



**IPART** Independent  
Pricing and Regulatory  
Tribunal | NSW

Maximum Opal fares until July 2028

# Issues Paper

January 2024

Transport »



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## Acknowledgment of Country

IPART acknowledges the Traditional Custodians of the lands where we work and live. We pay respect to Elders both past and present.

We recognise the unique cultural and spiritual relationship and celebrate the contributions of First Nations peoples.

## Tribunal Members

The Tribunal members for this review are:

Carmel Donnelly PSM, Chair  
Sandra Gamble  
Jonathan Coppel

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## Invitation for submissions

IPART invites comment on this document and encourages all interested parties to provide submissions addressing the matters discussed.

## Submissions are due by Friday, 1 March 2024

We prefer to receive them electronically via our [online submission form](#).

You can also send comments by mail to:

Maximum Opal fares until July 2028  
Independent Pricing and Regulatory Tribunal  
PO Box K35  
Haymarket Post Shop, Sydney NSW 1240

If you require assistance to make a submission (for example, if you would like to make a verbal submission) please contact one of the staff members listed above.

Late submissions may not be accepted at the discretion of the Tribunal. Our normal practice is to make submissions publicly available on our [website](#) as soon as possible after the closing date for submissions. If you wish to view copies of submissions but do not have access to the website, you can make alternative arrangements by telephoning one of the staff members listed above.

We may decide not to publish a submission, for example, if we consider it contains offensive or potentially defamatory information. We generally do not publish sensitive information. If your submission contains information that you do not wish to be publicly disclosed, please let us know when you make the submission. However, it could be disclosed under the *Government Information (Public Access) Act 2009* (NSW) or the *Independent Pricing and Regulatory Tribunal Act 1992* (NSW), or where otherwise required by law.

If you would like further information on making a submission, IPART's [submission policy](#) is available on our website.

## The Independent Pricing and Regulatory Tribunal

IPART's independence is underpinned by an Act of Parliament. Further information on IPART can be obtained from [IPART's website](#).



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# 1 Setting maximum Opal fares

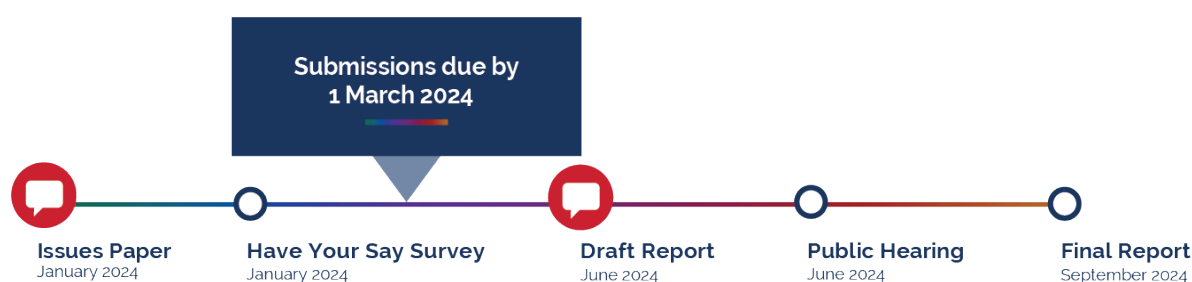
The Minister for Transport has asked IPART to determine *appropriate maximum fares* for Opal public transport services until 30 June 2028. Since our previous review, there have been large changes in the use of public transport, and new services have commenced or are about to commence.

When we set maximum fares, we will investigate how Transport for NSW operates its Opal services, how much these services cost taxpayers to run and how they fit within the bigger transport system of Sydney and surrounding areas. We will investigate how people use and want to use these services now and into the future.

This will help us understand how ticket prices, discounts and other fare options can be set to get the most out of our transport infrastructure and services. Our determination will set maximum fares. We may also provide recommendations for Transport for NSW to consider when setting discounts, caps or other fare options, below the maximum level.

In conducting our review we are required to consider a set of specified matters (listed in section 2.5 below). Different fare packages will have a different impact on the matters we are required to consider. We have proposed a methodology which identifies fare setting objectives (outlined in section 2.6 below) that encompass each of these matters and measures the impact of fare packages on these objectives. This will allow us to weigh up the benefits of different options in a methodical way and deliver a determination that best balances each of these objectives.

We want to hear from you about your experiences using Opal services. We want to hear from both users of the Opal network and those who don't use it, industry organisations, contracted service providers and government agencies. We are seeking feedback by 1 March 2024.



Our determination on appropriate maximum fares until 30 June 2028 will come into effect once it is released in September 2024. The timing and level of actual fare changes below the maximum will be decided by the NSW Government. Any discounts, concession fares, travel rewards, travel caps or other fares set below the appropriate maximum fares are not set by our determination but also decided by the Minister for Transport for NSW.

## 1.1 What services are covered by this review?

We are setting maximum fares for services where an Opal card can be used and are operated under a passenger service contract<sup>a</sup> or bus service contract with Transport for NSW.

For this review we will refer to all the services for we will set maximum fares for as Opal Services. The full list of Opal Services is set out in Box 1.1.

### Box 1.1 What are Opal Services?

Opal Services are defined as the following:

- train services operated by Sydney Trains under the authority of a passenger service contract with Transport for NSW
- train services operated by NSW Trains operated under the business name NSW TrainLink Intercity under the authority of a passenger service contract with Transport for NSW
- train services operated by Sydney Metro under the authority of a passenger service contract with Transport for NSW
- Sydney Ferries network services operating under the authority of a passenger service contract with Transport for NSW and ferry services operating between Manly and Circular Quay under the authority of a passenger service contract with Transport for NSW
- buses, light rail and ferry services operated by Newcastle Transport under the authority of a passenger service contract with Transport for NSW
- bus services operated under the authority of a Sydney Metropolitan Bus Service Contract with Transport for NSW
- bus services operated under the authority of an Outer Sydney Metropolitan Bus Service Contract with Transport for NSW
- light rail services operated by Sydney Light Rail, including Inner West and CBD and South East light rail, under the authority of a passenger service contract with Transport for NSW
- light rail services in Parramatta which is expected to commence in 2024, under the authority of a passenger service contract with Transport for NSW
- on-demand services in metro and outer metropolitan areas operated under the authority of a passenger service contract with Transport for NSW.

There are some services in NSW, excluded from this list, that accept Opal cards as a form of payment. These services are not considered Opal Services for this review and their maximum fares will not be set by our determination.

For Opal Services, the maximum fares are those payable using an Opal card, including Opal pay, and contactless transport payments (such as credit and debit cards, and enabled smart phones).

## 1.2 We want to hear from you

We want to hear from you. We are seeking feedback on the questions raised throughout our Issues Paper (and listed below). We are also interested in hearing about other issues in addition to those raised in this Issues Paper.

We will engage with users of Opal Services, industry organisations, contracted service providers, government agencies, councils and other interested stakeholders throughout our review. To have your say, you can:

- complete our "Have your say" survey
- provide a submission to this Issues Paper by 1 March 2024.

We will consider all the feedback we receive through this engagement, as well as the results of our analysis, in forming our draft decisions and recommendations. We will release our Draft Report and Draft Determination in June 2024. You will then have further opportunities to comment by:

- providing a submission to our Draft Report
- attending our public hearing, which is planned for June 2024.

We will release our Final Report and Final Determination in September 2024.

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## Have your say

Your input is critical to our review process.

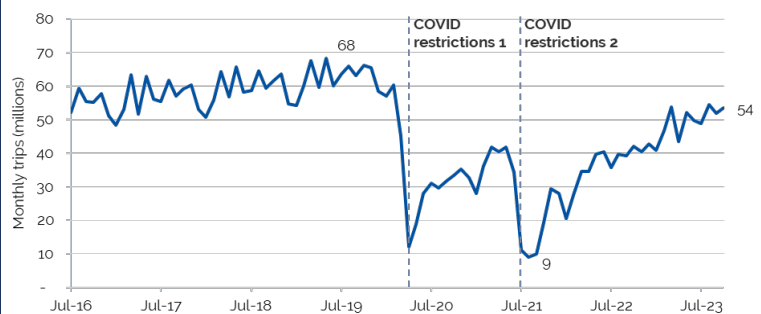
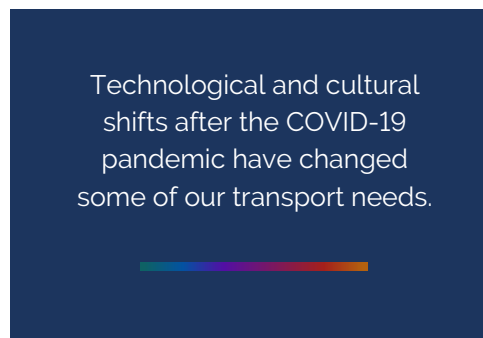
[Submit feedback »](#)

You can get involved by making a submission or completing our Have your say survey.

[Have your say survey »](#)

## 2 Transport networks enable our cities

Modern cities rely on sophisticated, interconnected and well-functioning transport networks to enable our way of life. Technological and preference shifts after the COVID-19 pandemic have changed some of our transport needs. However, transport networks continue to support many of our everyday activities. Work, education and childcare, construction and manufacturing, supply of goods and services, medical treatment, recreation, holidays, leisure activities and many other economic activities rely on our transport networks.



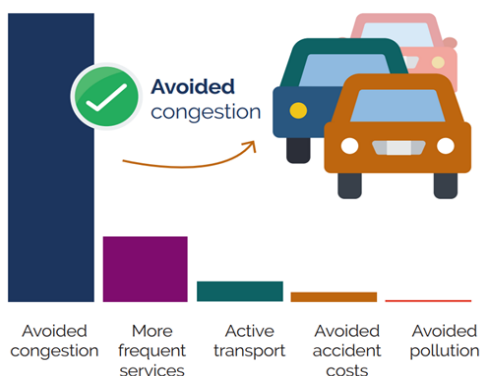
Source: Transport for NSW, [Opal Trips – All Modes](#), accessed November 2023.

Private vehicles, commercial services and public transport networks work together to enable the transport needs of our economy.

### 2.1 What are the benefits of public transport?

Public transport is a critical pillar of our transport network. It connects people including those without access to private transport options. It facilitates mass transport in and out of busy locations where an equivalent level of private travel would be less efficient or impractical (e.g. special events such as New Years Eve celebrations, sporting and cultural events or peak hour commutes to business districts).

Where public transport is available it minimises congestion in alternative transport options, usually has a lower pollution and emission output per user per km (when used at its full capacity) and can be a lower cost option for households.<sup>1</sup>



Private transport options such as cars can be more direct and faster but can also have higher financial and indirect costs for individuals and external costs for society. The purpose and characteristics of the journey may mean it is the most suitable mode.

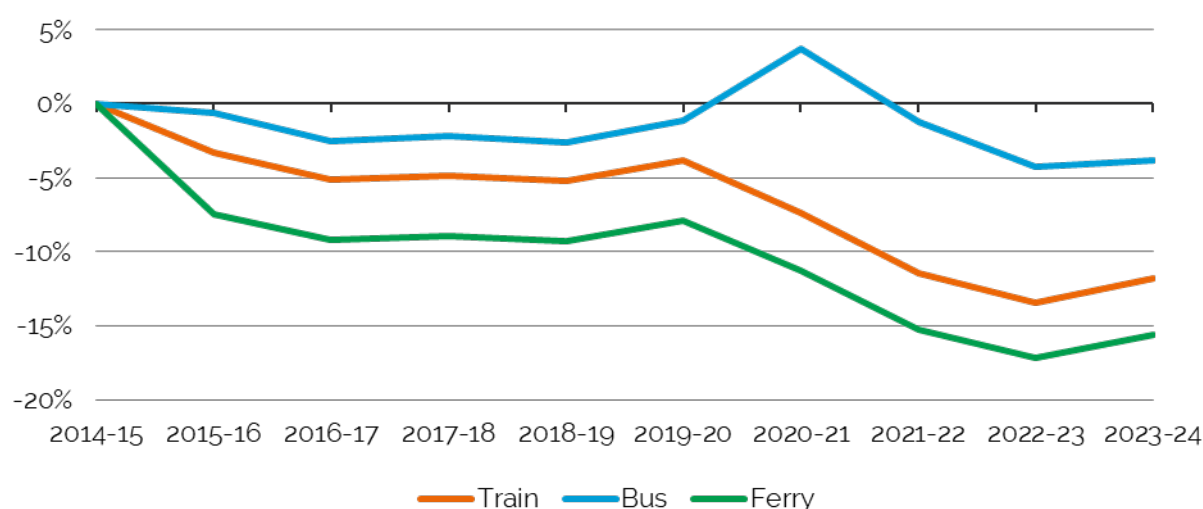
The benefits of each transport option are realised if the whole transport network is well designed, integrated, has a capacity equivalent to the demand and is used efficiently. This means that each journey is taken using the mode that is most suitable for the purpose.

## 2.2 Who pays for public transport?

Because public transport benefits both users and non-users, taxpayers subsidise the cost of public transport. Fares only cover a small proportion of the costs of running the public transport services. The last time we estimated cost recovery in 2019, we found revenue from fares covered about 27% of the total cost of providing services. Taxpayers covered the remaining 73% through government funding.

Since that time, we expect that cost recovery has further reduced, due to lower patronage post COVID-19. In addition, costs have increased due to higher operating and construction costs of new metro and light rail services and inflation, and the fares have not increased in line with inflation over many years (see Figure 2.1).

Figure 2.1 Cumulative fare changes, real



Note: Light rail and metro mode fares have been excluded from this chart. The 2020 determination set these fares in line with bus and train fares respectively.

Fare changes are based on a simple average of peak Adult fares across distance bands and do not account for daily caps, weekly caps or any other discounts that would reduce the average fares.  
Source: IPART analysis.

Because of these factors, we expect that cost recovery (the proportion of transport costs covered by fares) has reduced since 2019.

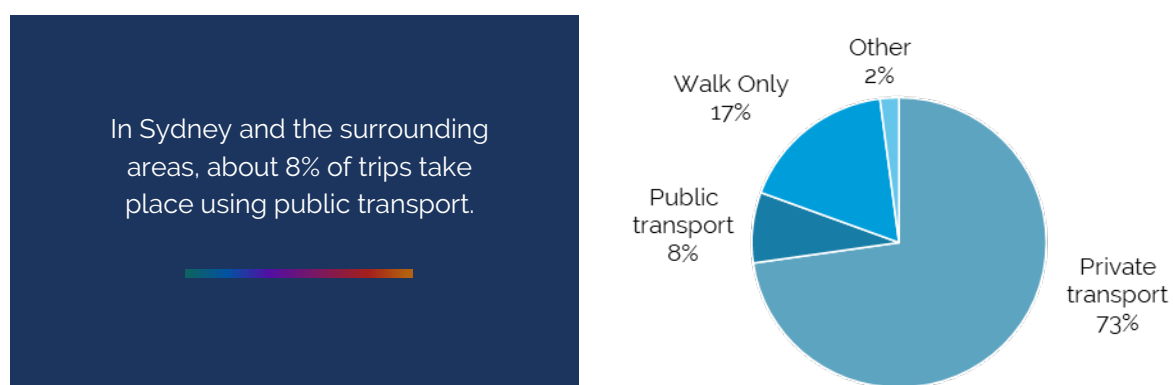
The NSW Government sets transport policy, including the services and infrastructure offered, decisions about timetables, structure of fares and the applicability of discounts and concessions.

IPART's role is to determine the maximum fare for Opal services until 2028.

The NSW Government has the ability to set fares below the maximum determined by IPART. When the Government decides to set fares below the maximum allowed, this means that taxpayers will fund more of the cost of the public transport network.

## 2.3 What influences people's travel decisions?

When individuals make travel decisions, they will consider multiple factors to choose the right option for them. These might include accessibility, comfort, convenience, duration, directness, luggage, number of stops, availability of parking and the price of different options.



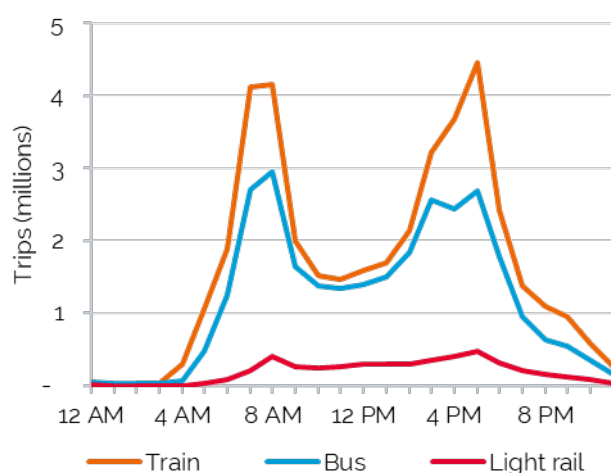
Note: Based on 2022-23 data for the Sydney Greater Capital City Statistical Area (GCCSA), parts of Illawarra and Hunter regions.  
Source: Transport for NSW, [Household Travel Survey](#).

Because the price of public transport fares can influence a person deciding between different transport options for a particular purpose, we aim to set the maximum price to make sure that it reasonably reflects the costs and benefits of this mode of transport.

## 2.4 How can changing fares improve public transport?

We consider that public transport fares should reflect the benefits to the individual and society. Our approach to setting fares, has been to set a maximum fare that does not discourage most people from catching public transport. We want fares to promote efficient use of the public transport network, remain accessible and affordable for those that need it and support the financial sustainability of the public transport network. Our review also supports transparency about sustainability of Government funding of public transport to ensure both taxpayers and passengers receive value for money. The NSW Government can decide to set fares below the maximum within the determination period. It cannot exceed the level of maximum fares set out in our determination.

We will consider the impacts of our proposed fare determination. For example, setting the price too high might discourage people who would otherwise take public transport because it is most suitable for their journey. Setting the price too low might result in too many people taking public transport journeys when they didn't need to (because they could have walked or didn't need to travel). This means services can become too crowded, slow down, be overused or need costly extra services.



Peak and off-peak fares are an example of how price can be used to encourage better usage of the network.

Note: Based on October 2023 data. Excludes weekends, Fridays from 20 October 2023 and public holidays.  
Source: Transport for NSW, [Opal Patronage](#), accessed November 2023.

Where someone can change their travel time to a less busy period, the lower off-peak fare gives them an incentive to do so. When they shift their travel time, they contribute to a less crowded journey during the peak time and free up capacity in the network.

In Sydney and some of the surrounding areas, the Opal network includes trains, metros, buses, light rail, most ferries and on-demand services. Opal fares can be paid for using an Opal card or a contactless payment device such as a debit card, credit card or smart device.

The network operates within Sydney the Blue Mountains, Wollongong, the Central Coast, Newcastle and parts of the Hunter regions. See the map of the Opal network area in [Appendix B](#).

## 2.5 What is IPART's process for reviewing fares?

As part of our review we will consider how Transport for NSW operates its Opal services, how much these services cost the government to run and their role within the bigger transport system of Sydney and surrounding areas. We will investigate how people use and want to use the services now and into the future. We will also consider whether any technological constraints limit improved ticketing options.

We will consult with stakeholders such as users of the Opal network, taxpayers, government organisations, operators, contractors and other stakeholders.

When we make our decisions on maximum fares, our referral and the *Passenger Transport Act 2014* (the Act) and requires us to consider a set of 13 specified matters and any other matter that we consider relevant.



In the referral from the Minister for Transport, we have been asked to consider the following matters:

1. the Opal mode and distance-based fare structure
2. incorporating new services into the Opal fare structure
3. managing demand and optimising the efficiency of transport networks
4. ensuring affordability and accessibility for disadvantaged groups
5. cost recovery in the post COVID-19 environment
6. the appropriateness of the current methodology for determining maximum Opal fares.<sup>2</sup>

We are also required to consider several other matters set out in the Act. These are:

1. the cost of providing the services
2. the need for greater efficiency in the supply of services so as to reduce costs for the benefit of consumers and taxpayers
3. the protection of consumers from abuses of monopoly power in terms of prices, pricing policies and standards of service
4. the social impact of the determination or recommendation
5. the impact of the determination or recommendation on the use of the public passenger transport network and the need to increase the proportion of travel undertaken by sustainable modes such as public transport
6. standards of quality, reliability and safety of the services (whether those standards are specified by legislation, agreement or otherwise)
7. the effect of the determination or recommendation on the level of Government funding
8. any other matter IPART considers relevant.<sup>3</sup>

We will deliver a determination that we think best balances each of the specified matters and any other matter that we consider relevant.

## 2.6 What are our proposed fare setting objectives?

To simplify the matters we are required to consider, we propose to create fare setting objectives which relate to one or more of these matters. The fare setting objectives are the outcomes that we should aim to achieve or influence through our decisions on fares. No set of fare decisions can meet all the proposed objectives to the same degree. Mapping the fare options against the fare setting objectives can assist us to weigh up and explain the differences between the different sets of fare options.

We propose 6 fare setting objectives



Fare structures are simple and flexible



Fares support better travel options



Fares ensure that public transport is accessible



Fares maximise benefits to the community



Fares are set to support the financial sustainability of the public transport network



Fares create value for customers

In the following sections we highlight the matters under the Referral and the Act that align to each of our proposed fare setting objectives. This is also summarised in [Appendix D](#).

### 2.6.1 We propose that fare structures should be simple and flexible

We propose that the fare structure we determine should be simple but also flexible.

The fares that we determine will apply to a large number of public transport services in Sydney and the surrounding areas. The fare structure needs to be simple for Transport for NSW to implement across each of its services. This includes considering any constraints of existing or future ticketing systems, as well as considering a structure that can easily incorporate new services that might be provided into the future.

A simple fare structure also has the benefit of being easily understood by passengers, meaning that they can quickly and easily estimate the fare they will pay for their public transport journey. This also assists with other fare setting objectives. When people understand the fare structure, they can respond to the price signals and use them to choose the best mode of travel for them.

Under this fare setting objective we will address the following factors:

- the Opal mode and distance-based fare structure **(the Referral)**
- incorporating new services into the Opal fare structure **(the Referral)**
- the appropriateness of the current methodology for determining maximum Opal fares **(the Referral)**.

## 2.6.2 We propose that fares should support better travel options

We propose that in determining fares they should provide signals to passengers that assist in selecting suitable travel options.

This might include differentials between different modes, time or day of travel, locations, distance or switching based on opportunities to use the capacity in the network efficiently. We propose that fares should reflect and support the service standards required of transport operators and expected by customers.

Under this fare setting objective we will address the following factors:

- managing demand and optimising the efficiency of transport networks **(the Referral)**
- standards of quality, reliability and safety of the services (whether those standards are specified by legislation, agreement or otherwise) **(the Act)**.

## 2.6.3 We propose that fares should mean public transport is accessible

Equitable, accessible and secure transport for all is one of 14 strategic directions outlined by Transport for NSW in its Future Transport strategy. Its focus is to remove barriers to transport which impact people's ability to participate in employment, education, social and leisure activities and access health services.<sup>4</sup> These barriers may be physical, safety or language related but can also relate to affordability of public transport.

We will consider affordability of the fare structure, the subsidised fares and concession programs for eligible groups and other options that assist passengers to manage their travel costs, such as off-peak fares and daily and weekly travel caps.

The NSW Government has several concession Opal cards that are available for passengers. These include the Opal Concession Card for eligible job seekers, tertiary students and apprentices and trainees, the Opal Gold Card available for eligible pensioners and seniors and the Child/Youth Opal Card available for passengers aged between 4 and 15, and full-time school students aged 16 years and older with a NSW student concession card.<sup>5</sup>

Under this fare setting objective we will address the following factor:

- ensuring affordability and accessibility for disadvantaged groups **(the Referral)**.

## 2.6.4 We propose that Opal fares should maximise the benefits of public transport use to the community

We propose that Opal fares should reflect the costs and benefits of public transport to both the individual and society. This will provide the right signals to help people decide how to travel.

One individual's choice to use public transport also creates cost and benefits on others and the community. These external costs and benefits are known as 'externalities'. In previous reviews we have found that, on average, each additional journey by public transport generates a net benefit for society.<sup>6</sup> The net benefit justifies subsidising the public transport system through taxes.

If fares were only reflective of the financial cost of running a public transport system, and did not consider the external benefits to society, then fares would likely be too high. Higher fares could discourage passengers from using public transport and increase road congestion. However, if fares are too low this could lead to overcrowding of public transport services, requiring new capacity to be provided which would increase the costs to NSW taxpayers. Additional services and infrastructure would compete with other Government priorities such as education and health.

Under this fare setting objective we will address the following factor:

- the social impact of the determination or recommendation **(the Act)**.

## 2.6.5 We propose that fares are set to support the financial sustainability of the public transport network

The NSW Government is investing significantly in additional public transport services within the Opal network to improve capacity and accessibility to serve the future needs of Sydney and the surrounding areas (including the Blue Mountains, Wollongong, Central Coast, Newcastle and parts of the Hunter region). The 2023-24 budget outlines spending for transport and infrastructure till 2026-27. Some of the significant public transport projects include:

- Sydney Metro West - \$13.7 billion
- Sydney Metro – Western Sydney Airport - \$7.9 billion
- Sydney Metro City and Southwest - \$3.3 billion
- Parramatta Light Rail - \$374 million (total cost \$2.9 billion).<sup>7</sup>

As these projects come online, it will also increase the annual operating costs of the transport network.

The fares charged for regular Opal services are used to cover some of the costs of providing public transport services, the rest is paid for through taxes. Ongoing revenue through fares is an important part of ensuring the public transport network and public transport services continue to be provided in the future and at the same standard. In our previous review we found that amount of public transport costs recovered through fares (cost recovery), at that time, was about 27%<sup>8</sup>. We expect that cost recovery fell due to reduced patronage during and after the COVID-19 pandemic.

We will calculate cost recovery and model the impacts of fare increases on future cost recovery rates. We will also consider how productive or efficient the Opal network is by looking at inputs and outputs of the network.

Under this fare setting objective we will address the following factors:

- cost recovery in the post COVID-19 environment (**the Referral**)
- the cost of providing the services (**the Act**)
- the need for greater efficiency in the supply of services so as to reduce costs for the benefit of consumers and taxpayers (**the Act**)
- the effect of the determination or recommendation on the level of Government funding (**the Act**).

## 2.6.6 We propose that fares create value for customers

Where passengers see value in the public transport network including both the price they pay and the level of service they receive, they will be encouraged to use the public transport network for more of their weekly travel journeys. We want to set Opal fares at a rate that provides value for customers (where the private benefit they receive is above or equal to the cost of the fare).

Demand elasticity studies (studying the behaviour of passengers in response to fare changes) helps to gauge the value passengers place on the service. We could consider changes in behaviour after fare increases, differences in peak and off-peak usage and changes in response to fare free periods.

This realises more external benefits (such as avoided congestion and increased active transport like walking or cycling), improves cost recovery of the system and improves the use of available infrastructure and capacity.

Under this fare setting objective we will address the following factors:

- the protection of consumers from abuses of monopoly power in terms of prices, pricing policies and standards of service (**the Act**)
- the impact of the determination or recommendation on the use of the public passenger transport network and the need to increase the proportion of travel undertaken by sustainable modes such as public transport (**the Act**).

## 2.7 How will we use the fare setting objectives?

We are interested in stakeholder feedback on whether these are the right objectives for this review, and whether there are other relevant matters we should consider in this review.

Once we have finalised our fare setting objectives using stakeholder feedback, we will develop indicators to help us measure how well different fare options address each of the fare setting objectives. We will use data about the expected travel patterns to model the outcomes of the different scenarios and compare different fare package options.

We may decide to weight some objectives more highly than others. Although we have proposed grouping the matters specified in the Act and the referral from the Minister for Transport into broader objectives, we will still consider each of the discrete matters. For more information on our fare package analysis approach, see Chapter 10 below.



## Seek Comment



1. What factors or objectives should we consider when designing fare options?



2. Are some objectives more important than others?









3. What measures can you suggest we use to assess the impact of the fares on fare setting objectives?

### 3 How does the Opal network help deliver the community's transport needs?

The Opal Network is the area in NSW where passengers can use their Opal card or contactless payment for public transport services such as trains, buses, ferries, light rail, metro and on-demand services.

This area includes Sydney and the surrounding areas including the Blue Mountains, Central Coast, the Hunter and the Illawarra. The different transport modes within the Opal network are shown in Figure 3.1. A full map of the Opal Network and services provided is presented in Appendix B.

Figure 3.1 Opal transport modes

	<b>Trains</b> 9 Sydney Lines serviced and 5 Intercity Lines
	<b>Buses</b> Bus service zone from Port Stephens to the South Coast and from the Blue Mountains to the Eastern Suburbs
	<b>Ferries</b> 10 Sydney Routes serviced and Newcastle Stockton Ferry
	<b>Light Rail</b> 3 Sydney Lines serviced and Newcastle Light Rail and Parramatta Light Rail (from 2024)
	<b>Metro</b> North West Line serviced and Sydney City & Southwest (from 2024), West (from 2030) and Western Sydney Airport (TBC)
	<b>On-demand services</b> Serviced in Sydney's Inner West, North West and Northern Beaches and Newcastle

Source: Transport for NSW, [Routes and timetables](#), accessed December 2023.

When we set appropriate maximum Opal fares, we want to understand passenger demand for public transport both now and in the future.

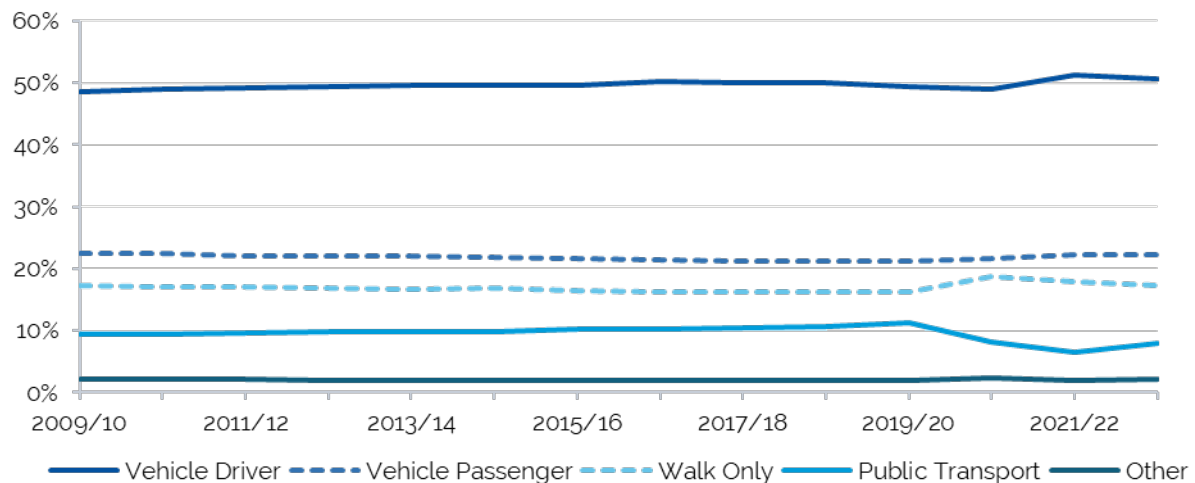
There have been significant changes in passenger behaviour over recent years. For example, commuting has declined, with increased working from home and hybrid working arrangements.

### 3.1 How do people travel around the Opal network?

Around 21 million trips are made each weekday across Sydney and the surrounding areas.<sup>9</sup> The Transport for NSW Household Travel Survey asked residents to identify modes and purpose of travel.

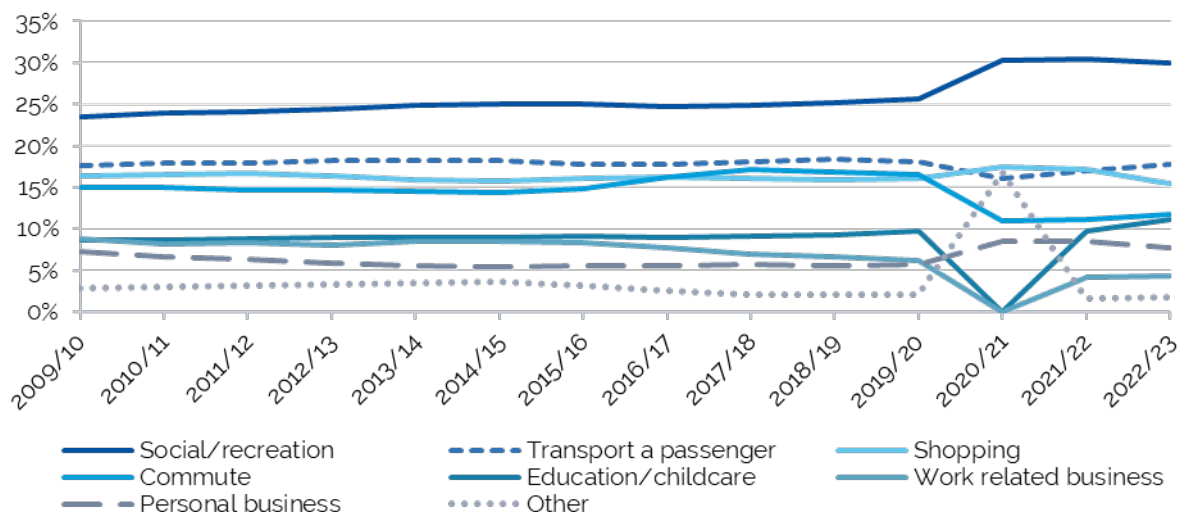
The 2022-23 survey data identified personal vehicle as the most common mode of travel used for 73% of trips (either as the driver or as the passenger), public transport was used for only 8% of trips in 2022-23 (Figure 3.2). The most common purpose of travel is social/recreation, followed by transporting a passenger (such as driving a friend or family member to an appointment), shopping and commuting (Figure 3.3). Until 2019, purpose of travel had been reasonably consistent. The social and technological disruptions of the COVID-19 pandemic have resulted in large changes to travel patterns.

Figure 3.2 Mode of Transport on an average weekday (2009-10 to 2022-23)



Note: 'Other' includes Taxi/rideshare, wheelchair, bicycle and aircraft.  
Source: Transport for NSW, [Household Travel Survey](#), July 2023.

Figure 3.3 Purpose of Travel on an average weekday (2009-10 to 2022-23)



Note: "Transport a passenger" refers to taking a trip for the purpose of facilitating travel for another person, i.e. taking a family member to an appointment.

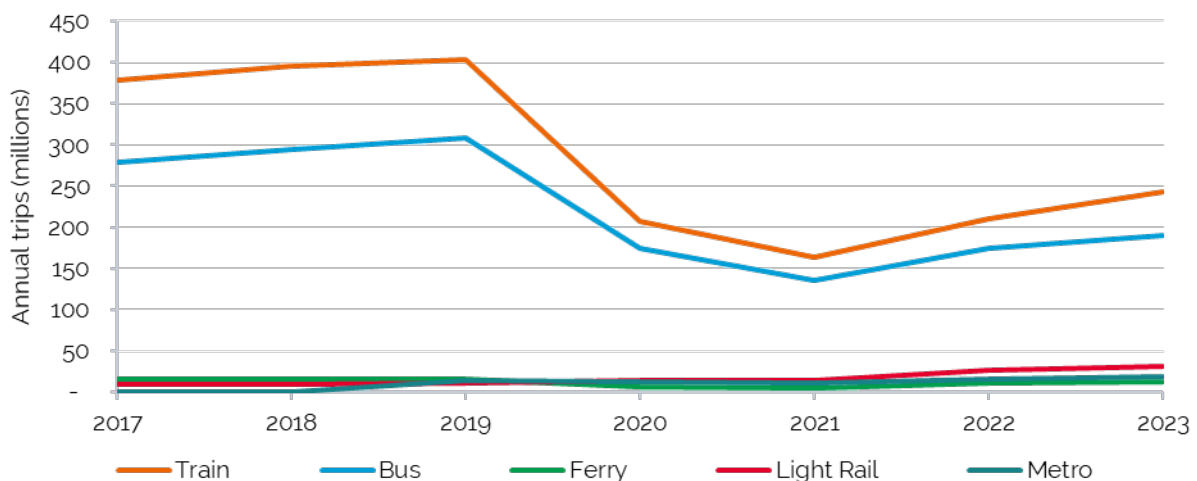
Source: Transport for NSW, [Household Travel Survey](#), July 2023.

The 2022-23 Household Travel Survey found average distance travelled for commutes and work-related business were the longest at 14.7km and 17.8km respectively.<sup>10</sup> Other purposes of travel such as shopping, social/recreation, education/childcare were shorter between 5.1km and 8.6km on average.<sup>11</sup>

### 3.1.1 How do people use public transport across the Opal network?

Approximately 87% of public transport trips across the Opal network are made using either a train or a bus. The remainder of trips take place using Light Rail (6%), Metro (4%) or Ferry (3%).<sup>12</sup> A total of 496 million public transport trips were taken in the 10 months to the end of October 2023.<sup>b</sup> Public transport usage today is significantly lower than the peak in 2019 of 753 million trips but has experienced a strong recovery from 2021 during which 330 million trips were taken reflecting restricted travel during the COVID-19 pandemic.<sup>13</sup> The change in total number of trips taken over the last 7 years is presented in Figure 3.4.

Figure 3.4 Total trips by mode – Millions (2017 to 2023)



Note: The pattern of declining trips is consistent across modes except Metro (which commenced in 2019) and light rail (which was significantly expanded in late 2019 and early 2020). 2023 data contains only trips until October.

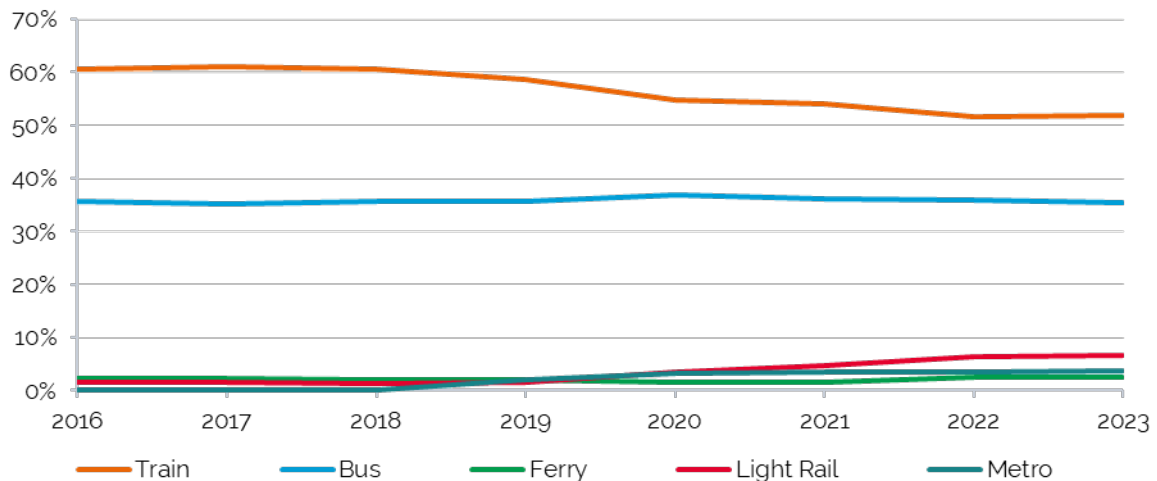
Source: Transport for NSW, [Opal Trips – All Modes](#), accessed November 2023.

More detailed analysis of Opal trips by user groups are presented in Figure 3.5 and Figure 3.6. Comparisons of the two largest passenger groups, adults (74%) and seniors (12%)<sup>14</sup> show different mode preferences between these groups.

<sup>b</sup> This is the number of trips up until and including October 2023. The first 10 months of 2023 already exceeds the total number of trips in 2022 (approximately 437 million).

In 2023 (from January to October), over half of adult Opal trips are taken by train (52%) followed by buses at 35%. Travel by seniors, during the same period, shows the opposite pattern with 52% of trips taken by bus followed by train at 37%. Both groups use other modes of transport in a similar manner to the total usage of public transport.<sup>c</sup>

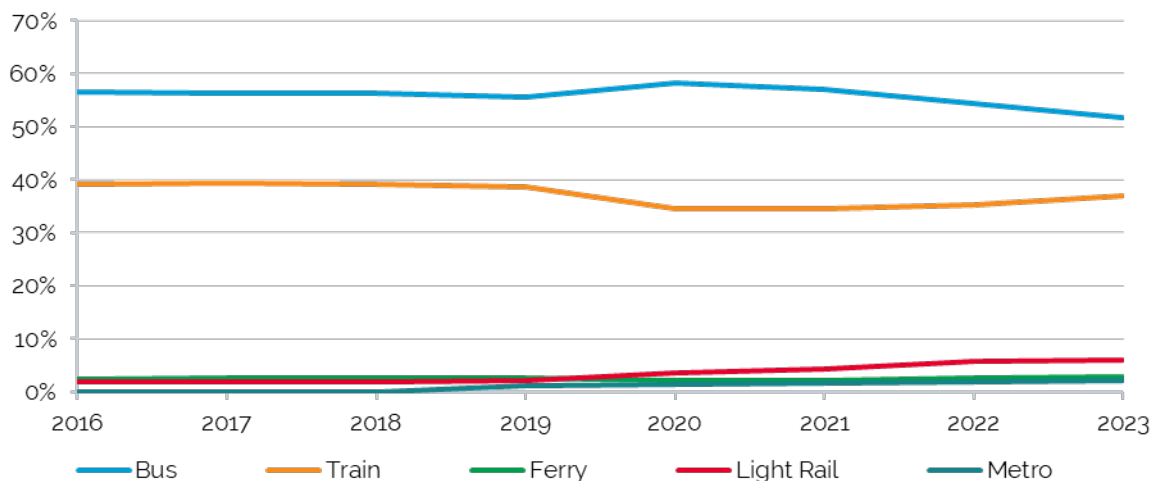
Figure 3.5 Trips by mode for Adult fares and contactless payments – percentage of trips (2016-2023)



Note: Adult fares and contactless payments are included together. This assumes that if a passenger had a concessional Opal card, they would use that cheaper option instead of contactless payment.  
2023 data contains only trips until October.

Source: Transport for NSW, [Opal Trips – All Modes](#), accessed November 2023.

Figure 3.6 Trips by mode for Senior fares – percentage of trips (2016-2023)



Note: 2023 data contains only trips until October.

Source: Transport for NSW, [Opal Trips – All Modes](#), accessed November 2023.

<sup>c</sup> Adult fare passengers use Light Rail slightly more than the rest of the population, likely due to its location close to Sydney CBD. Senior fare passengers use the Metro proportionally less than the rest of the population. Both groups use Ferries in the same proportion as the rest of the population.



Prior to 2020, patronage was increasing by about 5% per year.<sup>15</sup> This pattern of travel routinely saw crowded services within the peak travel hours.<sup>16</sup> However, this trend was disrupted during the 2020 and 2021 lockdowns (see Figure 3.4 and Figure 4.1). Although the lockdowns resulted in sharp short term drops in travel across all modes of public transport with quick recovery after the end of lockdowns, patronage has not yet recovered to the previous highs, resulting in additional capacity within the existing and expanding networks.

### Seek Comment



4. How important is public transport to you? Please explain why it is important, including which modes are most important, which times of day you rely on public transport the most and what days of the week?



5. How have your travel patterns on public transport changed over the past few years? Why have they changed, or why have they remained the same?

## 3.2 Who provides Opal services?

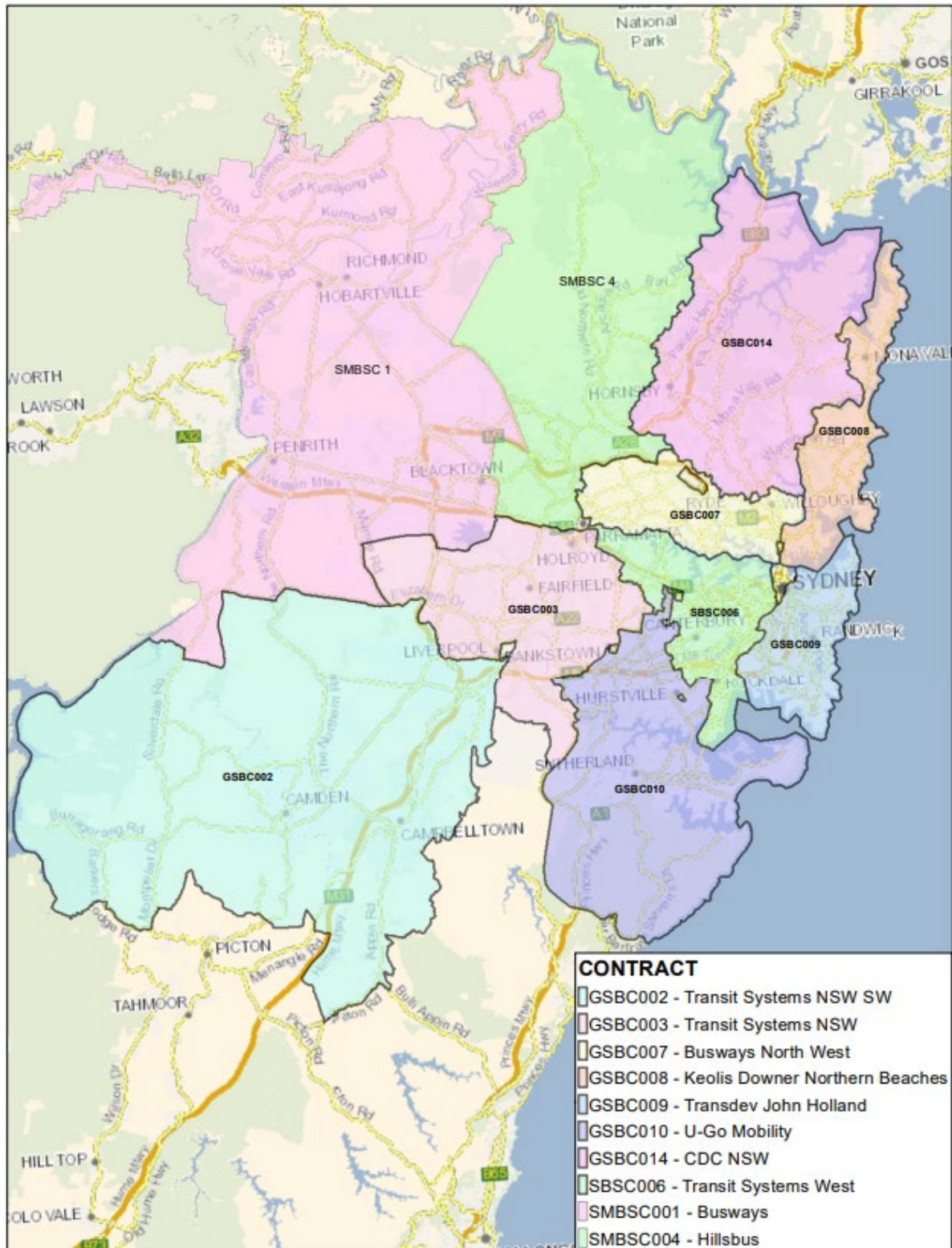
The different public transport modes in the Opal network have different operating arrangements. Some services are operated by NSW Government Agencies such as Sydney Trains, NSW Trains (NSW TrainLink Intercity). Other services are run by contract operators on behalf of Transport for NSW or another government agency. Operating arrangements by modes are summarised in Table 3.1.

Table 3.1 Operators of public transport

Mode	Operator
Trains	Sydney Trains and NSW TrainLink (Intercity)
Sydney Metro North West	Metro Trains Sydney, a private operator that is a joint venture of MTR Corporation, John Holland Group and UGL Rail
Light Rail	Transdev
Sydney Ferries	Transdev
On-demand Ferries	Transdev
Newcastle Stockton Ferry	Newcastle Transport, a private operator that is a subsidiary of Keolis Downer
Buses	22 contract operators, see Figure 3.7 and Figure 3.8
On-demand buses and non-opal services	A number of contract operators (see Transport for NSW website for details)

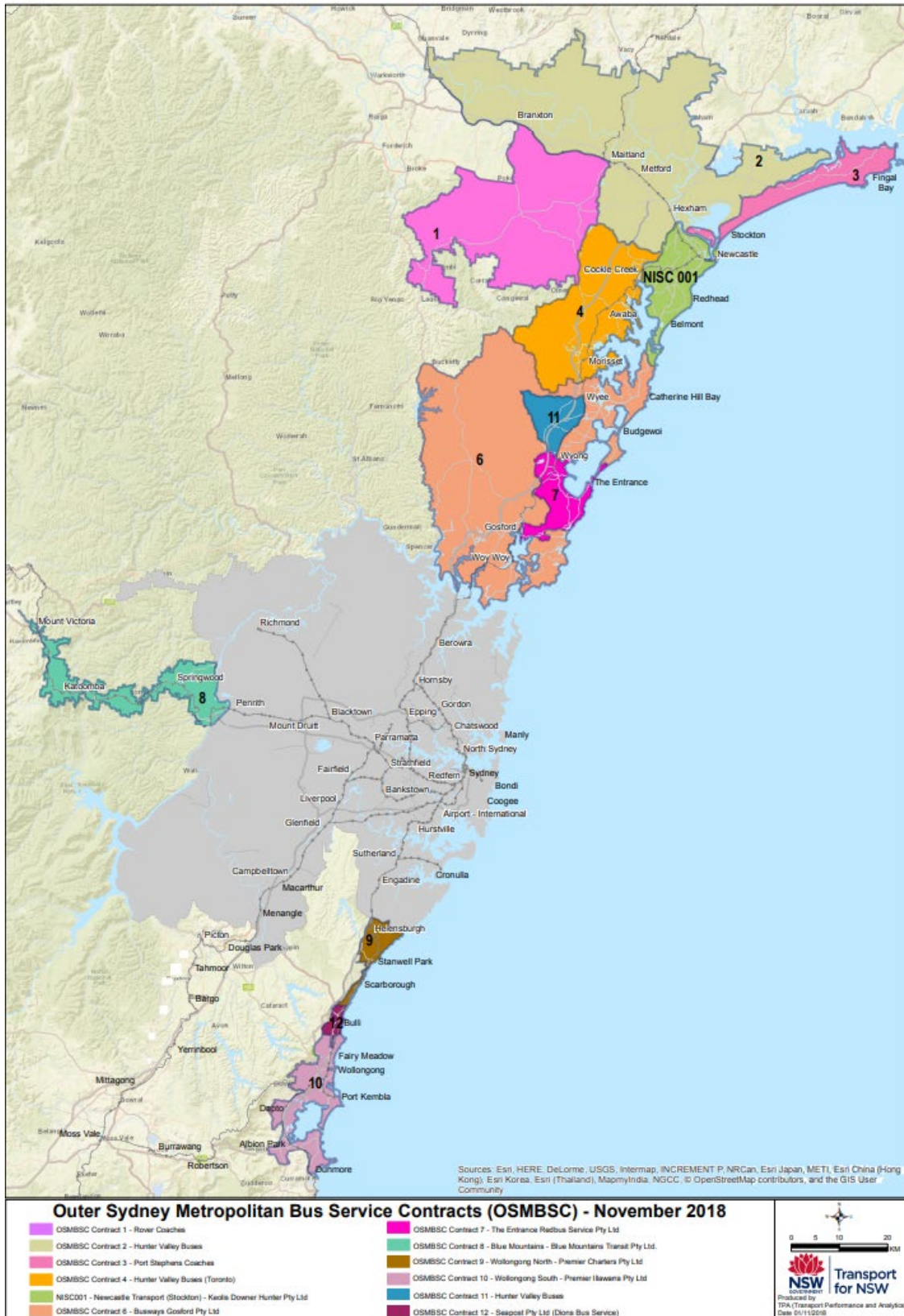
Source: MTR Australia, [Metro Trains Sydney \(MTS\)](#), accessed November 2023; Transdev, [Transdev Sydney Light Rail](#), accessed November 2023; Transdev, [Ferries in Sydney](#), accessed November 2023, Newcastle Transport, [Newcastle Transport](#), accessed January 2024.

Figure 3.7 Sydney Metropolitan Bus Contracts Map



Source: Transport for NSW, Open data: Opal Trips – Bus, accessed November 2023.

Figure 3.8 Outer Sydney Metropolitan Bus Contracts Map



Source: Transport for NSW, Open data: Opal Trips – Bus, accessed December 2023.



Opal fares are currently based on the mode of transport, the distance travelled and the time that the travel occurred (whether it was during peak or off-peak times). IPART in its current determination did not set a maximum for off-peak travel prices.

Morning peak times are 6:30am–10am for Bus, Light Rail, Sydney Metro and Sydney Trains. Morning peak starts at 6am for Intercity Trains. Evening peak for these services is 3pm–7pm.

Peak times apply Monday–Thursday (excluding public holidays).<sup>17</sup>

Some modes of public transport have the same distance and peak/off-peak fare structure. Train and Metro services share a single fare structure. Buses and Light Rail also have a single fare structure for both modes. The current fare prices for each mode are shown in Table 3.2. These fares are equal to or below the maximum price set by IPART.

Table 3.2 2023-24 Adult Opal fares (\$)

Train & Metro			Bus & Light Rail			Ferries	
Distance travelled	Peak	Off-peak	Distance travelled	Peak	Off-peak	Distance travelled	Fare
0 – 10 km	4.00	2.80	0 – 3 km	3.20	2.24	0 – 9 km	6.79
10 – 20 km	4.97	3.47	3 – 8 km	4.15	2.90	9+ km	8.49
20 – 35 km	5.72	4.00	8+ km	5.33	3.73		
35 – 65 km	7.65	5.35					
65+ km	9.84	6.88					

Source: Transport for NSW, [Adult fares](#), accessed November 2023.

## Seek Comment



6. Tell us what you think of the current fare structure. How could it be improved?

## 3.3 What is IPART's role?

IPART's role is to set maximum Opal fares. Under the Act, the Minister may refer a public passenger service to IPART for a determination or recommendation of appropriate maximum fares. For this review, the Minister referred Opal services to IPART for the determination of the appropriate maximum fares.

We will determine maximum fares for Opal services (see Box 1.1). We may also make recommendations to the NSW Government on how to improve other aspects of public transport pricing.

The NSW Government has the flexibility to implement a set of fares and discounts (including daily and weekly caps) below IPART's maximums.

### 3.3.1 What must we consider when making our determination and recommendations?

As discussed in section 2.6, when we make our decisions on maximum fares, our referral and the Act requires us to consider a set of specified matters, as well as any other matter that we consider relevant.

Matters we are required to consider include issues such as the costs of providing the services, standards of quality, reliability and safety, consumer protections, affordability and accessibility for disadvantaged groups and cost recovery in the post COVID-19 environment.

Some of these matters may be in tension with each other. We will make a determination that we consider achieves the best balance of these.

Setting maximum fares that consider these matters, should include how changes in the prices for public transport will impact passenger behaviour. Our aim is to set maximum fares that encourage the most efficient use of public transport, that fairly reflects the costs and benefits to an individual and society of using public transport.



If public transport fares are too high, not enough people will use public transport. There will be unused capacity on services.

This is less cost effective than services that are closer to capacity, and can reduce overall revenue, reducing financial sustainability.



If public transport fares are too low, this will impact the financial sustainability of the network and may lead to overcrowding.

This may require further expenditure to create additional capacity to accommodate the increased demand for public transport.

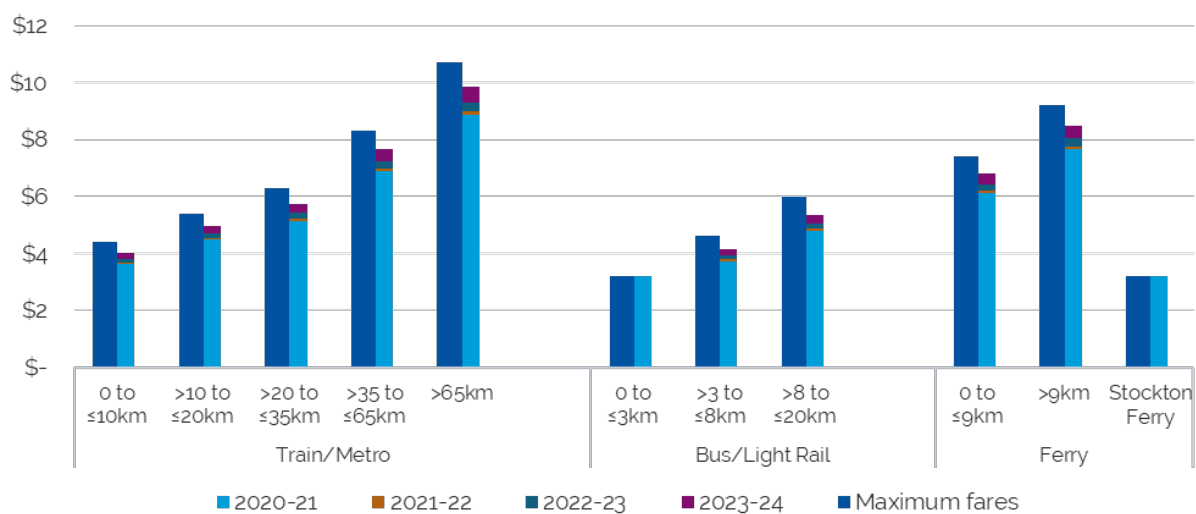
### 3.3.2 How should we determine maximum fares for Opal services?

IPART's existing determination sets fares by establishing the maximum price for each mode across set distances (fare bands). This is a simple form of the determination that is easy for passengers to understand and straightforward for Transport for NSW to implement.<sup>d</sup>

In this review we will again consider the most suitable form of the determination balancing matters such as simplicity/ease of use and flexibility.

The increase in adult peak Opal fares from 2020-21 to 2023-24 compared to the maximum Opal fares set by IPART are shown in Figure 3.9.

Figure 3.9 Increase in adult peak fares compared to the current maximum fare



Source: Transport for NSW, [Adult fares](#), accessed November 2023; IPART calculations.

<sup>d</sup> In the case that Transport for NSW wanted to change the fare band distances, we also created a schedule of distances in 1km increments by mode to allow maximum fares to be calculated using a weighted average price cap (WAPC) methodology allowing an average fare change (weighted by fare types). This methodology is more complex but provided Transport for NSW more flexibility in previous years during the roll out of the Opal card.

## 4 How has travel on the Opal network changed post COVID-19?

This review is the first to take place in the post COVID-19 environment. There have been changes in commuter patronage reflecting changes in working patterns, such as working from home.

As a result, a key issue for this review is understanding how people will choose to travel in the post COVID-19 environment. In this chapter we explore the impacts of COVID-19 on patronage, service performance and travel by time of day.

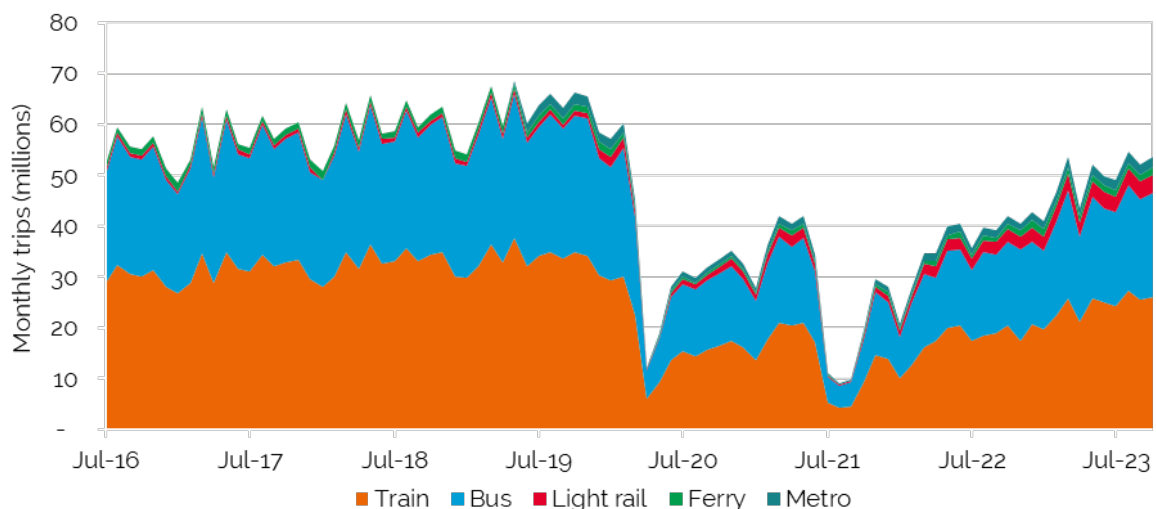
### 4.1 How are travel patterns changing?

Trips taken on the Opal network grew by around 5% per year over the period from 2016-17 to 2018-19. Public transport represented around 11% of travel in 2018-19 and was the third most popular mode of transport, following private transport and walking.<sup>e</sup>

The COVID-19 restrictions implemented by the NSW Government in March 2020 and June 2021 restricted travel for non-essential activities and led to significant declines in public transport patronage. Daily trips dropped from around 2.1 million per day in February 2020 to around 0.3 million per day in August 2021 as increased uptake of working from home and remote learning where possible reduced the need for commuters and students to travel. Social gatherings and other activities were also restricted and resulted in less reasons to travel.

Figure 4.1 presents monthly trips taken on the Opal network by mode over the period from July 2016 to October 2023.

Figure 4.1 Monthly Opal trips by public transport mode



Source: Transport for NSW, *Opal Trips – All Modes*, accessed November 2023.

<sup>e</sup> Based on the Sydney Greater Metropolitan Area (GMA) which includes Sydney Greater Capital City Statistical Area (GCCSA), parts of Illawarra and Hunter regions.  
Mode share calculated excluding walk linked trips.



Total Opal trips have recovered to around 78% of pre COVID-19 peaks as of October 2023, driven by train and bus trips. Train and bus trips account for the majority of trips taken on the Opal network. These have recovered strongly since lows reached in August 2021 but remain 31% and 29% lower respectively compared to peaks in 2019.

Public transport as a share of all household travel decreased to around 8% in 2022-23 and the proportion of travel using private transport and walking have increased. These shifts in personal travel behaviour from public transport to alternative options could impact externalities such as increased congestion on roads as a result of greater numbers of private vehicles and/or active transport benefits if more people choose to walk or cycle.<sup>f</sup> We will take into consideration these external costs and benefits through our social optimisation analysis in setting appropriate maximum fares (see section 10.3).

## How has commuting to work changed?

Commuting to work as a purpose for travel has declined since 2019, leading to reductions in public transport trips across the Opal network. The cultural and technological shifts enabling work from home have contributed to reduced commuting. Employees and employers continue to assess the best mix of working from home vs office arrangements, which will result in some uncertainty about longer-term levels of commuting.

We need to understand changing travel patterns and the impact of working from home on commuting as a purpose of travel. We will need to consider the decline in commuting as a purpose of travel and whether it is reasonable to expect this trend to continue in the medium to long term. Commuting as a purpose of travel has increased since the lowest point in 2020-21, however, it is still significantly below pre COVID-19 levels. Some of the academic research into preferences of employees to work from home is summarised in Box 4.1.

<sup>f</sup> Trips completed using private transport in 2022-23 remain lower than pre COVID-19 levels but the trend is increasing. If total trips continue to increase and the share of travel using private transport is maintained, trips completed using private transport could increase to be above pre COVID-19 levels over the upcoming determination period. Trips completed on foot (i.e. walking) in 2022-23 were higher compared to pre COVID-19 levels but slightly lower than in 2021-22.

### Box 4.1 Employee preferences on working from home

In 2021 the Institute of Transport and Logistics at the University of Sydney published a study on the impacts of working from home. The study conducted several surveys of Australians and asked them about how often they worked from home, positive, negative and other impacts. The results of a survey 3 months after the initial outbreak asked participants to identify challenges and benefits of working from home. The most important working from home benefit was 'No commute' for 46% of respondents and a further 22% reported it was the second most important benefit.

The surveys also found that those who said working from home was a positive experience and would like to work from home more in the future exceeded those that had a negative experience and would like to work from home less in the future.

The surveys examined the perception of the working from home experience and how this might translate into changes in future working arrangements. Between the first survey (3 months after the initial outbreak) and the final survey (6 months later), the study found that attitudes towards working from home remained "unchanged and overall positive when taking all factors into account."

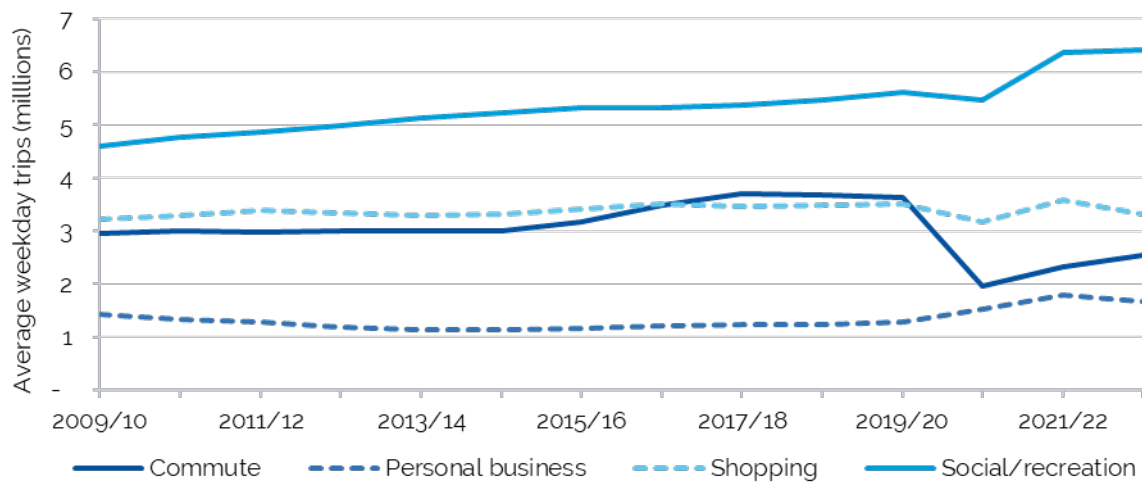
The University of Sydney's Institute of Transport and Logistics Studies has continued to investigate working from home in the years since the initial outbreak of COVID-19. In March 2022, workers in NSW reported that 47% of their days worked were worked from home. This has declined to 27% in March 2023, and 23% in September 2023. Recent declines from March 2023 to September 2023 nationally were driven by a reduction in the working from home hours for the occupations of professionals and sales. Professionals reduced their working from home proportion from 35% to 21% and sales workers reduced it from 28% to 15%. This has had a significant impact on the overall proportion of hours worked from home as these two occupations represent over 37% of the total working population.

Source: Beck, M and Hensher, D, Institute of Transport and Logistics Studies (ITLS): The University of Sydney Business School, Working from Home in Australia in 2020: Positives, Negatives and the Potential for Future Benefits to Transport and Society, October 2021, pp 7-9 and The University of Sydney: Institute of Transport and Logistics Studies, [Transport Opinion Survey](#), September 2023, pp 3 & 26.

### How is social and recreational travel changing?

Household travel survey data identified that travel for social/recreational purposes has continued to grow, despite the impact of COVID-19. Travel for social/recreational purposes remains the most popular purpose of travel across the Opal network and total trips for this purpose is 14% higher than 2019 levels. Figure 4.2 presents the household survey data for total trips by purpose.

Figure 4.2 Purpose of travel across the Opal network on an average weekday, 2009-10 to 2022-23

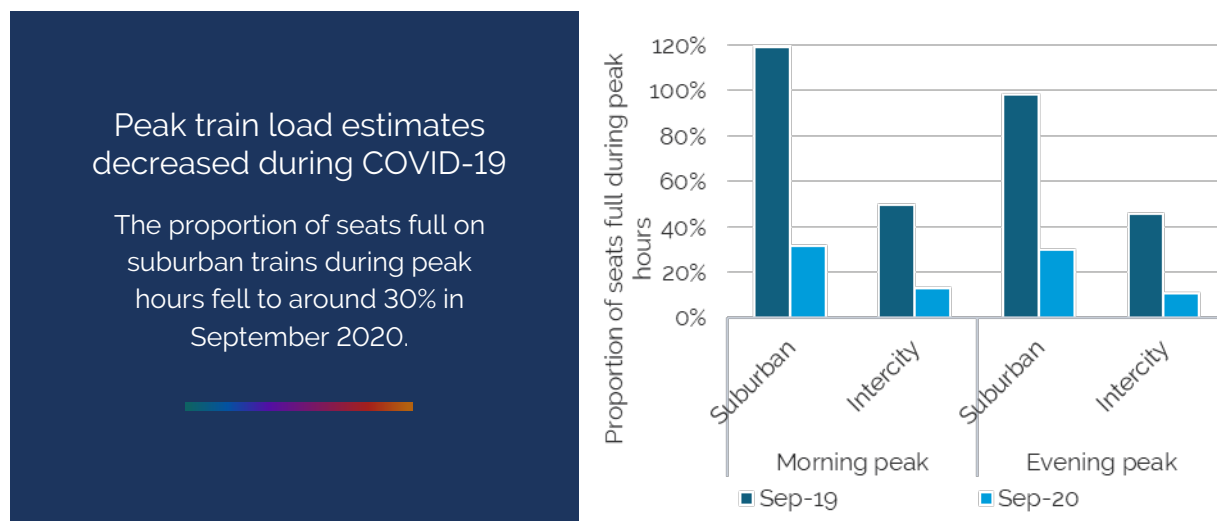


Note: Some purpose types have been excluded from this chart including 'work related business', 'transport a passenger', and 'other'.

Source: Transport for NSW, [Household Travel Survey](#), July 2023.

## 4.2 How can service performance be improved?

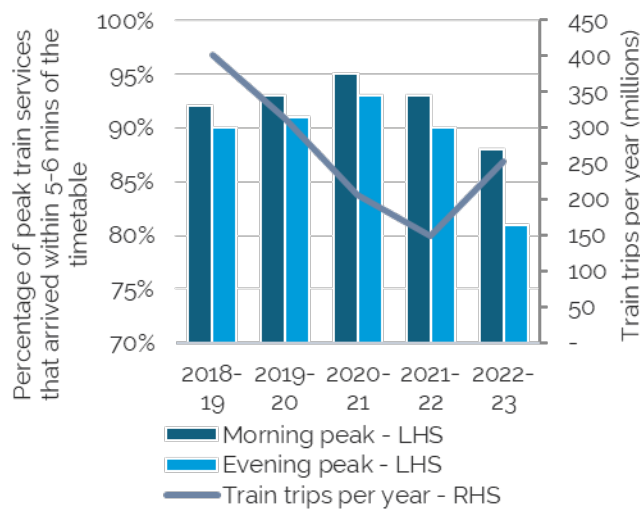
The decline in public transport patronage during COVID-19 led to significant falls in the proportion of train seats full during peak hours.



Note: Based on data for the workweek from 2-6 September 2019 and the workweek from 7-11 September 2020.

Source: Transport for NSW, [Peak Train Load Estimates](#), accessed November 2023.

Over this period, we also observed improvements in performance in terms of a greater proportion of services running on time.



Train punctuality performance improved during COVID-19 but has fallen in the last 2 years

In 2022-23 around 85% of peak services arrived within 5 to 6 minutes of the timetable.

Note: Services are determined to be punctual when arriving at their final destination within five minutes of the timetable for Sydney Trains services and six minutes for NSW TrainLink (Intercity) services. Services which skip stops, start or stop short, are diverted or cancelled are not punctual.

Source: Transport for NSW, [Sydney Trains and NSW TrainLink \(Intercity\) performance reports](#), accessed December 2023 and Transport for NSW, [Opal Trips – All Modes](#), accessed November 2023.

Data for 2022-23 shows that the proportion of services running on time in the AM and PM peaks fell to below pre COVID-19 levels and did not meet Transport for NSW's punctuality performance target to have at least 92% of peak services arrive within 5-6 minutes of timetable.<sup>18</sup> We note that overcrowding can reduce the proportion of services running on time because it takes longer for passengers to board and exit trains at stations. It can also be affected by a number of other factors, including severe weather conditions and problems with signal, track, overhead wiring and points.<sup>19</sup>

In addition to information on punctuality performance, Transport for NSW also publishes data collected through its bi-annual Customer Satisfaction survey which measures the satisfaction levels of people using all modes of transport, including public transport.<sup>20</sup> Passengers are asked to provide feedback on factors impacting the experience of their current trip or most recent trip such as timeliness, safety and security, ticketing, convenience, accessibility, comfort, cleanliness, information and customer service.<sup>21</sup> We will consider changes in customer satisfaction levels pre and post COVID-19 across different modes of public transport as part of this review.

The Transport Opinion Survey run by the Institute of Transport and Logistics Studies measures the nation's opinion on transport-related issues bi-annually. Results from the latest survey (September 2023) found that when asked about the highest priority issue for transport in Australia, 38% of NSW respondents identified public transport improvements as the top priority, followed by 21% that identified road improvement as the top priority.<sup>22</sup> The share of responses that selected public transport improvements as the top priority was also higher in NSW compared to the national average (38% compared to 30%).

The survey responses specifically related to public transport include service quality, cancellation and delay of train and bus services. The main problems regarding road improvement were related to congestion and poor road surface conditions. We note that avoided road congestion is a significant external benefit generated by public transport use.

Following changes in commuting patterns (including COVID-19 restrictions and working from home) public transport remains an important option for how people in Sydney and surrounding areas travel. Results of the Transport Opinion survey indicate support from the community for improving the performance of public transport services. However, it is important to note that some changes such as increasing service frequency would lead to higher costs that would need to be funded by public transport users and/or taxpayers. We are interested in hearing from passengers and other interested parties on current service performance, whether service performance has changed post COVID-19 and whether there is support for additional investment to improve the passenger experience.

### Seek Comment



7. Are you willing to pay more to improve Opal service performance?

## 4.3 What role do off-peak fares play?

Our 2020 determination set out maximum appropriate fares charged using up to 5 default distance bands by mode. We did not set any maximums for off-peak fares. Transport for NSW offers off-peak fares for all Opal modes except ferries at a rate of 70% of the equivalent<sup>9</sup> peak fare.

Peak times for Sydney Metro and Sydney Trains, Bus and Light rail services apply from **6.30am to 10am** in the morning and **3pm to 7pm** in the evening.

The morning peak travel time generally starts at **6am** for Intercity Trains, however, this can vary for some Intercity stations.

Opal customers receive a **30% discount** when travelling on Fridays, weekends, public holidays, and outside of peak times.

The reason for higher fares in periods of peak demand is to reflect the additional costs of providing services, as capacity-related costs are incurred in periods of highest demand. These include asset ownership costs, and other costs that do not vary with patronage, such as maintenance of ticketing system equipment.<sup>23</sup> Further, discounted fares can encourage people who are flexible with their travel on public transport to use the network in off-peak times.

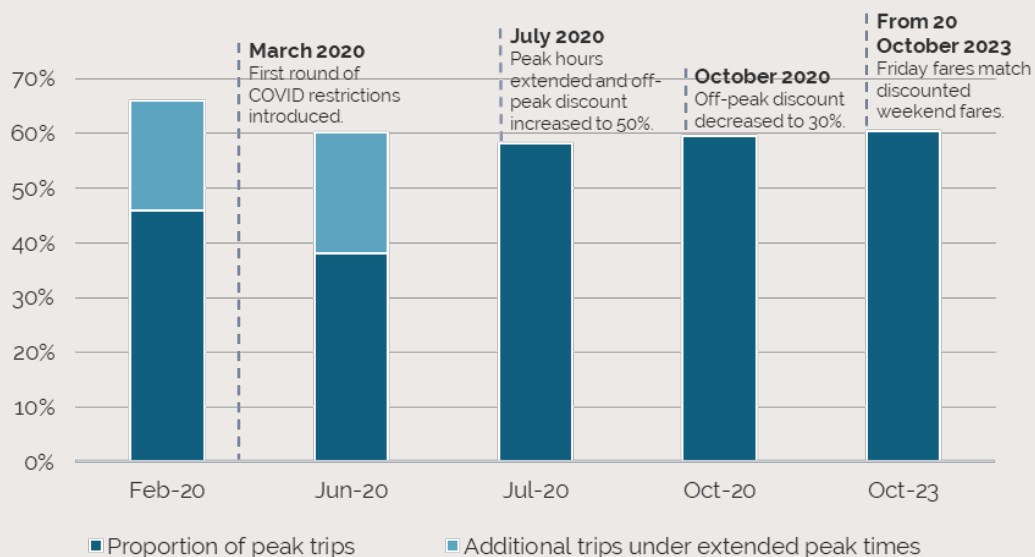
<sup>9</sup> For example, an adult off-peak fare is 70% of the adult peak fare, and a concession off-peak fare is provided at 70% of the concession peak fare.

Peak and off-peak pricing should help to manage demand across the day. By increasing the price differential between peak and off-peak, there is a stronger incentive for passengers to switch to travelling in the off-peak if it is possible for them to do so. In July 2020, the NSW Government implemented a 50% discount during off-peak hours over a 3-month period to encourage greater travel in the off-peak hours during the first COVID-19 restrictions. Box 4.2 presents passengers' responses to this temporary increase in the off-peak discount.

### Box 4.2 The majority of weekday trips occur during peak hours

This box discusses shifts in the proportion of weekday trips occurring in peak hours following COVID-19 and passengers' responses to changes implemented by the NSW Government.

Figure 4.3 Proportion of weekday trips occurring during peak hours



- a. Does not account for seasonal travel patterns.  
 b. Because the peak hours were extended in July 2020, we have attempted to compare the trips that were not counted as 'peak trips' at the time but would have been if the current peak hours had been in place at the time. These trips are labelled 'Additional trips under extended peak times'.  
 c. The source data does not separate trips between Sydney and Intercity trains, as a result, we have applied peak times for Sydney Trains for all train trips.

Source: Transport for NSW, [Opal Patronage](#), accessed November 2023.

Figure 4.3 compares the proportion of weekday trips occurring during peak hours at 5 different points in time, over the period from February 2020 to October 2023. We can observe that:

- The proportion of weekday trips occurring in peak hours declined from 46% in February 2020 to 38% in June 2020 due to the introduction of travel restrictions.

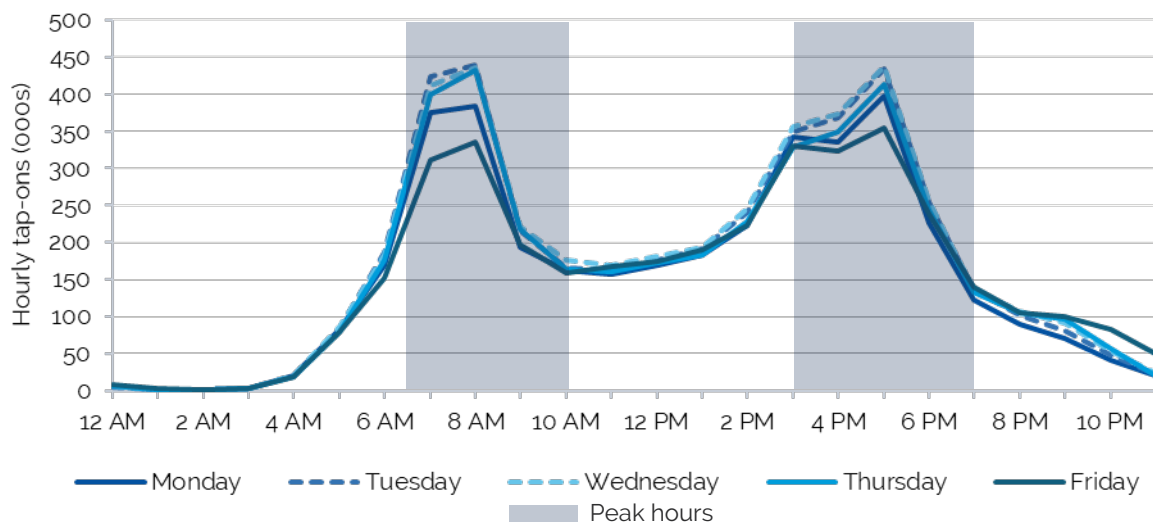
#### Box 4.2 The majority of weekday trips occur during peak hours

- In July 2020 the NSW Government extended peak times by 3 hours per day and increased the discount when travelling in off-peak hours to 50% for a 3-month period to help manage social distancing measures and stagger essential travel times during the COVID-19 pandemic.<sup>24</sup> The extension in peak times led to an increase in the proportion of trips occurring in peak hours.
- The proportion of trips occurring from 6.30am to 10am in the morning and 3pm to 7pm in the evening, decreased from 60% in June 2020 to 58% in July 2020. This could be related to both the extended hours and the higher off-peak discount, as some passengers previously paying 30% discounted off-peak fares would have paid peak fares under the expanded peak hours and would have received a 50% discount in switching to off-peak travel.
- The proportion of weekday trips occurring in peak hours increased slightly to 59% in October 2020 following the discontinuation of the 50% off-peak discount.
- The proportion of weekday trips occurring in peak hours is relatively unchanged 3 years on, at 60% in October 2023.

Although there have been some small fluctuations in the proportion of weekday trips occurring during peak hours over COVID-19, the share has remained around 60%. We want to understand why travel at peak time has remained relatively stable and what would encourage public transport users to shift their travel into off-peak periods.

The NSW Government introduced further changes from 20 October 2023 to extend fare discounts to Fridays so that fares on Fridays now match discounted weekend fares.<sup>25</sup> Opal data suggests that Friday patronage between the hours of 6.30am to 10am in the morning and 3pm to 7pm in the evening (i.e. peak hours for Monday to Thursday) is lower compared to other weekdays (see Figure 4.4).

Figure 4.4 Hourly tap-ons on weekdays for the week starting 23 October 2023





Source: Transport for NSW, [Opal Patronage](#), accessed November 2023.

In this review we will look at whether the current time periods for peak fares align with peak demand and road congestion. We will also update our modelling to account for changes in the post COVID-19 environment, to inform our assessment of appropriate price differentials between peak and off-peak fares. We are interested in hearing from stakeholders on when and where peak fares should apply, if the off-peak discount impacts their travel decisions, and whether we should consider setting maximum peak and off-peak fares.

## Seek Comment

8. What levels of peak time crowding on public transport are acceptable to you before you seek alternative travel options (either mode, time of day or not travelling at all)?
9. How flexible can you be in staggering your travel times? For example, are they influenced by work, childcare arrangements or education start and finish times?
10. Are the current peak arrangements appropriate (e.g. times, discount levels, modes etc.)?
11. What price differential between peak and off-peak fares would create an incentive to shift travel times? Should we consider setting maximum off-peak fares?
12. Has the NSW's Government decision to remove peak fares on Fridays impacted your travel decisions?
13. What other factors influence choice of travel time?

## 4.4 How will patronage change over the next 5 years?

It is evident from the data on monthly Opal trips that public transport use continues to evolve in the post COVID-19 environment (see Figure 4.1). This section discusses 2 key changes expected over the upcoming review period that could impact patronage levels across the different modes.

### 4.4.1 How are working from home patterns changing post COVID-19?

We expect the travel behaviour of office workers to significantly influence public transport patronage. That is because when employees choose to work from home they reduce the need for travel, and when they choose to return to the office this should lead to increased travel by all modes of transport, including public transport.

Office attendance in Australia has shown steady recovery over the past 12 months as more employers are encouraging or requiring staff back into the office. Analysis by commercial real estate services company CBRE shows that office attendance at the national level over the September quarter 2023 reached 71% of pre COVID-19 levels, which is 17 percentage points higher than the same period last year. This increase was attributed to more companies and employees acknowledging the importance of face-to-face collaboration.<sup>26</sup>

In Sydney, office attendance rates reached 75% of pre COVID-19 levels during the September quarter 2023.<sup>27</sup> This is consistent with the strong recovery in train and bus patronage over this period shown in and the sustained decline in days worked from home reported by the Institute of Transport and Logistics Studies' Transport Opinion Survey (see Box 4.1).

In this review we will look at how working from home patterns have changed since the last time we set maximum fares in 2020 and consider how these might evolve over the next 5 years. This includes office attendance rates as well as more flexible working arrangements which could lead to changes in working hours, and as a result, when people choose to use the Opal network.

## Seek Comment



14. Have your working from home patterns changed since COVID-19? Do you expect these to continue to change over the next 5 years?

### 4.4.2 What impact will the introduction of new services have on patronage?

The addition of new services can also change how people choose to travel and/or the mode of public transport they use. As an example, although total Opal trips have fallen to around 80% of pre COVID-19 peaks, light rail trips increased by around 259% over the 4-year period from October 2019 to October 2023. This is most likely associated with the introduction of new services, i.e. the Randwick line which opened in December 2019, followed by the Kingsford line which opened in April 2020. In late 2021, the NSW Government decided to discontinue more than 20 bus routes from the south-east Sydney region, which is expected to have encouraged further patronage of these light rail lines.<sup>28</sup>

New light rail and metro services are expected to commence operating over the next 5 years.



### Light rail

- Stage 1 of the Parramatta light rail is expected to open in 2024.
- The first phase of construction for Stage 2 of the Parramatta light rail will commence in 2024.



### Metro

- The Sydenham to Chatswood section of the City and Southwest Metro is expected to open in 2024.
- The upgrade to the T3 Bankstown Line between Sydenham and Bankstown to metro standards is expected to commence in the second half of 2024. Metro services are expected to commence from late 2025.

Source: Transport for NSW, [Parramatta Light Rail Frequently Asked Questions](#), October 2023, p 1; NSW Government, [Parramatta Light Rail Stage 2 picks up steam with additional \\$200m commitment](#), 18 September 2023 and Sydney Metro, [Southwest Metro project update](#), August 2023, pp 1-3.

We will consider how this impacts patronage and travel changes in public transport use, and whether it shifts passengers from one mode of public transport to another. We will also consider whether it encourages greater use of public transport by current nonusers due to proximity to or convenience offered by the new services.

### Seek Comment



15. Will the introduction of new light rail and metro services over the next 5 years impact your travel decisions?

## 5 What are new technologies for fare payments?

The introduction of the current Opal system from late 2012 transformed travel on public transport in Sydney and surrounding areas by allowing for full integration of fares across all Opal services and supporting a range of fare options previously not practical under paper tickets.

Over the current determination period we have observed further changes in how people choose to pay for to travel on the Opal network. Most notably, there has been a reduction in the use of the Adult Opal card, offset by increased use of contactless payment options such as debit and credit cards. Further changes are expected for the upcoming determination period as Transport for NSW prepares to procure new technology to replace the existing Opal system.<sup>29</sup> This change is expected to come into effect in the upcoming determination period.

This chapter discusses changes in fare payments over the current determination period, improvements offered by new technologies such as account-based ticketing systems and how technological changes can impact our determination of maximum fares.

### 5.1 Which payment options do passengers prefer?

Contactless payments (use of a smart phone, wearable device, credit card or debit card to tap on and off) were first launched in July 2017 and progressively rolled out across the Opal network over the period to September 2019, when it became available for all modes in the Opal network and provided the same discounts, caps and travel benefits as the Adult Opal card.

Contactless payments offer greater convenience compared to the Adult Opal card, as there is no need to top up in advance, and the same payment device can be used as for other electronic transactions rather than a specific card for public transport. Contactless payments also offer greater flexibility as the technology underpinning this can accommodate more complex fare options compared to Opal cards.

While more convenient, the price of travel is displayed differently when using a contactless device compared to when using an Opal card.<sup>h</sup>

Contactless payments are charged as an Adult Opal fare and users receive the same Opal benefits as an Adult Opal card.

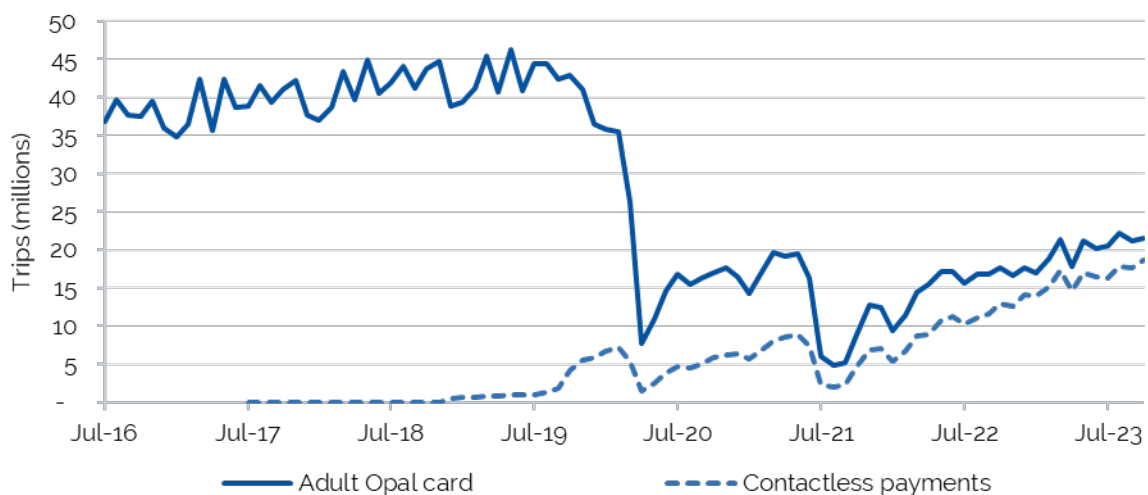
Concession, Child/Youth and Gold Seniors/Pensioner fares are not currently available using this payment method.

<sup>h</sup> Unlike using an Opal card, the price of travel is not displayed on the Opal reader at tap off when using a contactless payment option. Instead, users need to register their device or look up the last 10 payments on the Opal website.

Figure 5.1 presents monthly trips taken using the Adult Opal card compared to a contactless card or device. It shows strong growth in travel using contactless payments since our last Opal review in 2019-20.

Contactless payments as a share of total trips on the Opal network increased by 28 percentage points from 6% in October 2019 to 35% in October 2023,<sup>i</sup> and travel using an Adult Opal card as a share of total trips decreased by 25 percentage points from 65% to 40% over the same period.

Figure 5.1 Monthly trips by payment type (millions)



Source: Transport for NSW, [Opal Trips – All Modes](#), accessed November 2023.

## 5.2 What ticketing options could new technology deliver?

Although contactless payments are charged at the same fare as an Adult Opal card, the technology underpinning these contactless payments is different from current Opal card technology.

<sup>i</sup> Does not sum due to rounding.



### Opal card

When you tap off at the end of your journey, the system calculates your fare based on your travel distance and applies any discounts or caps.

The fare is then automatically deducted from your Opal card.



### Contactless payments

When you tap on, a pre-authorisation \$1 charge appears as a pending transaction on your statement.

As you travel throughout the day, fares will be accumulated, and the total cost of the day's travel will be processed at the end of each day. The total cost will replace the \$1 charge.

Source: Transport for NSW, [Tapping on and tapping off](#), accessed December 2023 and Transport for NSW, [How to use contactless](#), accessed December 2023.

Contactless payments are an example of account-based ticketing technology, where trip information is sent and held by a centralised database rather than stored on a travel smartcard (e.g. the Opal card) itself. The existing system does not allow for easy configuration of complex rules or differentiated fare pricing. In contrast, account-based ticketing systems allow greater flexibility and can accommodate more fare options because the technology allows fares to be calculated and processed by the back office rather than having to be processed in real-time at the moment of tapping. Examples include more tailored fare determination, fare correction and subscription pricing such as a monthly travel pass for public transport (similar to the former periodical tickets). Account-based ticketing systems could also provide different types of travel rewards to incentivise greater public transport use or even provide redress or rebates to inconvenienced customers if for example there was a major network disruption or service level failure.

In June 2022, the then NSW Government announced through the 2022-23 Budget that they will invest \$568.7 million over 4 years to replace existing Opal ticketing systems with a flexible, modular and future-ready system across Greater Sydney, outer metropolitan and regional areas.<sup>30</sup> Known as the Opal Next Gen upgrade, the new Opal system aims to better meet the needs of commuters and allow users to seamlessly plan, book and pay for a range of different transport services in one place.<sup>31</sup>

Over December 2022 and January 2023, Transport for NSW undertook a market sounding process and invited local and international organisations with expertise and experience in account-based ticketing systems to provide input and feedback to help inform and shape the way the Opal Next Gen upgrade can be procured, developed and delivered.<sup>32</sup>

### Seek Comment



16. What types of new fare options would you like to see following the transition to a new account-based ticketing system?

### 5.3 Do passengers know the price of their trip?

Currently when a passenger taps off using an Opal card at an Opal card reader, the display screen shows the fare charged based on travel distance and applies any discounts or caps.

However, when a passenger taps off using a contactless payment device no information about their fare is displayed. This means that passengers using contactless payments do not receive an immediate price signal as they would when they use an Adult Opal card and must refer to their credit or debit card statement, Transport for NSW website or linked account for this information.

Further, institution processing times differ so the transaction date on a passenger's statement may not correspond to the exact date on which travel took place, and delayed transactions or fare adjustments can appear up to 7 business days after the travel date.<sup>33</sup> As a result, some contactless payment users may be less aware of the fares they are paying compared to Opal card users.

Understanding passengers' demand response is critical to our review. We make assumptions about how sensitive passengers are to price and how they adjust their behaviour in response to fare changes. For these assumptions to be accurate, customers must know how much they are paying for their journeys. These assumptions inform our assessment of how different fare packages (including changes to fares and fare structures) perform, and it is also a key input into our modelling (see section 10.3). We will consider the impact of increases in contactless payments when estimating demand elasticities (i.e. a measure of how responsive demand for a particular product or service is to changes in its price) for this review.

#### Seek Comment



17. Do you know how much your usual Opal fare is?



18. Are fares an important factor for you when deciding whether to travel on public transport?



19. Would you like more visibility of fares paid using contactless payments to help you make more informed travel decisions?



## 6 What are the external benefits and costs of public transport?

People's decisions regarding the use of public transport are shaped by their personal preferences and economic considerations. Each person's use of public transport, however, also generates costs and benefits for all other users. Individuals do not fully factor these costs and benefits, defined as 'externalities', in their personal decisions, but governments consider them when designing policies that could have effects on society as a whole. In the sections below, we outline the main externalities of public transport and how we consider them when setting fares.



### **Congestion**

Using public transport reduces congestion and traffic on roads



### **Pollution**

Public transport overall emits fewer pollutants than private vehicles



### **Health**

Using public transport results in more physical activity and fewer accidents than private vehicles



### **Mobility and social inclusion**

Public transport allows people to access social, business, and health opportunities and resources



### **Service quality and frequency**

Increased usage of public transport can stimulate supply of services, but it can also cause overcrowding



### **Liveability**

Public transport contributes to connected, prosperous, and liveable suburbs in our cities

## 6.1 What are the main community benefits of public transport?

### Reduced road congestion

When individuals opt to travel by public transport instead of driving, they contribute to reducing traffic congestion. This benefits all drivers, as well as some public transport users (such as those on a bus journey) through time savings on road journeys and reduced wear and tear on vehicles.

In setting Opal fares for previous determinations, we found that road congestion savings are the largest of the public transport externalities we calculated. However, only large changes in public transport fares would result in material impacts on road congestion. For example, our 2020 modelling found that doubling transport fares could add 10 minutes to a driver's commute in heavily congested roads and times of the day. In addition to travellers' preferences around public and private transport, the characteristics of the road network and traffic flows also determine the impact of transport externalities on congestion.

### Reduced pollution

Public transport use typically generates fewer greenhouse gas emissions, air pollutants, and noise pollution compared to travelling by private vehicles. This reduced environmental footprint translates into a positive externality for the community. Changes in the uptake of electric and low-emission vehicles, both for public and private transport, can impact the magnitude of this externality.

### Public health benefits

The use of public transport generates several health benefits, both indirectly through reduced pollution, and directly through greater levels of physical activity and lower probability of road accidents. Compared with using a private vehicle, taking public transport involves more physical activity like walking and cycling (getting to and from where you catch the transport), which in turn improves health and can reduce healthcare costs for individuals and society. The decreased number of road accidents associated with public transport further reduces healthcare costs and other costs to society (e.g. reduced emergency services, flow on impacts of accidents on congestion, costs of clean-up and insurance).

### Mobility and social inclusion

Public transport enables individuals that don't have the option of using a private vehicle to access opportunities and resources that would otherwise remain out of reach. For example, public transport improves access to tertiary education and job opportunities for people experiencing economic disadvantage. Public transport also improves access to health and social benefits for people that might need it the most, such as pensioners and people with disabilities.

## Quality and frequency of services

The overall number of people using public transport can have different effects on the quality of journeys for individual users. High levels of patronage can lead to overcrowding and lower the quality of a public transport journey due to longer trip times and discomfort. However, high patronage could also result in increased service frequency, as the government adds services to meet the demand. This in turn improves waiting times and reliability. The extent of these effects depends on a number of factors, including the capacity constraints of the infrastructure (especially for train services).

## Liveability

Public transport contributes to producing prosperous, connected, and liveable suburbs. Access to public transport stimulates the agglomeration of people, skills, resources, infrastructure, and employment opportunities. This has a positive effect on economic growth that accrues to all of society, and not just the individuals using public transport.

Agglomeration benefits are the efficiency achieved when businesses and activities are clustered together in a single location like a central business district.

## 6.2 How do fares reflect the benefits and costs of public transport?

In our fare setting methodology, we propose to maximise the collective benefits of public transport while ensuring a fair distribution of costs and minimising taxpayer burden.

Fares paid by users directly contribute to the operation of public transport, but they are not sufficient to cover the full costs of operating and providing the services. The remainder (almost 75% of the cost) is covered by government subsidies, which are funded through revenue from all taxpayers (regardless of their use of public transport). This recognises the benefits of public transport beyond the direct users of the system.

In determining the appropriate level of public transport subsidies, governments often also consider the budgetary impact and prioritise the allocation of limited resources. While public transport is an important service, it competes for taxation revenue with other essential public services, such as healthcare and education.

As a result, fare setting decisions involve choosing the proportion of costs to be funded collectively through subsidies, and the proportion to be recovered through user fares. In our determination, we will consider how decisions around the balance between fares and subsidies for public transport incorporate positive externalities and ensure that the full societal value of public transport is reflected in its funding.

We define **positive externalities** as the benefits of a public transport trip that extend beyond the passenger

Not all positive externalities of public transport might be best addressed through fare changes.

For example, agglomeration benefits of public transport (the efficiency achieved when businesses and activities are clustered together in a single location like a CBD) could be recognised by urban planning and infrastructure investment policies, rather than fare decisions. Some of the externalities of public transport, such as social mobility, are restricted to specific groups such as those without alternative access to personal transportation. The eligibility for and level of concession fares might therefore be a better instrument to address equity concerns without broad fare changes. In our determination, we will consider which externalities are best addressed by fare setting decisions, and how to best reflect them in our methodology. More details on our proposed approach are outlined in Chapter 10.

### Seek Comment



20. Are there other external benefits that public transport provides?



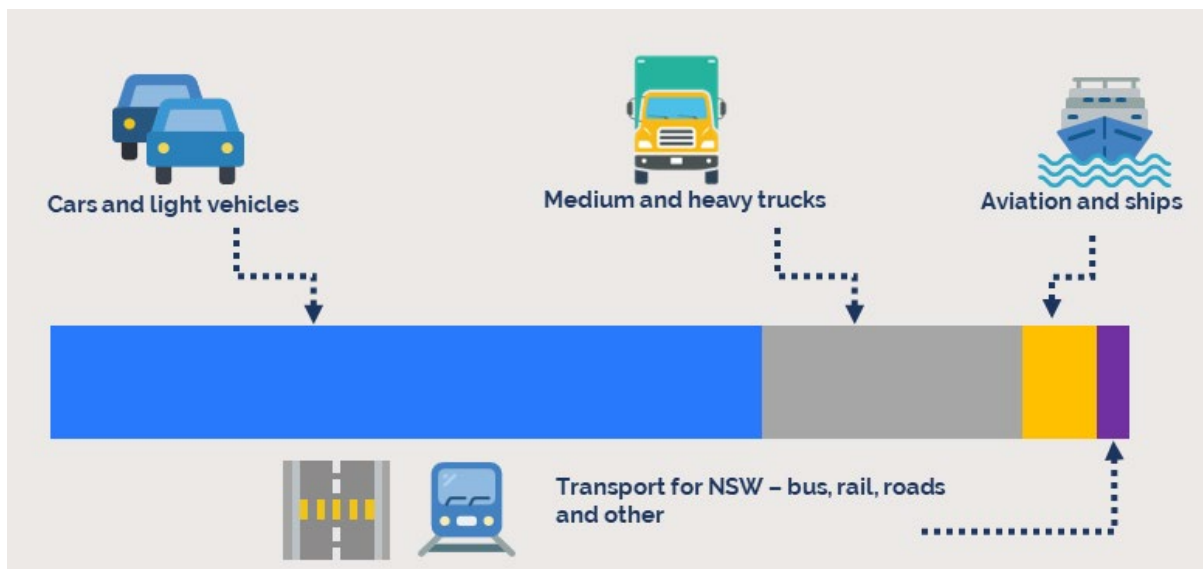
21. Which external benefits of transport are best addressed through fares?

## 7 How does public transport promote environmental sustainability?

Our daily travel decisions can have significant impacts on the environment. Providing options for sustainable modes of transport is an important part of protecting the environment. The importance of sustainable transport has been reinforced by the NSW Government's commitment to reduce emissions by 50% by 2030 and achieve net zero emissions by 2050.<sup>34</sup>

Transport emissions are a significant proportion of the total emissions generated by the economy. Figure 7.1. shows the proportions of transport sector emissions generated by various methods of transport. Of the emissions generated by Transport for NSW, almost two thirds of this is produced by buses.

Figure 7.1 Transport sector CO<sub>2</sub> emissions in NSW



Source: Transport for NSW, *Future Transport Strategy: Our vision for transport in NSW*, p 74.

### 7.1 Does public transport reduce emissions?

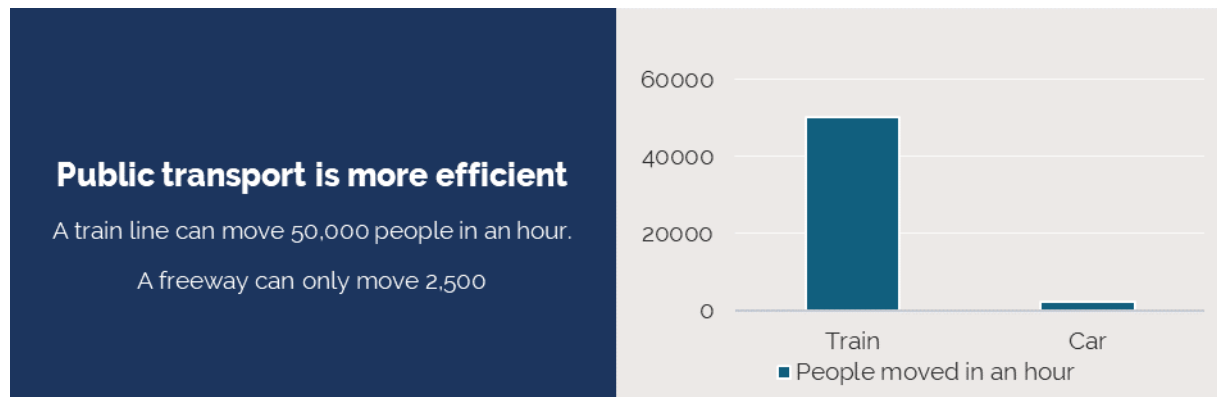
When a passenger uses public transport, their single trip tends to produce less carbon emissions than if they had used a car.<sup>35</sup> Cars produce tailpipe emissions that significantly contribute to climate change. NSW Trains are completely electrified, and Transport for NSW is in the process of completely electrifying the bus fleet.

However, the issue of which mode of transport is the most environmentally sustainable is far more complicated than measuring emissions. It is important to also consider the materials and energy used in the entire supply chain required to provide the mode of transport and the infrastructure that it uses.

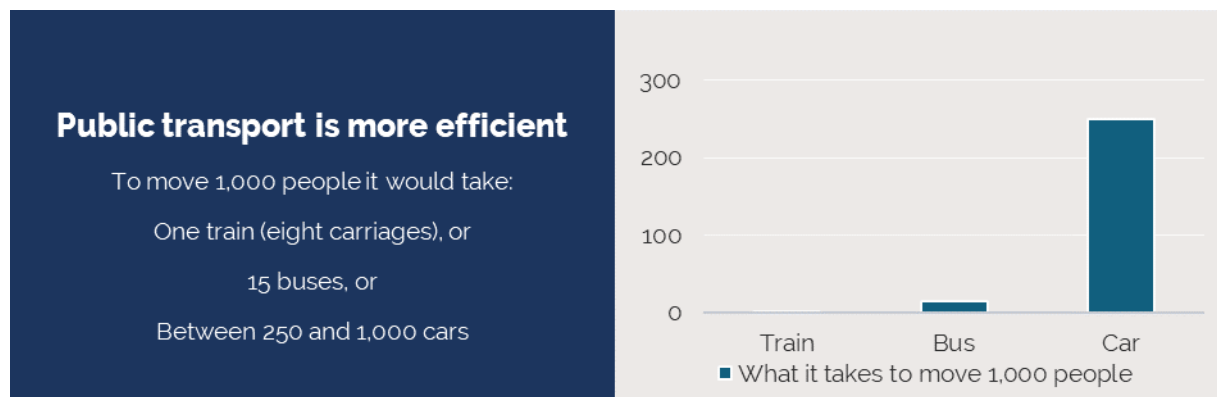
Buses and cars require roads and freeways to operate, while trains, metro and light rail all require train lines and stations to operate. Ferries require wharves but operate on water bodies.

Fuels such as diesel, natural gas and electricity are also an input and range in their environmental impact. Public transport can be electrified, but this will still produce carbon emissions if electricity is generated through sources like coal. All these factors are important in understanding the sustainability of each mode of transport.

Environmental sustainability is a complex issue. However, we can still recognise the environmental sustainability of public transport compared to cars by examining efficiency. Public transport can be a far more efficient method of moving people than cars.



Source: Transport for NSW, [Why is rail travel a better choice for the environment?](#), accessed November 2023.



Source: Transport for NSW, [Why is rail travel a better choice for the environment?](#), accessed November 2023.

Fares can recognise the external benefits to society of fewer emissions. In the short term, increased public transport use will reduce tailpipe emissions which improves overall air quality and the health of individuals. The sustainability of public transport will increase over time as more services become electrified such as buses and ferries, although personal vehicles will also likely become more electrified. Over time, the more public transport trips replace trips taken by higher emission personal or commercial vehicles, the lower the impact of climate change.

Public transport use benefits the community through fewer emissions and has the potential to reduce the cost of climate change. This impact could be accounted for in the price of Opal fares to encourage passengers to increase the proportion of travel undertaken by sustainable modes of public transport so these benefits can be realised.

## Seek Comment



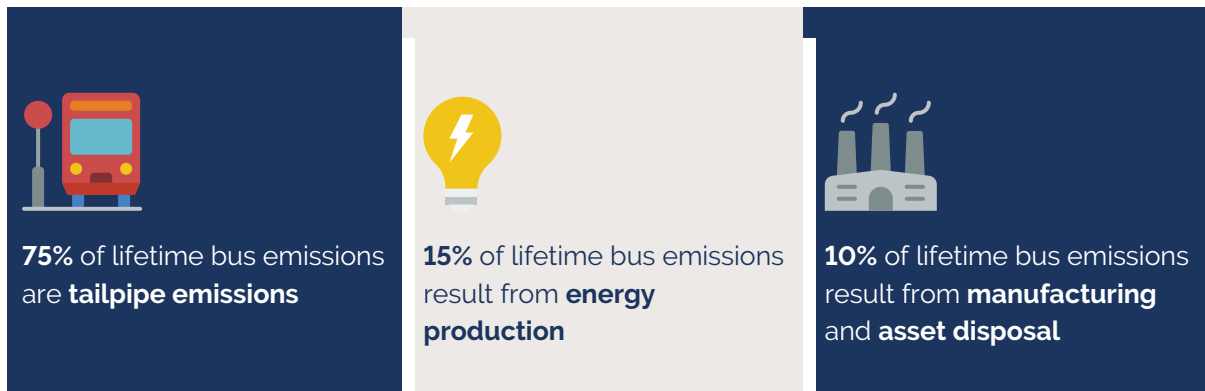
22. How can our determination of maximum Opal fares encourage NSW residents to use more sustainable modes of transport?

## 7.2 What is the cost of reducing public transport emissions?

Although public transport is more sustainable than petrol and diesel car usage, it is not emissions free. Further improvements can be made to the existing public transport network to improve its environmental sustainability. There are significant costs involved with reducing the emissions produced by public transport.

Transport for NSW is in the process of creating Zero Emission Buses. This is the process of transitioning 8,000 diesel and natural gas buses to those using electric batteries. This transition will occur in stages, with Greater Sydney completed by 2035, Outer Metropolitan regions by 2040 and in Regional NSW by 2047.<sup>36</sup> This is an important step in reducing emissions as buses produce the majority of emissions produced by public transport.<sup>37</sup>

Transitioning to zero emissions buses will require replacing the existing diesel and natural gas fleet with electric or hydrogen buses, purchasing 'green' (zero emission) energy and working with industry to reduce emissions from manufacturing and asset disposal.<sup>38</sup>



Source: Transport for NSW, [Zero Emission Bus Transition Strategy](#), p 8.

It is estimated that the transition would save \$1-2 billion in environmental and health costs compared to diesel buses over 30 years.<sup>39</sup>

However, this will require significant capital investment from the NSW Government to transition to Zero Emission Buses. The NSW Government has also established other programs and investments to support environmental sustainability, these can be found in the Future Transport Strategy, available [here](#). These include proposals such as enhancing 30-minute travel catchments and reducing reliance on personal vehicles to access key destinations, incorporating green infrastructure in urban projects and assets, prioritising electric ferries in new procurement and refitting the existing fleet.



Increased investment in public transport can be funded in two different ways, higher fares for passengers or through increased subsidises from the NSW Government. Each option has benefits and trade-offs. Historically, the majority of capital funding for the opal network services has come from government subsidies. This is not unique to NSW and is observed in other jurisdictions as well.

Public transport provides benefits to the individual and to the community. The individual receives the physical benefit of transport, and it is reasonable that they are charged a fare for this service. The community also receives a direct benefit from a well-functioning public transport system; people can go to work, they can take trips for recreation and spend money at local businesses.

We will need to consider how to best account for the different types of costs that will be incurred as public transport emissions are reduced. There will be capital expenditure such as the purchase of new vehicles, though not all future capital expenditure will be targeted at reducing emissions. There will also be operating expenditure such as more sustainable sources of fuel. We will consider how our methodology for calculating maximum fares for Opal services should include these costs.

### Seek Comment



23. How should the cost of creating a more sustainable public transport network be balanced between fares and taxes?

## 7.3 How does sustainability interact with our fare setting objectives?

For this review we will establish fare setting objectives to aid consultation and decision making. These summarise the factors we are required to consider under the *Passenger Transport Act 2014* and the referral from the Minister for Transport. These objectives will also need to consider the impact of the NSW Government's plans to invest in sustainable modes of transport and to encourage greater use of the public transport network.

Some objectives will be supported by the NSW Government's decisions such as encouraging public transport use and maximising the benefits to the community. However, some objectives may be more difficult to achieve, such as supporting a financially sustainable public transport network. We will need to consider how our determination can best balance each of the proposed objectives. It is important that we balance how each of the objectives are considered along with other issues such as sustainability, affordability and equity, community impacts and financial sustainability.

## 8 How do public transport fares promote equity and affordability?

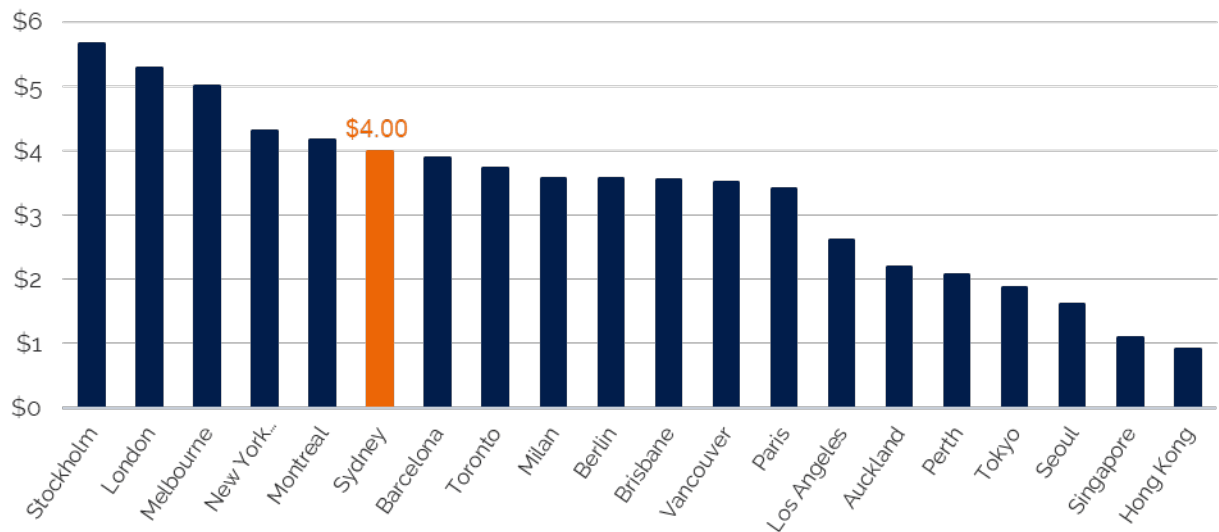
Affordable fares help ensure that people can access the benefits provided by public transport when they need and want to. Fares vary depending on journey factors such as distance travelled, modes used, and time and day of travel. The preferences, needs, and characteristics of transport users also determine the amount of money they spend on public transport. Certain groups, such as students and seniors working less than 20 hours a week are eligible for discounted or concession fares.

### 8.1 How can affordability be defined and measured?

Defining whether transport is 'affordable' or not can involve a number of considerations and measurements. Affordability can be calculated as the percentage of household income that is spent towards public transport needs. This measure of affordability varies according to socio-economic status, type of employment, and public transport use. Other measures could compare fares with average income or wages, consider fare changes over time relative to income and other categories of expenditure. The choice of method used to measure affordability can influence conclusions about affordability. For example, when compared internationally, public transport in Sydney has been described as both 'among the priciest'<sup>40</sup> and 'relatively cheap'<sup>41</sup> depending on the data and methodologies used.

In Figure 8.1, Figure 8.2 and Figure 8.3 below, we compared some transport fare options in the Opal network with a sample of cities worldwide, noting that differences in transport systems, fare structures, and geographies often complicate direct comparisons. There are also many factors that determine how high or low fares are in different countries. For example, some cities (e.g. Hong Kong, Singapore) are very densely populated and can maintain high patronage with relatively shorter distances; others (Sydney, Los Angeles) are spread over large distances and low-density areas. Car usage also varies across countries, with Australia traditionally having a very high proportion of private vehicle travel, while a higher share of travellers use public transport in countries in continental Europe and East Asia. Finally, the purchasing power of each country's currency depends on many economic factors.

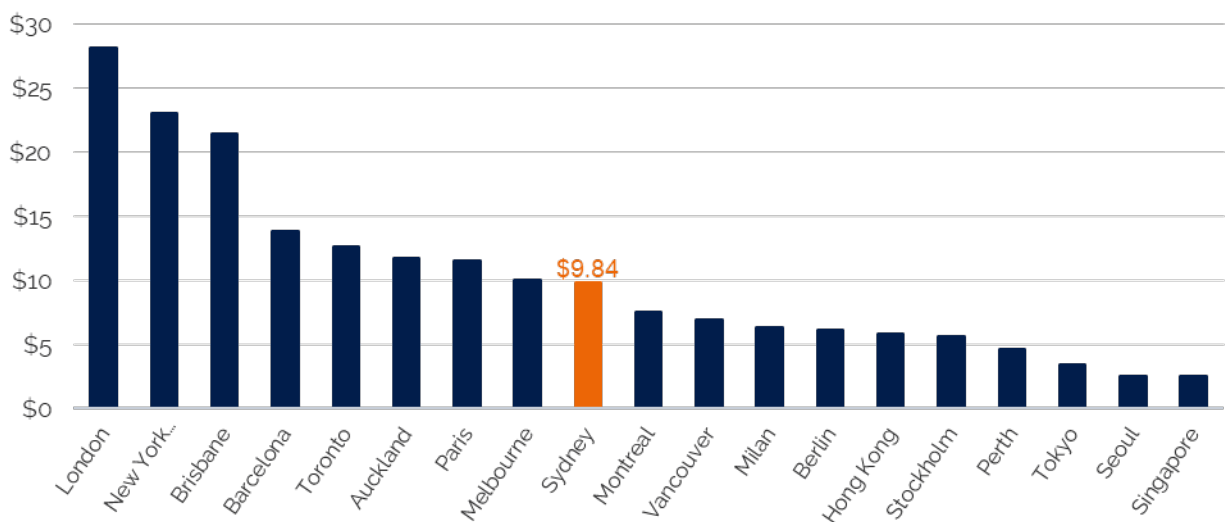
Figure 8.1 Adult fares (shortest available distance) for train/metro systems around the world (AU\$ December 2023)



Note: Depending on fare structure and geography for each city, the shortest available distance was calculated either as the shortest distance band offered (e.g. Opal network 0-10 km), the Zone 1/city limits area fare for zone-based systems (e.g. London, Paris, and Milan subway systems), or the fare charged for a trip between the closest apart stations (e.g. Singapore, Hong Kong).

Sources: Régie Autonome des Transports Parisiens, Transport for London, Metropolitan Transportation Authority, Translink (Queensland), Transports Metropolitans de Barcelona, Toronto Transit Commission, Auckland Transport, Public Transport Victoria, Transport for NSW, Société de transport de Montréal, Azienda Trasporti Milanesi, Translink (British Columbia), Berliner Verkehrsbetriebe, Transperth, MTR Corporation Limited, Tokyo Metro, Land Transport Authority, Seoulmetro

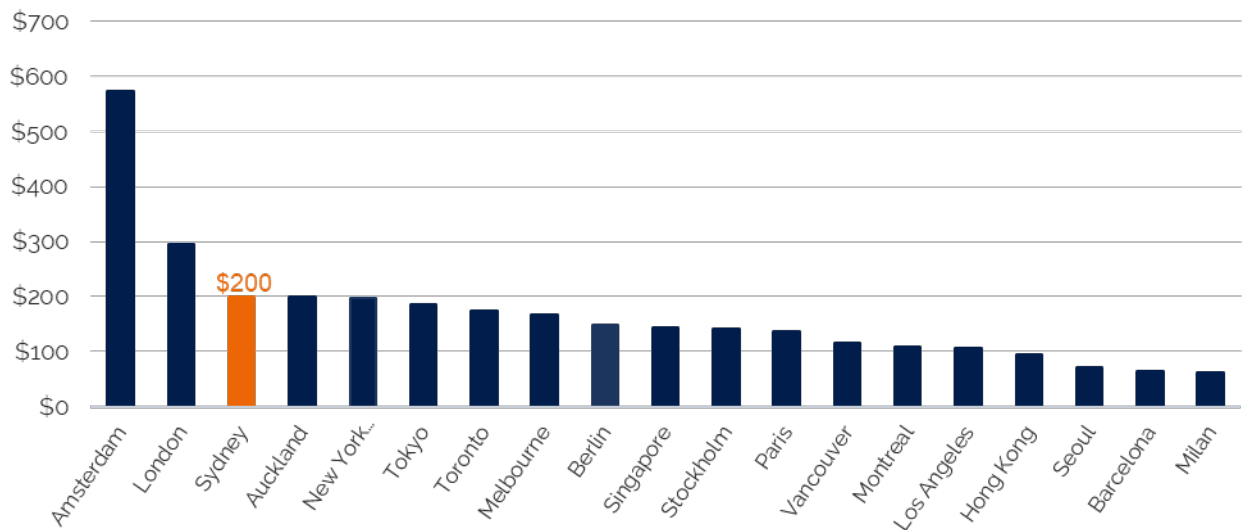
Figure 8.2 Adult fares (longest available distance) for train/metro systems around the world (AU\$ December 2023)



Note: Depending on fare structure and geography for each city, the longest available distance was calculated either as the longest distance band offered (e.g. 65 km+ in the Opal network), the highest number of zones crossed from the city centre outwards (e.g. Milan, Paris, London), or the fare charged for a trip between the farthest apart stations (e.g. New York, Toronto).

Sources: Régie Autonome des Transports Parisiens, Transport for London, Metropolitan Transportation Authority, Translink (Queensland), Transports Metropolitans de Barcelona, Toronto Transit Commission, Auckland Transport, Public Transport Victoria, Transport for NSW, Société de transport de Montréal, Azienda Trasporti Milanesi, Translink (British Columbia), Berliner Verkehrsbetriebe, Transperth, MTR Corporation Limited, Tokyo Metro, Land Transport Authority, Seoulmetro

Figure 8.3 Price of monthly subscription/cap for rail systems around the world (AU\$ December 2023)



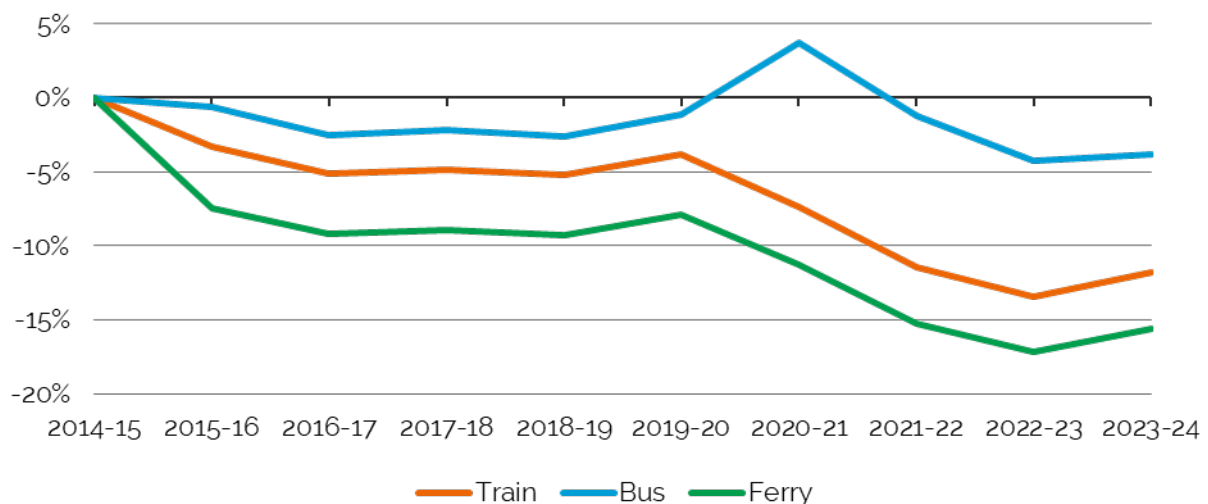
Note: Subscription price, where available, was based on the standard, full price, Adult monthly pass, without concession discounts and without surcharges for long-distance routes. For cities without a monthly pass or monthly cap, the weekly or daily caps have been multiplied accordingly.

Sources: Régie Autonome des Transports Parisiens, Transport for London, Metropolitan Transportation Authority, Translink (Queensland), Transports Metropolitans de Barcelona, Toronto Transit Commission, Auckland Transport, Public Transport Victoria, Transport for NSW, Société de transport de Montréal, Azienda Trasporti Milanesi, Translink (British Columbia), Berliner Verkehrsbetriebe, Transperth, MTR Corporation Limited, Tokyo Metro, Land Transport Authority, Seoulmetro

## 8.2 Are public transport fares affordable for users in NSW?

Public transport fares have increased over the past decade but by less than the maximum allowed under our determinations. When adjusting for inflation, fares have generally been decreasing in real terms. Adult peak-time fares for all modes are lower in 2023-24 than they were in 2014-15.

Figure 8.4 Cumulative change in fares over time from base year, in real terms



Note: Light rail and metro mode fares have been excluded from this chart. The 2020 determination set these fares in line with bus and train fares respectively.

Fare changes are based on a simple average of peak Adult fares across distance bands and do not account for daily caps, weekly caps or any other discounts that would reduce the average fares.

Source: IPART analysis.

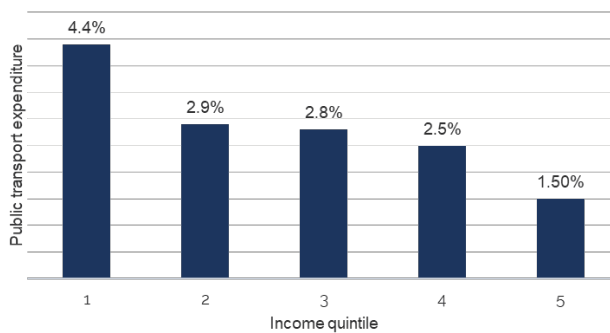
In 2021 the Productivity Commission calculated the weekly transport costs for frequent Opal network commuters<sup>j</sup> at \$50, equal to 6.5% of the weekly national minimum wage and 2.8% of average weekly earnings.<sup>k</sup>

Higher income is associated with higher public transport usage and expenditure. However, the share of income spent on public transport is higher for low-income workers.<sup>42</sup> Analysis by the Productivity Commission show that public transport costs are relatively contained for lower income users. The Productivity Commission also found car travel is also more expensive than public transport for all income groups,<sup>43</sup> including low-income people and that low-income groups take more off-peak trips than higher income ones, and travel by bus more frequently.<sup>44</sup>

The percentage of income spent on public transport differs between groups and travel patterns. Assessments of affordability of fares consider how travel costs compare to incomes and other expenses, across groups.

<sup>j</sup> Users that travel to and from the CBD five times a week from a middle or outer ring suburb and pay full adult fares, would not pay more than the \$50 cap.

<sup>k</sup> This estimate is based on the \$50 weekly cap, which is the maximum a customer can spend in a week on Opal travel. Most customers spend less than the weekly cap.



Public transport expenditure as a share of total weekly expenditure is lower for higher income quintiles

a. For households that spend money on public transport

b. Income quintile 1 is the lowest 20% of earners; income quintile 5 the highest 20%

Source: Productivity Commission, [Public transport pricing research paper](#), December 2021.

### 8.3 Do discounts and concession fares improve equity for people experiencing vulnerability?

#### Concession and subsidised travel

Throughout our determination we will look at fare affordability for all users in NSW, including groups experiencing vulnerability for whom public transport fares might represent a significant cost barrier or financial burden.

The NSW Government offers discounted (concession) fares for certain passenger groups. While IPART does not determine the level and eligibility of concession fares, our referral from the Minister for Transport asks us to consider affordability, accessibility, and cost recovery (among others) when setting maximum fares. The *Passenger Transport Act 2014* allows the Minister to approve a scheme for Government subsidised travel, the level of concession fares and the classes of persons who are entitled to free, concession or subsidised travel. Current government policy sets the concession fare at 50% of the equivalent adult fare.

Concession and discounted fares are a useful tool to address affordability concerns for specific groups, as they ensure transport fare relief goes to those who need it. Improving access to public transport for disadvantaged groups in turn promotes social inclusion and equity and allows people to access key economic, social, and other activities. Many users of public transport depend on it to access these opportunities, as they do not have access to alternative forms of transport. Among these groups are full time students, seniors, and people experiencing financial disadvantage, all of whom may not work full time, hold a driver's licence or own a car. This situation is likely to be exacerbated by the cost-of-living pressures and increased prices for fuel over the 2021-2023 financial years.

Tertiary students, Centrelink customers, apprentices and trainees, pensioners, children, asylum seekers, veterans, and people with disabilities are eligible for Opal concession fares or other discounts. In 2023, 5%<sup>l</sup> of trips on the Opal network were made by concession Opal card holders and a further 4% of trips were taken by Child/Youth Opal card holders. Both groups are entitled to 50% discounts on all fares. Trips taken by Senior/Pensioner card holders accounted for 12% of total trips and are allowed unlimited travel on the Opal network for \$2.50 per day.

In our previous review we also identified Commonwealth Health Care Card holders as a group not currently eligible for concessions who may benefit from extending concession eligibility.

## Other travel discounts

The Opal system includes travel discounts which are available to all user groups regardless of eligibility for concession or subsidised travel. These discounts assist households to manage the total daily or weekly cost of public transport. These include daily and weekly caps as well as discounted weekend rates.

These discounts tend to favour regular users of the network. Weekly travel caps provide commuters with cost protection in a similar way that period passes that were previously available in paper form did.<sup>m</sup> These travel discounts and caps were originally used in an environment where a large proportion of public transport users would regularly travel five days a week and were largely driven by office and full-time working commuters.

In this review we will consider whether these discounts continue to incentivise public transport use in the post COVID-19 environment or whether there are other opportunities to tailor discounts to the current travel patterns.

## Seek Comment

-  24. How much of your weekly expenditure goes towards public transport use?
-  25. How can we measure affordability of public transport fares?
-  26. What measures (like concession/discount arrangements) help you access public transport and/or make public transport more affordable?
-  27. Are there groups that aren't currently eligible for concessions/discounts that would benefit from such arrangements?

<sup>l</sup> This number excludes children and seniors with Opal Gold cards

<sup>m</sup> These included weekly, fortnightly, Quarterly and Yearly tickets, TravelTen bus and Ferry passes, Day passes and My Multi options



## 9 How should we measure the financial sustainability of public transport?

For this review one of our fare setting objectives is to support the financial sustainability of the public transport network. This will help ensure that services continue into the future and that service quality continues to reflect passenger expectations and balances government contributions.

It is important that our determination of maximum Opal fares balances the interest of financial sustainability with the other fare setting objectives. We recognise that the fare setting objectives can compete with each other. We will deliver a determination that we think best balances each of the objectives.

### 9.1 Why is fare revenue important?

Increasing fare revenue improves the financial sustainability of the transport network. Fare revenue is influenced by the level of fares and the demand for services. The demand for services includes the total number of passengers, frequency and distance of their travel. When setting maximum fares and recommending fares, we will estimate the expected fare revenue based on the expected number of trips and journeys taken across the network and take into account the way that fare changes can also change demand. Fare revenue is usually the largest revenue source for transport operators, but we will consider whether there are other sources of revenue that may be applicable to our review such as advertising or leasing. We will also consider the impact of fare evasion and enforcement strategies on revenue and whether this should be accounted for in our methodology.

### 9.2 What are the costs of providing public transport services?

The cost of delivering public transport influences the financial sustainability of the transport network. The services provided and the efficiency of delivering those services determine the cost of public transport.

Like many industries, transport costs can be categorised in different ways. The cost of providing or expanding infrastructure (such as rail lines, or vehicles) does not change with each passenger fare, as the cost is often required at the beginning of a project, years before any passengers use the service. These costs create the overall capacity of the network to transport passengers. Other costs, such as operating and maintenance costs, (e.g. fuel, or cleaning), are regular costs (such as monthly or annually) and can be influenced by the number of passengers and the types of journeys they take. Costs can be mode specific or may be shared across the transport network.

### 9.3 How is public transport funded?

An indicator of the financial sustainability of a public transport network is a measure known as 'cost-recovery'.

There is no universal definition of cost recovery (sometimes referred to as coverage rate) but it will generally be an estimate of the proportion of public transport costs recovered through revenues. This is an indicator of the extent to which the public transport network is reliant on Government contributions to fund costs that are not recovered from fares or other sources.

A high cost-recovery percentage (closer to 100%) indicates minimal reliance on government funding. Typically, in NSW, and in many jurisdictions around the world, cost-recovery for public transport is far less than 100%. This means that a significant proportion of costs are funded from taxpayers through government subsidies.

Taxpayers who do not directly benefit from transport investments still contribute to the costs of the network. This is because public transport services deliver wider economic, health and environmental benefits to the community.<sup>45</sup> However, it is important that the costs are fairly balanced between those who directly benefit from investment into the public transport network and those who pay for it. This will be an important consideration for this review.

Measuring and comparing the cost recovery of public transport networks is not always straightforward. Accounting practices for measuring and classifying costs and revenues differ between operators in different jurisdictions or even between modes within the same transport network. Even over time, accounting practices within an organisation can change. Organisational change or new models of contractual arrangements can make it difficult to compare cost recovery over time where categories of costs and revenue are not consistent.

Table 9.1 outlines some types of revenue and costs that could be included in cost-recovery calculations. A comparison of inputs to the cost recovery across different jurisdictions is also presented in Table 9.2

Table 9.1 Options for establishing revenue and costs to calculate cost-recovery

Types of revenue that could be included	Types of costs that could be included
Ticket sales (Farebox)	Operating costs (i.e. staff, maintenance, overheads, administration)
Fines paid by fare-evaders	Depreciation costs
Reimbursements for concession discounts applied (may be considered as an explicit or implicit subsidy of Adult fares)	Infrastructure costs (i.e. tracks, tunnels, platforms)
Government subsidies (e.g. non-ticket public contributions)	Financial costs return on and off capital
Other transport related revenues (e.g. special transport services, charter services, advertising revenues)	
Other non-transport related revenues (i.e. real estate developments, courier and other logistics services)	

Source: International Association of Public Transport (UITP), A common metric for public transport coverage rate?, April 2016, p 11

Table 9.2 Cost recovery input jurisdictional comparison

	Millennium City Database (UITP)	Comet and Nova (Imperial College UK)	Canadian Urban Transit Association	Verband Deutscher Verkehrsunternehmen (Germany)	Shenzhen (China)	Russia	ESA95 (EU)	ESA2010 IPSAS (EU)
<b>Revenue</b>								
Farebox	✓	✓	✓	✓	✓	✓	✓	✓
Social fare compensations	✓	✗	✓	✓	✗	✓	✓	✓
Other public contributions	✗	✗	Partly	✗	✗	✗	✗	✗
Other transport related revenues	✗	✓	✓	✓	✓	✓	✓	✓
Other non-transport related revenues	✗	✓	✗	✗	✗	✓	✗	✗
<b>Costs</b>								
Operational costs	✓	✓	✓	✓	✓	✓	✓	✓
Depreciation of vehicles and other operational assets	✗	✗	✗	Partly	✗	✓	Partly	✓
Infrastructure costs (tracks, stop access fees, etc)	✗	✗	✗	Partly	✗	✓	✗	✓

Source: International Association of Public Transport (UITP), A common metric for public transport coverage rate?, April 2016, p 11.

We will calculate cost recovery as part of this review for Opal services. In choosing a method, we will consider which costs and revenues to include. This may mean making judgements about:

- using only operating costs or total costs (which could include longer term capital or infrastructure costs and depreciation costs)
- consistency between modes. Cost categories between modes can differ due to operating and contractual arrangements
- how to account for free, subsidised or concession travel. Concession fares, free travel and some other discounts for eligible groups are part of the policy set by the NSW Government. In calculating cost recovery, we could treat the subsidised amount as an explicit subsidy within the revenue or use only the actual revenue received. If actual fare revenue is used, then the cost recovery will appear lower. Alternatively, we could consider that each eligible free or concession trip is subsidised by the government and treat the difference as a revenue stream
- including sources of revenue other than ticket sales, such as advertising, charter services, property leases, fines or other sources.

In our previous review we commissioned the Centre for International Economics to estimate cost recovery for public transport in NSW. Table 9.3 shows the estimated cost recovery for transport modes for 2018-19, including a breakdown of trains into metropolitan and intercity rail.

Table 9.3 2018-19 estimated cost recovery for public transport

Transport mode	Cost recovery
Metropolitan rail	27.1%
Intercity rail	10.8%
Light rail	26.1%
Bus	35.0%
Ferry	41.1%
<b>Overall cost recovery</b>	<b>26.8%</b>

Source: The CIE, [Measuring cost recovery of NSW public transport services](#), February 2020, p 2.

## Seek Comment



28. Is there is an appropriate balance between recovering the cost of public transport through fares or through government subsidies?



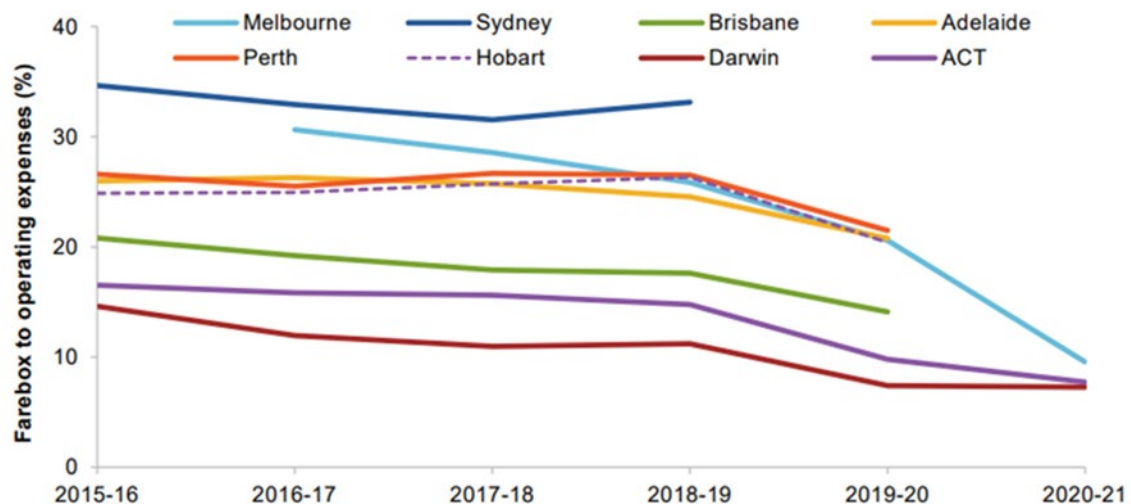
29. What revenue and cost components should be included in a cost recovery calculation?

## 9.4 How has cost recovery changed since COVID-19?

We have not calculated cost-recovery for the Opal network in the years since COVID-19. We know that overall patronage is lower than pre COVID-19 levels. Operating expenditure has likely increased due to long term projects such as new light rail and metro lines commencing since this time, as well as inflationary increases to most operating costs. We expect that our review will likely find that this has resulted in lower levels of cost-recovery.

The Productivity Commission compared cost recovery in Australian jurisdictions from 2015-16 to 2020-21 (with some data missing), as shown in Figure 9.1. Most jurisdictions have experienced declining cost recovery since 2018-19. We expect that the Opal network has experienced a similar decline in cost recovery.

Figure 9.1 Cost recovery in Australian jurisdictions (operating costs)



Note: This is a measure of cost recovery for only operating costs and thus is different to the figures in Table 9.3.

Source: Productivity Commission, [Public transport pricing Research paper](#), December 2021, p 30.

Financial sustainability is an important fare setting objective that we consider when setting maximum Opal fares. As part of our review, we will consider financial sustainability as well as fare affordability, and how fares may incentivise additional public transport use which can increase fare revenue and maximise the benefits to the community.

The ongoing impacts of shifting travel demands present both challenges to revenue but also opportunities where additional capacity may be available in the network.

## 9.5 How does our review promote accountability of costs and efficiency?

We will determine maximum Opal fares for the next four years. Our review also has a number of other beneficial outcomes. Our review promotes transparency and accountability of the costs, cost recovery, productivity and efficiency of the public transport network.

Our review provides stakeholders with information about the cost of running a public transport network and how it is funded, through fares and their taxes. It also helps to promote trust in public services and that public funds are being used efficiently to benefit the community as a whole.

We also may make recommendations about improving the efficiency of the public transport network and supporting passenger outcomes. These recommendations can promote the overall financial sustainability of public transport, cost recovery or social issues such as eligibility for concession fares.

## 10 What is our approach to setting maximum fares?

Traditional price regulation methodologies usually determine the revenue requirements of an organisation by estimating the efficient cost of providing services, allowing for a rate of return and including other costs such as taxation or depreciation. The sum of these cost components (the building blocks) becomes the revenue requirement of the organisation.

The revenue requirement is converted to a price by estimating the demand over the determination period. This type of model creates an incentive for the entity to improve its efficiency and increase demand. It can also incorporate other elements into the price structure to target other objectives.

However, public transport fares cover only a small proportion of the costs of providing services with the remainder covered by taxpayers. We have observed that this model does not improve efficiency in the case of public transport.

Our previous reviews of public transport fares have trialled different methodologies for setting maximum fares. Recent reviews employed different approaches including:

- fare analysis, which involves considering a range of possible fare options that account for capacity and willingness to pay and likely impact on public transport usage
- modelling the socially optimal level of fares.

### 10.1 What are the advantages of a hybrid approach?

We are proposing to use a hybrid approach for this review. That is, we plan to analyse possible fare options as well as update our social optimisation model. We would consider the outcomes of both methodologies in determining maximum fares and making recommendations to the NSW Government. Further information on fare analysis and the social optimisation model are presented in the following sections.

Our Referral asks us to consider the appropriateness of the current methodology for determining maximum Opal fares. We propose to use a hybrid approach because we consider that each methodology has its own advantages. Fare analysis allows stakeholders to provide greater input into priorities for fares and ensures that fares are designed at practical and implementable levels. We also consider it is an appropriate time to update our social optimisation analysis completed in 2016 to understand how these may be impacted by changes in the post COVID-19 environment as well as recent expansions to the network (such as new metro and light rail lines).<sup>n</sup>

A hybrid approach enables us to better consider all the factors we have been asked to address in our review.

<sup>n</sup> We did not rebase the socially optimal fares as part of our 2020 review as it was considered that little time had passed since our omnibus work in 2016.



## 10.2 How will we determine changes to fare options?

The fare analysis approach starts with understanding stakeholder preferences and priorities including capacity and willingness to pay for fare change options and developing sets of fares that incorporate these preferences.

Examples of fare options we could investigate include:



### Mode-specific fares and the Opal transfer discount

Fares are based on how you travel. Light rail and metro fares are currently set at the same level as bus and train fares respectively. Passengers receive a discount when they switch between modes within 60 minutes of the last tap-off as part of one journey.



### Distance bands

Fares are based on the distance between where you tap on and tap off.



### Time of travel discounts

Peak times for train, bus, light rail, and metro services apply from 6:30am to 10am and 3pm to 7pm. Travel outside of peak times is at a 30% discount. Fares do not differ by journey direction or for travel to specific locations (except for airport train stations<sup>o</sup>).



### Daily and weekly caps

Daily and weekly caps apply for Adult, Child/Youth and Concession and Gold Senior/Pensioner Opal cards.



### Concession fares

Concession Opal cards are for eligible tertiary students, Centrelink customers, apprentices and trainees.



### Other fare options

The expected transition to an account-based ticketing system over the upcoming determination period will allow for the introduction of more fare options such as subscription or periodical fare packages.

Source: Transport for NSW, [Opal benefits](#), accessed December 2023; Transport for NSW, [Opal peak and off-peak fares](#), accessed December 2023 and Transport for NSW, [Concession fares](#), accessed December 2023.

We are seeking stakeholder feedback on preferred changes to fare options through this Issues Paper and our Have your say survey. While we have already considered and made recommendations on some of these in the past, we consider that there is merit in reassessing to account for changes in the post COVID-19 environment as well as the expected transition to Opal Next Gen within the upcoming determination period.

We propose to model the impacts of any fare options to assess the impact on affordability, change on fare revenue, costs and community benefits under these options, and assess their performance against the fare setting objectives outlined in section 2.6 and the underlying matters specified in the *Passenger Transport Act 2014* and the referral from the Minister for Transport.

<sup>o</sup> Note that the airport station access fee is not within the scope of this review

The fare options will likely have their own individual strengths and weaknesses. They will meet particular fare setting objectives to different degrees. This analysis will allow us to compare fare options that provide benefits in different ways. We propose to select fares that we consider best balances our review objectives and maximises overall performance.

## Seek Comment



30. How do you prefer paying for using the Opal network, for example, distance based, zones, caps, etc?

## 10.3 How does the social optimisation model calculate optimal fares?

As part of our 2016 review of Opal fares, we developed a social optimisation method to assist with determining public transport fares. This approach aims to calculate socially optimal fares by incorporating all costs and benefits of public transport use and satisfy the fare setting objectives.

When people decide to take a trip by public transport, the public transport system incurs costs that it would otherwise have avoided (i.e. a marginal cost). However, the decision to use public transport means that other people can avoid or reduce certain costs that they would otherwise have had to face, like travel delays because of road congestion, carbon emissions from car use or health effects from air pollution. These are the marginal external benefits of a trip. If all public transport users pay less than their own marginal cost because of these external benefits, there will be increased government subsidy required to fund the public transport network. This subsidy would need to be funded from increased taxation.

Under our social optimisation approach, we establish a function that captures the marginal costs of delivering public transport services, the marginal external costs of avoided private vehicle use, and the marginal external burden of taxation needed to fund public transport deficits. We estimate separate optimal fares for all the public transport modes for peak and off-peak time periods and for a range of common travel distances.

We do not include the costs of owning transport infrastructure such as railway tracks or train stations. This reflects that these investments are primarily made for the purpose of generating agglomeration externalities, and that these costs approximately equal those external benefits.

We propose to use a wide range of data to develop social optimal fares and build on the model used in previous determinations. We will consider how the model can be best updated to reflect new patterns of public transport use after the COVID-19 pandemic. A preliminary outline of the inputs to be used in our model is summarised in Box 10.1 below.

As we progress with our review, we will engage in further consultation to develop our social optimisation model. For example, we plan to form a working group with industry stakeholders and meet regularly to discuss the details of our model.

## Seek Comment



31. Which external benefits of transport should be included in our calculation of optimal fares?



32. Are there any other matters we should include when developing an updated social optimisation model?

## Box 10.1 Inputs for the social optimisation model

### External benefits

The social optimisation model will require input information on the external benefits of public transport and an assessment of the external costs of car travel. We propose to also consider the external costs of public transport including how the increased taxation to fund subsidies to operate public transport results in distortions to the markets on which they are raised.

The results of the model could change significantly based on the benefits we decide to include, the weights we assign to them, and the calculations we use to incorporate them. In previous determinations, we calculated the following:

- Congestion — using the Strategic Travel Model to quantify the relationship between usage of each public transport mode and car travel time in peak and off-peak periods.
- Air pollution — using the Strategic Travel Model to quantify the relationship between usage of each public transport mode and car fuel consumption (a proxy for emissions of CO<sub>2</sub> and chemicals that are harmful to health).
- Accidents — including a marginal external cost for accidents in our model will depend on the correlation between traffic density and the rate of accidents. We will also consider whether or not accident costs are already sufficiently internalised (and thus captured) in decisions other than the use of public transport.
- Active transport — to include an allowance if the relationship between usage of each public transport mode and walking or cycling can be established reliably.
- Social inclusion — we will need to consider whether we can reliably calculate and measure the benefits of social inclusion, and if they are best defined as an externality or as a private benefit to users of transport.

### Marginal costs

We will look at the costs that additional uses of public transport impose on the network. The main source for this analysis is accounting data from Transport of NSW, including both usage and availability measures. We propose to categorise marginal costs on a per journey or total per km basis, and to also adjust for inefficiencies to calculate the marginal efficient cost.

### Demand characteristics

We will look at how users of public transport change their travel behaviour in response to changes in fares, for example by switching between modes of public transport, or deciding to travel by car instead. This includes measures of own price

elasticity for each transport mode and time of day, and cross-price elasticity for each pair of transport modes by time of day and/or distance travelled.

Possible sources for elasticity estimates are the Sydney Strategic Travel Model, or econometric studies using recent Opal data. Since our last determination, demand patterns have changed due to the expansion of flexible working arrangements and new services.

# Appendices

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## A Fare referral

**The Hon Jo Haylen MP**  
Minister for Transport



Ref: BN23/00278

Ms Carmel Donnelly PSM  
Chair  
Independent Pricing and Regulatory Tribunal  
PO Box K35  
Haymarket Post Shop NSW 1240

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Re: Referral of the Opal maximum fares for review

Dear Ms Donnelly,

I write to the Independent Pricing and Regulatory Tribunal (IPART) to refer the task of determining appropriate maximum fares for Opal public transport services until 30 June 2028.

The Premier has approved this referral, as required under section 123 of the *Passenger Transport Act 2014*.

Under section 123(2)(b) of the *Passenger Transport Act 2014*, I have included additional matters for IPART to consider as part of the review, in addition to the matters set out in section 124.

There have been significant changes in the way customers travel since the COVID-19 pandemic. It is appropriate to seek IPART's guidance to ensure that Opal fares are suitable for the new environment.

The inclusion of additional matters will provide IPART an opportunity to provide policy advice on current and emerging issues, to ensure they are considered in determining maximum fares.

I look forward to receiving IPART's determination.

If you would like more information, please contact Mr Aaron Murray by phone on 0140 5834 558 or email [Aaron.Murray@transport.nsw.gov.au](mailto:Aaron.Murray@transport.nsw.gov.au).

Yours sincerely

A handwritten signature in blue ink, appearing to read "Jo Haylen".

Jo Haylen MP  
Minister for Transport

52 Martin Place Sydney NSW 2000  
GPO Box 5341 Sydney NSW 2001

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[nsw.gov.au/ministers](https://nsw.gov.au/ministers)

1



**Passenger Transport Act 2014**  
**Section 123(1)(a)**

**Referral**

I, the Hon. Joanna Elizabeth Haylen MP, Minister for Transport, with the approval of the Hon. Christopher John Minns, MP, NSW Premier, who is responsible for administering the *Independent Pricing and Regulatory Tribunal Act 1992*, refer, under section 123(1)(a) of the *Passenger Transport Act 2014*, Opal Services to the Independent Pricing and Regulatory Tribunal (IPART) for determination of the appropriate maximum fares for Opal Services.

In addition to the matters contained in section 124 of the *Passenger Transport Act 2014*, when making investigations for the purposes of its report on its determination, IPART is required, under section 123(2)(b) of the *Passenger Transport Act 2014*, to consider the following matters:

1. The Opal mode and distance based fare structure.
2. Incorporating new services into the Opal fare structure.
3. Managing demand and optimising the efficiency of transport networks.
4. Ensuring affordability and accessibility for disadvantaged groups.
5. Cost recovery in the post COVID-19 environment.
6. The appropriateness of the current methodology for determining maximum Opal fares.

For the purposes of this referral, Opal Services means the following services:

- Train services operated by Sydney Trains under the authority of a passenger service contract with Transport for NSW
- Train services operated by NSW Trains operated under the business name NSW TrainLink Intercity under the authority of a passenger service contract with Transport for NSW
- Train services operated by Sydney Metro under the authority of a passenger service contract with Transport for NSW
- Sydney Ferries network services operating under the authority of a passenger service contract with Transport for NSW and ferry services operating between Manly and Circular Quay under the authority of a passenger service contract with Transport for NSW
- Buses, light rail and ferry services operated by Newcastle Transport under the authority of a passenger service contract with Transport for NSW
- Bus services operated under the authority of a Sydney Metropolitan Bus Service Contract with Transport for NSW
- Bus services operated under the authority of an Outer Sydney Metropolitan Bus Service Contract with Transport for NSW

- Light rail services operated by Sydney Light Rail, including Inner West and CBD and South East light rail, under the authority of a passenger service contract with Transport for NSW
- Light rail services in Parramatta, under the authority of a passenger service contract with Transport for NSW
- On demand services in metro and outer metropolitan areas operated under the authority of a passenger service contract with Transport for NSW

For Opal Services listed above, the maximum fares are those payable using an Opal card, including Opal pay, and contactless transport payments.

IPART is to report to the Minister for Transport on its determination as soon as practicable, but no later than 12 months of receipt of this referral. A draft report and determination should also be publicly released during the course of the review to ensure adequate public consultation.


IPART is to determine maximum fares for Opal Services for the period to 30 June 2028. The determination should remain in force until it is varied or replaced.

Signed:   
The Hon. Joanna Elizabeth Haylen, MP  
Minister for Transport

Date: 13-7-23

#### Approval of Referral

I, the Hon. Christopher John Minns, MP, NSW Premier, as the Minister administering the *Independent Pricing and Regulatory Tribunal Act 1992*, approve this referral under section 123(1) of the *Independent Pricing and Regulatory Tribunal Act 1992*.

Signed:   
The Hon. Christopher John Minns, MP  
NSW Premier

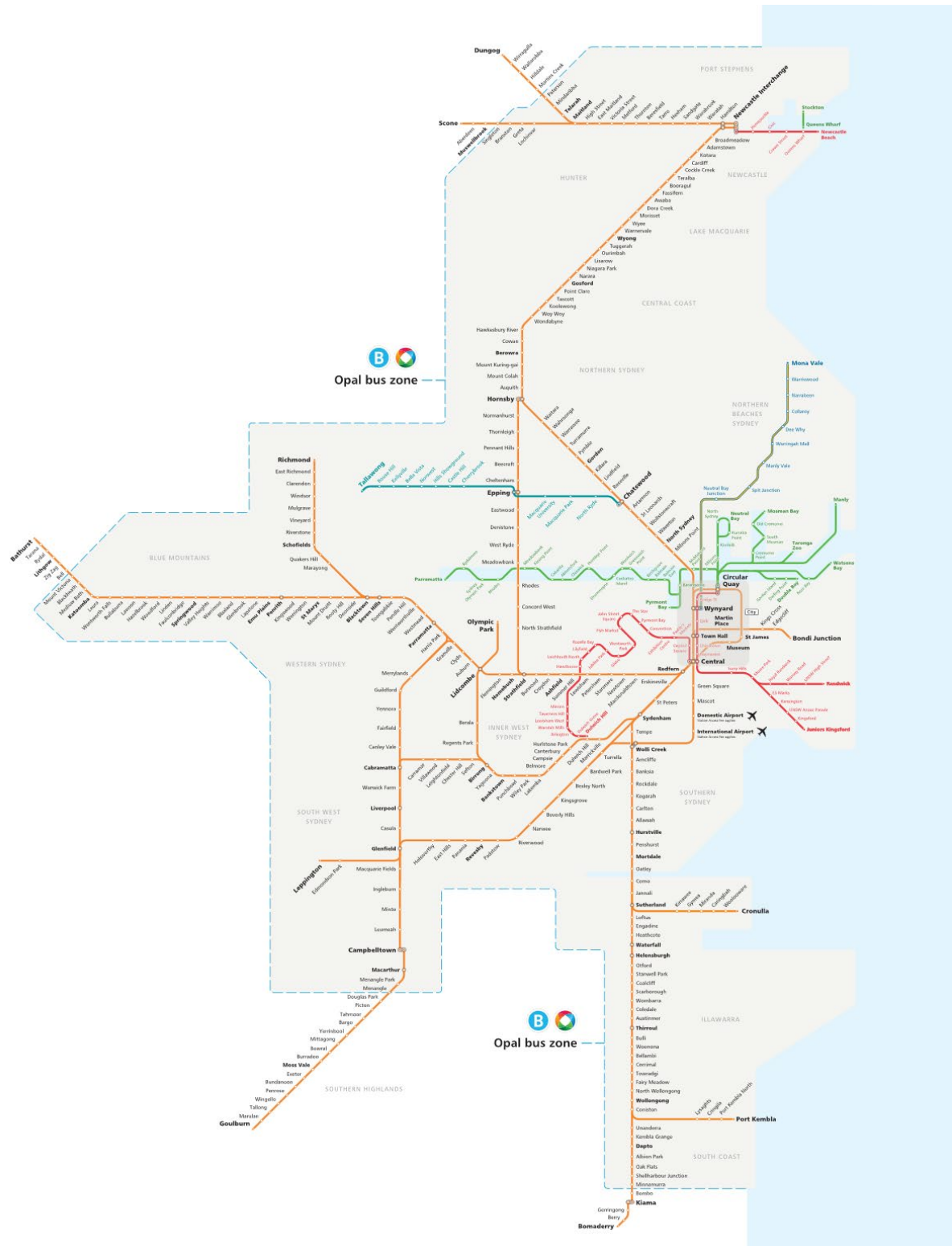
Date: 5/9/23

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## B Opal network area



Note: Map current as at January 2024.

## C Legislative requirements

Section 124 of the *Passenger Transport Act 2014*

### 124 IPART investigations and determinations

1. IPART is to conduct investigations and report to the Minister on the appropriate maximum fares if a referral is made under this Part.
2. IPART may report to the Minister on any matter it considers relevant that arises from an investigation under this Part.
3. IPART is to consider the following matters in making a determination or recommendation under this Part:
  - a. the cost of providing the services,
  - b. the need for greater efficiency in the supply of services so as to reduce costs for the benefit of consumers and taxpayers,
  - c. the protection of consumers from abuses of monopoly power in terms of prices, pricing policies and standards of service,
  - d. the social impact of the determination or recommendation,
  - e. the impact of the determination or recommendation on the use of the public passenger transport network and the need to increase the proportion of travel undertaken by sustainable modes such as public transport,
  - f. standards of quality, reliability and safety of the services (whether those standards are specified by legislation, agreement or otherwise),
  - g. the effect of the determination or recommendation on the level of Government funding,
  - h. any matter specified in the referral to IPART,
  - i. any other matter IPART considers relevant.
4. IPART must indicate what regard it has had to the matters specified in this section in any report of a determination or recommendation under this Part.
5. If IPART makes a determination or recommendation to increase the maximum fare for a service provided by a corporation constituted under the *Transport Administration Act 1988* or under a passenger service contract that provides (however expressed) for the payment of fare revenue to TfNSW, IPART is required to assess and report on the likely annual cost to the Consolidated Fund if the fare were not increased to the maximum permitted and compensation were paid to the corporation or TfNSW for the revenue foregone by an appropriation from the Consolidated Fund.

## D How our objectives relate to the matters we are required to consider

Review objective	Matters we are required to consider under the <i>Passenger Transport Act 2014</i> and the Referral for the review
Fare structures are simple and flexible	<ul style="list-style-type: none"> <li>the Opal mode and distance-based fare structure</li> <li>incorporating new services into the Opal fare structure</li> <li>the appropriateness of the current methodology for determining maximum Opal fares.</li> </ul>
Fares support better travel options	<ul style="list-style-type: none"> <li>managing demand and optimising the efficiency of transport networks</li> <li>standards of quality, reliability and safety of the services (whether those standards are specified by legislation, agreement or otherwise).</li> </ul>
Fares ensure that public transport is accessible	<ul style="list-style-type: none"> <li>ensuring affordability and accessibility for disadvantaged groups.</li> </ul>
Fares maximise benefits to the community	<ul style="list-style-type: none"> <li>the social impact of the determination or recommendation.</li> </ul>
Fares are set to support the financial sustainability of the public transport network	<ul style="list-style-type: none"> <li>cost recovery in the post COVID-19 environment</li> <li>the cost of providing the services</li> <li>the need for greater efficiency in the supply of services so as to reduce costs for the benefit of consumers and taxpayers</li> <li>the effect of the determination or recommendation on the level of Government funding.</li> </ul>
Fares create value for customers	<ul style="list-style-type: none"> <li>the protection of consumers from abuses of monopoly power in terms of prices, pricing policies and standards of service</li> <li>the impact of the determination or recommendation on the use of the public passenger transport network and the need to increase the proportion of travel undertaken by sustainable modes such as public transport.</li> </ul>

## E Glossary

Term	Description
Account-based technology	Account-based ticketing technology where trip information is sent and held by a centralised database rather than stored on a travel smartcard (e.g. the Opal card) itself.
Active transport benefit	The health benefits of the greater physical activity (e.g. walking, cycling) associated with taking public transport instead of using private vehicles.
Agglomeration	The efficiency achieved when businesses and activities are clustered together in a single location like a CBD.
Concession fare	Discounted fare offered to eligible categories of travellers (like tertiary students, and Centrelink customers). Most concession fares are set at 50% of the full Adult fare.
Determination	The determination is the legal instrument issued by IPART under the <i>Passenger Transport Act 2014</i> in which the maximum appropriate fares are set.
Externality	The external benefits or costs of public transport use (or in general, of any economic activity or transaction) that impact people other than the user of public transport.
Fare (distance) band	Travel journey distance range to which a specific fare applies (for example, \$4 fares for train journeys from 0 to 10 km in length).
Fare package analysis	Methodology used to determine the impact of potential fare options on our fare setting objectives.
Fare setting objectives	A set of objectives that summarise the factors IPART is required to consider when setting maximum fares under the <i>Passenger Transport Act 2014</i> and the Minister's referral.
Financial sustainability	A fare setting objective that considers the revenue of the public transport system in comparison to the cost.
Gold Seniors/Pensioner Opal card	A type of Opal card available to eligible seniors (aged 60 or over and working less than 20 hours a week), pensioners, asylum seekers and Veterans. The Gold card entitles holders to Concession discounts (50% of the Adult fare) and to \$2.50 daily caps.
Mode	Type of transport being used. In NSW, the modes are train, bus, light rail, ferry, metro and on-demand services.
Off-peak	Users who travel during off-peak hours get a 30% discount on their fare. Off-peak hours are outside the morning (6:30-10:00am) and evening (3:00-7:00pm) peak times.
On-demand services	Services offered by Transport for NSW in certain areas to cover gaps between existing transport hubs. Fares and payments for on-demand services are administered through the Opal system.
Referral	Referral from the Minister for Transport requesting IPART to determine maximum fares for specified transport services.
Social optimisation model	IPART approach to calculate socially optimal fares (i.e. fares that maximise the level of welfare to society) by incorporating all costs and benefits of public transport use and satisfy the fare setting objectives.
TfNSW	Transport for NSW



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- <sup>8</sup> The CIE, [Measuring cost recovery of NSW public transport services](#), February 2020, p 2.
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