9	2:50PM	3:41PM	98
Old Timers	Kilgariff	Bradshaw	5.4	CMC	4.9	CSC	7.8	Percy Court	0.2 km	7:37AM	8:30AM	2	Gillen	1	2:50PM	3:33PM	96
Little Sisters	Ilparpa	Bradshaw	4.3	CMC	3.5	CSC	6.3	Len Kittle Commonage	0.8 km	7:44AM	8:30AM	3	Gillen	3	2:50PM	3:31PM	87
White Gate	Undoolya	Sadadeen	2.6	CMC	6.7	CSC	2.4	Spearwood Stop	1.6 km	7:28AM	8:30AM	8	Gillen	8	2:50PM	3:36PM	108
Basso's	Stuart	Braitling	2.5	CMC	6.8	CSC	5.8	Basso Rd	0.8 km	7:40AM	8:30AM	9	Gillen	1	2:50PM	2:55PM	55
Karnte	Arumbera	Gillen	7.6	CMC	7.7	CSC	10.5	Karnte Rd 2	0.2 km	7:42AM	8:30AM	1	Gillen	1	2:50PM	3:35PM	93
Hoppy's Camp	Stuart	Braitling	3.7	CMC	4.2	CSC	3.3	Ulpaya Rd	1.1 km	7:39AM	8:30AM	12	Gillen	1	2:50PM	3:05PM	66
Mount Nancy	Stuart	Braitling	1.8	CMC	6.1	CSC	5.1	Basso Rd	0.4 km	7:40AM	8:30AM	9	Gillen	1	2:50PM	2:55PM	55
Abbotts Camp	The Gap	Gillen	3.2	CMC	3.3	CSC	3.8	Alice NT Stop	1.0 km	7:39AM	8:30AM	6	Gillen	6	2:50PM	3:45 PM	106
Trucking Yards	Ciccone	Braitling	2.9	CMC	2.8	CSC	4.3	Lovegrove & Smith	0.7 km	7:34AM	8:30AM	4	Gillen	14	2:50PM	3:35PM	101
Larapinta Valley	Flynn	Gillen	3.2	CMC	2.4	CSC	5.7	Larapinta Valley	0.8 km	7:30AM	8:30AM	5	Gillen	10	2:50PM	3:31PM	91

8. Annexure 5- Alice Springs School Bus, Route 2 (Departing Amoonguna)



Appendix 2 – Passenger use of bus stops located near Town Camps

2016-17

Town Camp	Stop ID	Bus	Boardings	Concession	Full Fare	Alightings
Morris Soak	1065: Lovegrove Drive	401	119	109	10	10
Charles Creek	1022: Ulpaya Road	100, 101	27	26	1	103
Drive In	1086: Op Heath Road	300, 301	603	515	85	884
Palmer's Camp	1018: Basso Road	100, 101	990	817	173	419
Hidden Valley	1037: Sadadeen Road	200	77	75	2	228
Ilparpa	1084: Stuart Highway	301	1,141	1,041	99	158
Warlpiri	1017: Dalgety Road	100, 101	17	13	4	566
Old Timers	1079: Old Timers	300, 301	2,443	2,044	392	2,634
Little Sisters	1089: Commonage Road	300, 301	476	431	44	541
White Gate	1033: Undoolya Road	200	217	170	47	407
Basso's Farm	1018: Basso Road	100, 101	990	817	173	419
Karnte	1086: Op Heath Road	300, 301	603	515	85	884
Hoppy's Camp	1022: Ulpaya Road	100, 101	27	26	1	103
Mount Nancy	1018: Basso Road	100, 101	990	817	173	419
Abbotts Camp	1091: Gap Road	300, 301	355	289	65	150
Trucking Yards	1066: Smith Street	401	34	34	0	195
Larapinta Valley	1062: Larapinta Drive	400, 401	1,038	800	236	537
Ilpeye-Ilpeye	1033: Undoolya Road	200	217	170	47	407

2017-18

Town Camp	Stop ID	Bus	Boardings	Concession	Full Fare	Alightings
Morris Soak	1065: Lovegrove Drive	401	167	147	20	4
Charles Creek	1022: Ulpaya Road	100, 101	36	34	2	91
Drive In	1086: Op Heath Road	300, 301	709	629	80	998
Palmer's Camp	1018: Basso Road	100, 101	979	796	177	320
Hidden Valley	1037: Sadadeen Road	200	80	80	0	217
Ilparpa	1084: Stuart Highway	301	1,153	1,071	82	167
Warlpiri	1017: Dalgety Road	100, 101	50	47	3	582
Old Timers	1079: Old Timers	300, 301	2,831	2,485	344	2,732
Little Sisters	1089: Commonage Road	300, 301	548	525	19	588
White Gate	1033: Undoolya Road	200	477	385	91	376
Basso's Farm	1018: Basso Road	100, 101	979	796	177	320
Karnte	1086: Op Heath Road	300, 301	709	629	80	998
Hoppy's Camp	1022: Ulpaya Road	100, 101	36	34	2	91
Mount Nancy	1018: Basso Road	100, 101	979	796	177	320
Abbotts Camp	1091: Gap Road	300, 301	455	409	46	187
Trucking Yards	1066: Smith Street	401	114	113	1	228
Larapinta Valley	1062: Larapinta Drive	400, 401	1,070	902	165	247
Ilpeye-Ilpeye	1033: Undoolya Road	200	477	385	91	376

2018-19

Town Camp	Stop ID	Bus	Boardings	Concession	Full Fare	Alightings
Morris Soak	1065: Lovegrove Drive	401	195	175	20	1
Charles Creek	1022: Ulpaya Road	100, 101	44	41	3	65
Drive In	1086: Op Heath Road	300, 301	344	314	30	392
Palmer's Camp	1018: Basso Road	100, 101	1,070	902	165	247
Hidden Valley	1037: Sadadeen Road	200	107	99	8	322
Ilparpa	1084: Stuart Highway	301	496	449	40	37
Warlpiri	1017: Dalgety Road	100, 101	9	8	1	905
Old Timers	1079: Old Timers	300, 301	2,120	1,818	298	2,223
Little Sisters	1089: Commonage Road	300, 301	775	735	37	628
White Gate	1033: Undoolya Road	200	280	237	38	305
Basso's Farm	1018: Basso Road	100, 101	981	651	328	295
Karnte	1086: Op Heath Road	300, 301	344	314	30	392
Hoppy's Camp	1022: Ulpaya Road	100, 101	44	41	3	65
Mount Nancy	1018: Basso Road	100, 101	1,070	902	165	247
Abbotts Camp	1091: Gap Road	300, 301	292	229	63	92
Trucking Yards	1066: Smith Street	401	6	4	2	148
Larapinta Valley	1062: Larapinta Drive	400, 401	686	578	107	480
Ilpeye-Ilpeye	1033: Undoolya Road	200	280	237	38	305

2019-20

Town Camp	Stop ID	Bus	Boardings	Concession	Full Fare	Alightings
Morris Soak	1065: Lovegrove Drive	401	128	114	14	35
Charles Creek	1022: Ulpaya Road	100, 101	17	12	5	92
Drive In	1086: Op Heath Road	300, 301	379	269	110	308
Palmer's Camp	1018: Basso Road	100, 101	691	473	218	169
Hidden Valley	1037: Sadadeen Road	200	150	85	65	402
Ilparpa	1084: Stuart Highway	301	859	738	121	259
Warlpiri	1017: Dalgety Road	100, 101	19	18	1	632
Old Timers	1079: Old Timers	300, 301	2,085	1,527	558	2,146
Little Sisters	1089: Commonage Road	300, 301	1,079	820	257	736
White Gate	1033: Undoolya Road	200	244	198	46	420
Basso's Farm	1018: Basso Road	100, 101	691	473	218	169
Karnte	1086: Op Heath Road	300, 301	379	269	110	308
Hoppy's Camp	1022: Ulpaya Road	100, 101	17	12	5	92
Mount Nancy	1018: Basso Road	100, 101	691	473	218	169
Abbotts Camp	1091: Gap Road	300, 301	294	155	129	177
Trucking Yards	1066: Smith Street	401	31	17	14	109
Larapinta Valley	1062: Larapinta Drive	400, 401	695	466	229	351
Ilpeye-Ilpeye	1033: Undoolya Road	200	244	198	46	420

2020-21

Town Camp	Stop ID	Bus	Boardings	Concession	Full Fare	Alightings
Morris Soak	1065: Lovegrove Drive	401	17	16	1	102
Charles Creek	1022: Ulpaya Road	100, 101	36	34	2	172
Drive In	1086: Op Heath Road	300, 301	332	312	20	247
Palmer's Camp	1018: Basso Road	100, 101	435	361	74	144
Hidden Valley	1037: Sadadeen Road	200	62	58	4	224
Ilparpa	1084: Stuart Highway	301	482	444	38	476
Warlpiri	1017: Dalgety Road	100, 101	299	250	46	465
Old Timers	1079: Old Timers	300, 301	1,347	1,182	165	1,392
Little Sisters	1089: Commonage Road	300, 301	830	747	79	633
White Gate	1033: Undoolya Road	200	300	232	68	463
Basso's Farm	1018: Basso Road	100, 101	435	361	74	144
Karnte	1086: Op Heath Road	300, 301	332	312	20	247
Hoppy's Camp	1022: Ulpaya Road	100, 101	36	34	2	172
Mount Nancy	1018: Basso Road	100, 101	435	361	74	144
Abbotts Camp	1091: Gap Road	300, 301	374	305	69	121
Trucking Yards	1066: Smith Street	401	120	117	3	133
Larapinta Valley	1062: Larapinta Drive	400, 401	562	435	127	220
Ilpeye-Ilpeye	1033: Undoolya Road	200	300	232	68	463

Appendix 3 – Public and School Bus Route and Timetables

Public Bus Routes and Timetables:

Route	Service information	Timetable	Map
100-101	Braitling and Ciccone	Timetable 100-101	Bus route map 100-101
200	Eastside and Sadadeen	Timetable 200	Bus route map 200
300-301	Ross, Ilparpa, The Gap and Alice Springs Hospital	Timetable 300-301	Bus route map 300-301
400-401	Gillen, Araluen and Larapinta	Timetable 400-401	Bus route map 400-401
500	Gillen and Alice Springs Hospital	Timetable 500	Bus route map 500

Table based on information available on 3 February 2023 at: < https://nt.gov.au/driving/public-transport-cycling/public-buses/alice-springs-timetables-and-maps>.

School Bus Routes and Timetables:

Morning

Route	Service information	Timetable	Map
1	Kilgariff Estate to St Philip's College - via Gillen Interchange and Gillen Primary School	Timetable	Route 1 map
2	Amoonguna to Sadadeen Primary School - via Gillen Interchange, Gillen Primary School, Sacred Heart College (Sadadeen)	Timetable	Route 2 map
3	Bullen Road to St Philip's College - via Gillen Interchange, Sacred Heart (Bath Street) and Braitling Primary School	Timetable	Route 3 map
4	Lovegrove Drive to Living Waters Lutheran Primary School - via Gillen Interchange	Timetable	Route 4 map
5	Larapinta Valley Town Camp to The Alice Springs Steiner School - via Gillen Interchange, Gillen Primary School	Timetable	Route 5 map
6	Corner Stephens Road / The Links to Centralian Senior College - via Gillen Interchange	Timetable	Route 6 map
7	Lyndavale Drive to St Philip's College - via Gillen Interchange	Timetable	Route 7 map
8	Hidden Valley TC to Centralian Senior College - via Sacred Heart College (Bath Street), Gillen Interchange and Sacred Heart College (Sadadeen)	Timetable	Route 8 map
9	Dalgety Road to Sacred Heart College (Traeger) - via Gillen Interchange	Timetable	Route 9 map
10	Minion bus stop to Araluen Christian College - via Gillen Interchange and Bradshaw Primary School	Timetable	Route 10 map
11	Gap Road to Larapinta Primary School - via Gillen Interchange	Timetable	Route 11 map
12	Corner Mercorella Circuit / Sadadeen Road to Centralian Senior College - via Sacred Heart College (Sadadeen), Gillen Interchange and Gillen Primary School	Timetable	Route 12 map
13	Corner Patterson Crescent / Melrose Court to Ross Park Primary School - via Bradshaw Primary School and Gillen Interchange	Timetable	Route 13 map

Afternoon

Route	Service information	Timetable	Map
1	Braitling Primary School to Ilparpa Camp - via Gillen Primary School, Gillen Interchange and Kilgariff Estate	Timetable	Route 1 map
2	Sadadeen Primary School to Amoonguna - via Centralian Senior College, Gillen Interchange	Timetable	Route 2 map
3	St Philip's College to Bullen Road - via Sacred Heart (Bath Street) and Gillen Interchange	Timetable	Route 3 map
4	Living Waters Lutheran Primary School to corner Dixon Road / Bird Street - via Gillen Interchange	Timetable	Route 4 map
5	The Alice Springs Steiner School to Albercht Drive - via Gillen Primary School, Gillen Interchange, Larapinta Valley Town Camp	Timetable	Route 5 map
6	Centralian Senior College to corner Barrett Drive / The Links	Timetable	Route 6 map
7	St Philip's College to corner Larapinta Drive / Mparntwe Driver - via Gillen Interchange	Timetable	Route 7 map
8	Sacred Heart College (Sadadeen) to Undoolya Road - via Sacred Heart College (Bath Street), Gillen Interchange and Centralian Senior College	Timetable	Route 8 map
9	Sacred Heart College (Traeger) to Outer Terminus - via Gillen Interchange and Dalgety Road	Timetable	Route 9 map
10	Araluen Christian College to Minion bus stop - via Bradshaw Primary School and Gillen Interchange	Timetable	Route 10 map
11	Larapinta Primary School to Hong Street - via Gillen Interchange	Timetable	Route 11 map
12	Sacred Heart College (Sadadeen) to corner Mercorella Circuit / Sadadeen Road - via Gillen Primary School, Gillen Interchange and Centralian Senior College	Timetable	Route 12 map
13	Sacred Heart College (Sadadeen) to corner Lyndavale Drive / Bokhara Street - via Ross Park Primary School and Gillen Interchange	Timetable	Route 13 map
14	Sacred Heart College (Traeger) to Trucking Yards Town Camp - via Gillen Interchange and Bradshaw Primary School	Timetable	Route 14 map

Table based on information available on 3 February 2023 at: < https://nt.gov.au/driving/public-transport-cycling/public-school-buses/alice-springs-school-bus>.