

Independent Pricing and Regulatory Tribunal
New South Wales

Review of fares for private ferry services

**Maximum fares for private ferry services from
January 2018 to December 2021**



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Invitation for submissions

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

Submissions are due by 27 October 2017

We would prefer to receive them electronically via our online submission form <www.ipart.nsw.gov.au/Home/Consumer_Information/Lodge_a_submission>.

You can also send comments by mail to:

Review of maximum fares for private Ferries
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1 Executive summary

The Independent Pricing and Regulatory Tribunal of New South Wales (IPART) is reviewing the maximum fares for seven private ferry operators that provide regular passenger ferry services under contract to Transport for NSW (TfNSW) in the Sydney, Central Coast and North Coast areas of NSW.

The Minister for Transport has asked IPART to determine maximum fares for four years from 1 January 2018 to 31 December 2021. Operators may charge less than the determined maximum fare, if they wish.

This report explains our draft decisions and the approach we took to make these decisions. We invite submissions from all interested parties, which we will consider before finalising our decisions and our report in December 2017. The new maximum fares will apply from 1 January 2018.

1.1 Overview of our draft decision

Under our draft decision maximum fares for private ferry services are set out in Table 1.1.

Table 1.1 Draft decision on maximum fares for private ferry services (including GST, including inflation)

Operator	Current max fare	2018	2019	2020	2021
Brooklyn Ferry Service	\$7.30	\$7.60	\$8.00	\$8.40	\$8.80
Central Coast Ferries	\$7.80	\$8.00	ΔCPI_t	ΔCPI_t	ΔCPI_t
Church Point Ferry Service	\$8.30	\$8.70	\$9.00	\$9.40	\$9.70
Clarence River Ferries	\$8.30	\$8.60	\$8.90	\$9.20	\$9.50
Cronulla and National Park Ferry Service	\$6.40	\$6.40	\$6.40	\$6.40	\$6.40
Matilda Cruises – Circular Quay to Darling Harbour	\$7.40	\$7.60	ΔCPI_t	ΔCPI_t	ΔCPI_t
Matilda Cruises – Circular Quay to Lane Cove	\$7.40	\$7.60	ΔCPI_t	ΔCPI_t	ΔCPI_t
Palm Beach Ferries – Palm Beach to Mackerel Beach and the Basin	\$8.10	\$8.10	\$8.10	\$8.10	\$8.10
Palm Beach Ferries – Palm Beach to Ettalong and Wagstaffe	\$11.60	\$11.60	\$11.60	\$11.60	\$11.60

For the four years from 1 January 2018 to 31 December 2021, the maximum fares for private ferry services would change as follows:

- ▼ fares for Brooklyn Ferry Service, Church Point Ferry Service and Clarence River Ferries **increase** by 30 to 40 cents each year
- ▼ fares for Central Coast Ferries and Matilda Cruises **increase** by the change in the Consumer Price Index (CPI) each year, and
- ▼ fares for Cronulla and National Park Ferry Service and Palm Beach Ferries **do not change** from the 2017 levels.

It is important to note that we determine a maximum fare. Ferry operators can choose to set their fare below the maximum fare, and may do so to compete with other forms of transport. In our view, ferry operators are in the best position to decide whether to set their fares below the maximum.

1.2 How we made our draft decision

We first assessed the level of competition on the routes covered by each private ferry operator. The private ferry businesses service different routes, and the level of competition differs by route. We then invited all ferry operators to submit a pricing proposal for the period from 2018 to 2021. We received pricing proposals from all operators except for Clarence River Ferries.

Central Coast Ferries and Matilda Cruises' proposed fares are reasonable

We found that Central Coast Ferries and Matilda Cruises face a high level of competition from other ferry services and/or other modes of transport compared to the other private ferry operators. Hence we adopted a light handed approach for these operators by inviting them to propose maximum fares without providing cost information. We did not review their costs to determine efficient fares as fares set by the competitive market are likely to be a better estimate of efficient fares.

These two operators sought to increase their current maximum fares by the change in the CPI in each of the four years from 2018 to 2021 (ie, no change in real terms). For several years, Matilda Cruises have been charging below the maximum fare due to competition from other ferry operators or modes of transport. Central Coast Ferries charged below the maximum fare for two years. From July 2017, it increased its fare to the maximum. We agree that their proposals to keep fares constant in real terms are reasonable and our draft decision is to **accept** their pricing proposals.

For the remaining operators we assessed proposed fares by analysing efficient costs

For the remaining five operators who face little or no competition, we analysed the efficient costs of providing their ferry services. We engaged an external consultant, The CIE, to provide advice on the efficient costs of providing private ferry services. We then estimated the fares that would be required to recover the efficient costs less any government subsidy payment based on patronage forecasts (ie, efficient fares).

Once we estimated efficient fares, we applied the following decision rule to decide whether or not to accept pricing proposals:

- ▼ If proposed fares are less than or equal to efficient fares, our draft decision is to **accept** the proposed fares.
- ▼ If proposed fares are greater than efficient fares, our draft decision is **not to accept** the proposed fares. Instead:
 - If current maximum fare is below efficient fares, our draft decision is to **increase** the current maximum fare to the efficient fare.
 - If current maximum fare is higher than efficient fares, our draft decision is to **freeze** the current maximum fare in nominal terms.

In deciding to adopt this decision rule, we have had regard to the matters specified in the Act and the Minister’s referral as outlined in Chapter 2.

We consider that this is reasonable as it ensures passengers pay prices that reflect the efficient costs of providing private ferry services, and enables ferry operators to sustain their business over the long term by allowing them to recover the efficient costs. By accepting proposed fares as long as they are below the efficient levels, our decision rule recognises that ferry operators know their market best and are in the best position to decide an appropriate fare level.

Brooklyn Ferry Service and Church Point Ferry Service proposed fares are reasonable

Our draft decision is to **accept** Brooklyn Ferry Service (Brooklyn Ferries) and Church Point Ferry Service (Church Point Ferries)’s pricing proposals. The proposed annual increases range from 30 cents to 40 cents each year. We consider that this is a reasonable transition towards the efficient fares and avoids a large increase in fares in any one year for customers.

Cronulla and National Park Service and Palm Beach Ferry Service fares would not change

For Cronulla and National Park Service (Cronulla Ferries) and Palm Beach Ferries, our draft decision is **not to accept** their pricing proposals and to **freeze** current maximum fares in nominal terms for the next four years.

Although Cronulla Ferries’ efficient fares have increased slightly (on average) since our last review due to higher forecast operating costs, its current and proposed fares continue to be above the efficient fares. Cronulla Ferries’ fares have reduced by 6% in real terms as fares have been frozen since January 2014. Continuing to freeze Cronulla Ferries’ fares for the next four years would reduce fares by 14% in real terms (taking into account the impact of inflation). We did consider reducing maximum fares (in nominal terms) so that they move closer to the efficient levels. However, this is likely to have a financial impact on Cronulla Ferries. We are seeking stakeholder feedback on whether we should reduce the maximum fares rather than freezing fares to transition them to the efficient levels over the next four years.

Palm Beach Ferries’ maximum fares were set at or very close to the efficient levels in our previous reviews. Palm Beach Ferries recently undertook a fleet restructure involving replacement and reallocation of vessels. The fleet restructure means the efficiency of Palm Beach Ferries’ operations is likely to improve and has resulted in a substantial reduction in capital costs. Also, patronage has increased since the last review. The combined effect is that Palm Beach Ferries has a lower total efficient cost to be recovered from higher patronage, resulting in a lower efficient fare per passenger.

Given the substantial difference between Palm Beach Ferries' efficient fares and the current and proposed fares, we considered reducing maximum fares in nominal terms. However, our draft decision is to leave the current maximum fares unchanged so Palm Beach Ferries can receive the benefits of efficiency saving resulting from the fleet restructure for the next four years. This is consistent with our approach for other regulated utilities.

Clarence River Ferries fares would increase by 30 cents each year

As Clarence River Ferries did not submit a pricing proposal, we estimated efficient fares based on The CIE's advice on the efficient costs of providing the ferry service. We found that Clarence River Ferries' current maximum fare is well below our estimated efficient fares. Based on our decision rule discussed above, our draft decision is to **increase** its maximum fare by 30 cents each year. While a 30 cents increase would bring its maximum fares closer to the efficient fares, there would still be a substantial difference between the efficient fares and the maximum fares. We are seeking stakeholder feedback on whether we should increase Clarence River Ferries' maximum fares by more than 30 cents.

We will set maximum fares for a single adult ticket

Consistent with our approach in the previous private ferries reviews, our draft decision is to determine the maximum fares for a single adult fare.

Several private ferry operators offer discounted multi-trip tickets. Our approach for estimating efficient fares therefore takes account of both discounted and non-discounted fares, and calculates the efficient fare that allows an operator to earn enough revenue to recover the passengers' share of total efficient costs.

If the availability of discounted tickets increases patronage, the non-discounted fare would be lower as more of the total efficient costs would be recovered from those travelling under discounted tickets, all else being equal. However, if the availability of discounted fares does not increase patronage, the non-discounted fare would need to be higher for the operator to recover total efficient costs.

Private ferry operators are commercial businesses with an incentive to be efficient and profitable. Private ferry operators earn revenue from ticket sales, and operators make discounted tickets available if they judge it would increase the profitability of their businesses. Hence we consider it appropriate for operators to decide the availability and the price of multi-trip tickets.

Maximum fares would be adjusted if fuel costs differ materially from forecast costs

Private ferry operators are typically small businesses with limited capacity to hedge against volatility in fuel costs. As our review will determine fares for the next four years, we considered it appropriate to include a mechanism to manage the risk of a material deviation between our forecast and actual fuel costs over this period. This would allow maximum fares for all ferry operators to be adjusted up or down if fuel costs increase or decrease by more than 20%. The materiality threshold of $\pm 20\%$ is higher than that proposed in the Issues Paper (ie, $\pm 10\%$). Chapter 7 provides further details.

1.3 How you can have a say on this draft report

We are seeking written submissions on this draft report. Submissions are due by 27 October 2017. Late submissions may not be accepted. More information on how to make a submission can be found on page iii of this Draft Report. We will hold a public hearing on 23 October at which stakeholders will be able to provide comments on our draft decision. More information on our public hearing will be available on our website (www.ipart.nsw.gov.au).

We will take into account stakeholder submissions and updated market information in making our final decision. We will provide our Final Report and Determination to the Minister for Transport and Infrastructure in mid-December.

1.4 List of draft decision

- 1 That IPART accepts fares proposed by Central Coast Ferries and Matilda Cruises. 24
 - The maximum fares for Central Coast Ferries and Matilda Cruises would increase annually by the change in the Consumer Price Index (CPI) for the four years from January 2018 to December 2021. 24
 - Maximum fares for Central Coast Ferries would be \$8.00 in 2018 24
 - Maximum fares for Matilda Cruises would be \$7.60 in 2018 24
- 2 That IPART accepts fares proposed by Brooklyn Ferry Service and Church Point Ferry Service. 25
 - Brooklyn Ferry Service's maximum fares would be \$7.60 from January 2018, \$8.00 from January 2019, \$8.40 from January 2020 and \$8.80 from January 2021. 25
 - Church Point Ferry Service's maximum fares would be \$8.70 from January 2018, \$9.00 from January 2019, \$9.40 from January 2020 and \$9.70 from January 2021. 25
- 3 That IPART does not accept fares proposed by Cronulla and National Park Ferry Service and Palm Beach Ferry Service. 27
 - Cronulla and National Park Ferry Service's maximum fares would be \$6.40 for the four years from January 2018 to December 2021. 27
 - The maximum fares for Palm Beach Ferry Service's Ettalong route would be \$8.10 for the four years from January 2018 to December 2021. 27
 - The maximum fares for Palm Beach Ferry Service's Mackerel route would be \$11.60 for the four years from January 2018 to December 2021. 28
- 4 That Clarence River Ferries' maximum fares increase by 30 cents each year for the period from 2018 to 2021 28
 - maximum fares would be \$8.60 from January 2018, \$8.90 from January 2019, \$9.20 from January 2020 and \$9.50 from January 2021. 28

5	That if fuel costs changed (increased or decreased) by more than 20% in a year, then maximum fares for the following year would increase or decrease by the amount calculated as follows:	30
	$\Delta \text{MaxFare}_{t+1,i} = \% \text{ of fuel cost}_{t,i} * \Delta \text{Fuel cost}_t \text{ in excess of } \pm 20\%$, where	30
	- $\Delta \text{MaxFare}_{t+1,i}$ is the percentage change to be applied to the maximum fare for a ferry operator i in year t	30
	- $\% \text{ of fuel cost}_{t,i}$ is the proportion of fuel in the total operating cost for a ferry operator i in year t	30
	- $\Delta \text{Fuel cost}_t$ is the percentage change between the average fuel price in year t and the average fuel price in year $t-1$. To calculate “ $\Delta \text{Fuel cost}_t$ in excess of $\pm 20\%$ ”, if $\Delta \text{Fuel cost}_t$ is a positive number, 0.2 will be subtracted from that number, and if it is a negative number, 0.2 will be added to that number.	30

1.5 How this report is structured

This report provides more detail on this review and our draft decision:

- ▼ Chapter 2 explains our role in making determination for private ferry fares and our process for conducting this review, and provides our response to issues raised in submissions.
- ▼ Chapter 3 provides an overview of the approach for this review.
- ▼ Chapter 4 discusses our assessment of competition on the routes serviced by ferry operators.
- ▼ Chapter 5 summarises pricing proposals submitted by ferry operators.
- ▼ Chapter 6 explains how we reached our draft decision including our approach for assessing ferry operators’ pricing proposals.
- ▼ Chapter 7 explains the fuel cost adjustment mechanism.
- ▼ Chapter 8 discusses other factors we considered in making our draft decisions, including their impact on stakeholders.
- ▼ Appendices A to E contain our terms of reference, draft determination and supporting information including how we estimated efficient fares using the building block model.

2 Context and process for the review

As Chapter 1 noted, this year IPART is required to determine the maximum fares for the seven private ferry operators for the four years from 1 January 2018 to 31 December 2021. The Final Report and Determination on the maximum fares are to be provided to the Minister for Transport and Infrastructure. After IPART determines the maximum fares, TfNSW makes a fare order setting out the maximum fares that the seven ferry operators can charge. When TfNSW makes such an order, the fares set out in that order cannot exceed the maximum IPART determined fares and must follow the IPART maximum fares methodology.

Our review does not cover fares for Sydney and Stockton Ferry services. IPART determines fares for both these services as part of our Opal fares review. Also, we did not review the discount applied to concession tickets or the cost or availability of the Pensioner Excursion Ticket (PET) and the Gold Opal card as these are matters for the NSW Government.

This chapter outlines the matters we considered in conducting the review. It also sets out the current maximum fares and provides our response to the issues raised in submissions to our Issues Paper released in June 2017.

2.1 Matters we consider in undertaking the review

The review is undertaken in response to a referral from the Minister of Transport and Infrastructure under the *Passenger Transport Act 2014* which requires IPART to review and determine the maximum fares for the private ferry services for four years from 1 January 2018 to 31 December 2021 (Appendix A). In addition to any other matters we consider relevant, the referral specifies the factors that we must consider in undertaking this review. These include:

- ▼ the cost of providing the services
- ▼ the need for greater efficiency in the supply of services so as to reduce costs for the benefit of consumers and taxpayers
- ▼ the protection of consumers from abuses of monopoly power in terms of prices, pricing policies and standards of service
- ▼ the social impact of the determination or recommendation
- ▼ 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
- ▼ standards of quality, reliability and safety of the services (whether those standards are specified by legislation, agreement or otherwise), and
- ▼ the effect of the determination or recommendation on the level of Government funding.

We also had regard to the list of factors we are required to consider under section 15 of the IPART Act in making our draft determination for private ferry fares (see Appendix B).

2.2 Current maximum fares

Table 2.1 lists the current maximum fares for each of the private ferry services covered by this review. Operators may charge less than the determined maximum fare, and Central Coast Ferries and Matilda Cruises currently do.

Table 2.1 Private ferry services covered by IPART's review

Operator	Routes	Current maximum fare
Brooklyn Ferry Service	Brooklyn to Dangar Island	\$7.30
Central Coast Ferries	Woy Woy to Empire Bay	\$7.80
Church Point Ferry Service	Scotland Island and western foreshore of Pittwater	\$8.30
Clarence River Ferries	Iluka to Yamba	\$8.30
Cronulla and National Park Ferry Service	Cronulla to Bundeena	\$6.40
Matilda Cruises ^a	Circular Quay to Darling Harbour	\$7.40
	Circular Quay to Lane Cove	\$7.40
Palm Beach Ferries	Palm Beach to Mackerel Beach and the Basin	\$8.10
	Palm Beach to Ettalong and Wagstaffe	\$11.60

^a Part of the Captain Cook Cruises & SeaLink Travel Group

Source: IPART, Review of maximum fares for private ferry services in 2017, November 2016, p 2.

2.3 Our response to matters raised in submissions

We received seven submissions to our Issues Paper from stakeholders including Brooklyn Ferries, Dangar Island League and five individuals. We have summarised the main themes raised in these submissions and our response to these issues.

External benefits should include a broader range of benefits of private ferry service

In response to our Issues Paper, Brooklyn Ferries submitted that our external benefit assessment focuses narrowly on road congestion with no recognition of the pollution created by private vessel transport. It also commented that our assessment also excludes social and community benefits provided by private ferry services such as providing safe transport over water for offshore residents and access to day trippers and holiday makers, keeping net wealth of the 'community' through high property values compared to other areas where ferry services are not provided.¹

¹ Brooklyn Ferry Service submission to the Issues Paper, August 2017, p4; pp 8-9.

Brooklyn Ferries further commented that we should consider external benefits that private ferry services provide to the community that they service, not just the macro-level definition of 'community' adopted in IPART's external benefits analysis.²

The submission from Dangar Island League also noted the benefit that ferries provide to local communities. It submitted that our external benefits assessment does not take into account:

- ▼ avoided impacts of inefficient commuter boats as Brooklyn Ferries replaces what would be a very large number of passenger trips by private boats carrying one to two passengers
- ▼ the significant financial and environmental costs associated with upgrading the capacity of the port given very limited mooring opportunities in the Brooklyn Port
- ▼ social benefits by ameliorating the potential for social isolation of the island's residents by providing services to those less mobile or unable to utilise small boats, and
- ▼ avoided productivity losses had ferry service not been available to commuters during inclement weather as the ferry is the only mode of transport available to most residents during such time.³

Our assessment involved identifying ferry services where there are likely to be road congestion benefits as this is the biggest component of external benefits. As Brooklyn Ferries and Church Point Ferries provide a service to islands, we do not consider there would be material external benefits (avoided road congestion) in their service areas. In addition, the Clarence River Ferries is located on the north coast of NSW where there is unlikely to be substantial road congestion. However, there are likely to be some external benefits (avoided road congestion) associated with the Palm Beach Ferries (Ettalong), Cronulla Ferries and Central Coast Ferries services.

Our estimates of external benefits already include other external benefits such as avoided car accidents (ie, safety benefits), avoided air pollution and greenhouse gas pollution, and external health benefits (through walking or cycling to and from public transport) which arise when people use public transport instead of using their own private vehicle.

We calculated the external benefits of avoided air and greenhouse gas pollution specifically for ferry service based on the avoided cost of air pollution and greenhouse gas emissions generated by Sydney Ferries' passenger ferries. For other external benefits such as avoided car accidents and health benefits for ferry services we measured based on outputs for train services and car. The estimated value of these external benefits was very small relative to that of avoided road congestion.⁴

External benefits would also include avoided congestion (at the wharf and on the water), reduced boat moorings and avoided private boating incidents associated with private ferry services. To estimate how much private boat use is avoided and thus congestion and accidents on the water, we need to estimate how many people currently using private ferry services would choose to use private boats if private ferry services were not available, and what impact this additional private use would have on the travel times of existing private

² Ibid, p 8.

³ Dangar Island League submission to the Issues Paper, August 2017, p 1.

⁴ IPART, *Review of external benefits – Draft Report*, December 2014, p 6.

boat users and boating incidents. If the private ferry services were not provided it is not clear whether users would substitute travel by private boat, water taxi, boat ride share or not travel at all. If journeys would be replaced by private vessels the impacts on increased water incidents and wharf congestion would need to be estimated.

It is only the uninsured component of water incidents – vessel damage and health costs that are relevant for estimating external benefits. We estimate that the number of boating incidents in private ferry operators' service areas is likely to be small inferring from the 2015-16 boating incident statistics in NSW. In 2015-16 there were 22 incidents in total involving a (recreational) personal watercraft, five serious injury incidents and zero fatality incidents in NSW. In addition, the overall incident rate was 178.1 per 100,000 (ie, 0.18%). More than 25% of recreational boating incidents involving at least one personal watercraft occurred on the Georges River and Botany Bay waterway.⁵ Given this, even if there were avoided incidents in private ferry operators' service areas, the value of external benefits of avoided private boating incidents would likely be small. The total value of external benefits including such a value would not exceed the government subsidy most private ferry operators are currently receiving through financial viability payments.

To estimate any avoided wharf congestion costs if the Brooklyn ferry service were not to operate we would need to estimate how many people currently using its ferry services would choose to use their private boats in peak times and whether there is sufficient wharf capacity to accommodate any increased peak usage. If there is insufficient capacity at the wharf, options to address wharf congestion include time of use wharf access charges or capital expenditure to expand wharf capacity. In the short to medium term, increasing wharf access charge in peak times would be a more efficient than expanding capacity.

While there may be community and social inclusion benefits associated with ferry services, these do not meet the criteria we established for deciding whether public transport fares should be funded by NSW taxpayers rather than by users. Our criteria for including the value of the net external benefits in setting public transport fares are:

1. **It needs to be external**, not a private cost or benefit that goes directly to the user, as those are already taken into account when making a decision on how to travel.
2. **It should not be available only to a particular subset of people** as benefits that are only available to some people (such as, benefits to those who own property close to a train station) do not provide justification for lowering fares for everyone.
3. **It needs to be measurable** in that we need to be able to quantify a reasonable range for the value of the benefit.
4. **It needs to change materially in response to changes in public transport use, brought about by changes in fares** in that the value of the net benefits of public transport use to society should change in response to changes in fares.⁶

Social and community benefits highlighted in Dangar Island and Brooklyn Ferries' submissions are **private**. The ability of people to access resources such as education, employment, health and other services improves a person's well-being. Further, while we agree that private ferries are important for local economies, for example, through tourism,

⁵ Transport for NSW, *Boating incidents in NSW – Statistical report for the 10-year period ended 30 June 2016, January 2017*, p 10.

⁶ IPART, *Review of external benefits – Draft Report*, pp 15-16.

these benefits are private and are enjoyed by local businesses (through increased sales/profits) and by private ferry operators (through increased patronage).

In its submission Brooklyn Ferries noted that communities that are serviced by ferries exhibit property values almost double compared with areas not serviced, and this should be captured as an external benefit.⁷ Increased property values may be an example of external benefits that are only available to a narrow section of the community such as those who own property in the local area. As a result, we consider a more targeted mechanism such as a tax or levy on those properties where their value has increased due to the availability of a ferry service would be more appropriate than lowering fares for everyone through a general government subsidy, paid for by taxpayers. While such a mechanism may mean that the local community chooses to support their local ferry, whether and how this is done is a matter for the community and Governments (both state and local).

We consider that there may be some external benefits associated with improved mobility and social inclusion, but the benefits largely arise from physical access to public transport and frequency of services rather than fare levels. We also note that the risk factors for social exclusion include household income, supporting the view that well-targeted concession fares are an appropriate way of incorporating these externalities into fare setting, rather than lowering fares for all customers and not just those who require the additional subsidy.

Brooklyn Ferries submits that fares should reflect actual financial and risk exposure

Brooklyn Ferries submitted the building block approach of determining maximum fares for private ferries does not specifically address financial and risk exposure of operators, based on their contract period, terms and conditions, and therefore cannot properly assess efficiencies between operators.⁸

In setting prices for a regulated utility, we consider how much revenue would be required by an efficient 'benchmark' firm, rather than the actual firm, where the benchmark is defined as 'a firm operating in a competitive market and facing similar risks to the regulated business'.⁹ Hence actual financial and risk exposure of operators per se are not reflected in the building block methodology, but the risks faced by the benchmark entity are captured through the weighted average cost of capital (WACC) which measures the expected costs of debt and equity.

The risks are reflected in the two industry specific parameters (equity beta and gearing) used in the calculation of the WACC. However, the industry specific parameters only capture risks faced by a benchmark firm operating in a competitive market, and hence actual risks faced by ferry operators such as those associated with contract period, terms and conditions are not accounted for in estimating the required cost of capital.

⁷ Brooklyn Ferry Service submission to the Issues Paper, p 9.

⁸ Brooklyn Ferry Service submission to the Issues Paper, p 5.

⁹ IPART's review of WACC methodology is currently considering whether our current definition of the benchmark firm remains appropriate or can be improved. IPART, *Review of our WACC method – Issues Paper*, July 2017, p 12.

The RAB should include 100% of the replacement cost of spare ferries

Brooklyn Ferries disagreed that only 50% of the replacement cost of a spare ferry is accounted for in the regulatory asset base (RAB) where a spare ferry is required for backup and is not fitted out or designed for use as charter vessel.¹⁰

Private ferry operators can pursue opportunities to earn supplementary revenue from their spare ferry, and as Table 2.2 shows all operators, including Brooklyn Ferries, do so. There might be cases where a spare ferry is not designed for charter services. However, it could be efficient for an operator to fit out a spare ferry to use it to earn supplementary revenue.

We do not consider it to be reasonable that passengers pay fares that reflect 100% of the spare ferry given that most private ferry operators might be using them for regulated ferry services around 10% to 20% of the time.¹¹ This is well below the 50% utilisation we assume in the efficient fare calculation. We consider that including 50% of the spare ferry in the efficient fare calculation is fair to passengers and operators, and still provides an incentive for operators to maximise its economic value.

Industry index should be used instead of RBA inflation forecast rate

Brooklyn Ferries questioned the use of the Reserve Bank of Australia (RBA)'s inflation forecast in converting the nominal post-tax WACC to a real post-tax WACC. It considered that an industry specific index such as the 'transport and tourism' – a sub group from the CPI, may be more appropriate because private ferry services are subject to similar pricing pressures as the transport and tourism industry.¹²

The WACC comprises the efficient return required for making investments in the equity and debt markets. The appropriate inflation rate forecast to estimate inflation embedded in the nominal rate of return on these investments is an economy-wide inflation. Since the change in the CPI measures the average price increase in a market basket of goods and services, it is a reasonable proxy for an economy-wide inflation.

Industry specific indices (such as the "transport and tourism" index) measure how much the cost of providing services in particular industries has changed over time. These indices incorporate industry-specific input prices and measure the sectoral inflation rather than general inflation. We consider it to be too specific for the purpose of estimating inflation included in the nominal returns on investments.

¹⁰ Brooklyn Ferry Service submission to the Issues Paper, p 7.

¹¹ IPART, *Review of maximum fares for private ferry services and the Stockton ferry service for 2015 – Final Report*, December 2015,

¹² Brooklyn Ferry Service submission to the Issues Paper, p 9.

Table 2.2 Charter services as advertised on operators' websites

Operator	Availability of charter service
Brooklyn Ferry Service	<p>One of the two Brooklyn Ferries' vessels, the Banksia, is used for charter services. The costs of charter services are not shown on the website.</p> <p>"Enjoy the exclusivity, old-world charm and heritage style of the Banksia (1952). Specialising in lazy and indulgent cruises aboard this magnificent example of working history, you can cruise in style enjoying old world charm forgotten in today's lifestyle but enjoyed with relish in days gone by. The Banksia has provided over 60 years of service and is still eager to please!"</p>
Church Point Ferry Service	<p>Church Point Ferries uses the L. Duck and Elvina to provide charter services.</p> <ul style="list-style-type: none">▼ Exclusive guided tours are available Monday to Friday between 9:30 am and 3:00 pm, and the prices are \$17.50 for two hours and \$25 for three hours.▼ The cost to charter the L.Duck is \$300 per hour for a minimum of two hours for less than 50 passengers. For 50 to 80 passengers, the rate is \$350 per hour.▼ The cost for the Elvina is \$175 per hour for a minimum of two hours. <p>"The Elvina is ideal for wedding party transfers or a unique backdrop for photos. The Elvina is very safe for small kids, and perfect for a 'pirate' birthday party..."</p>
Clarence River Ferries	<p>Clarence River Ferries provides cruise services on the Clarence River every Wednesday, Friday and Sunday.</p> <ul style="list-style-type: none">▼ The costs of the Harwood Island cruise range from \$18 to \$20 return.▼ The costs of the Sunday live music cruise range from \$25 to \$30 return. <p>"Enjoy an informative history while cruising the beautiful Clarence River Ferry departs every Wednesday and Friday & our Regular Sunday Music Cruise."</p>
Cronulla and National Park Ferry Service	<p>Cronulla Ferries provides numerous cruise services, such as three hour scenic river cruise, live music cruise, seniors & bus group cruises, charter and party cruises, dining cruises and explore group cruises.</p> <p>"Whether it's a formal occasion or a day at the beach our vessels are a perfect venue for Party cruises including, Christmas, Weddings, engagements, Hens parties or work functions. Both vessels can be chartered on Port Hacking. The Gunnamatta and Explorer crews are renowned for providing friendly service and fabulous gourmet food."</p>
Palm Beach Ferries	<p>Palm Beach Ferris provides numerous cruises such as whale watching and Pittwater lunch cruise and vessel charter services.</p> <p>"Fantasea Cruising delivers the most personalised experiences on Pittwater, Broken Bay and beyond... We will depart when you want, where you want and for however long you want. With Fantasea Cruising we build the experience around your itinerary, not the itinerary around our requirements..."</p>

Source: <http://brooklynferry.com.au/banksiaferrycharters/>; <http://churchpointferry.com.au/charters-day-trips/>; <https://www.clarencriverferries.com.au/cruises>; <http://cronullaferries.com.au/charters-and-party-cruises/>; <https://www.fantasea.com.au/palmbeachferries-charters/>, accessed 13 September 2017.

Concerns over fare increases and that Opal should be available on private ferries

Submissions recommended no increase in fares, increasing fares in line with wage increase or no further fare increase until private ferry services are included in the Opal system.¹³ These submissions also suggested that cheaper multi-journey fares be introduced, and ferry services be extended until 8 pm on weekends.

An individual submitted that we need to consider the possibility of Opal coverage during the determination period, particularly including access to the transfer discount.¹⁴ Dangar Island League submitted that the Island is an attractive destination for day-trippers, and Brooklyn Ferries' current fare and its proposed fare increases act as a deterrent to such visitors and would reduce patronage.¹⁵ It suggested that IPART should consider the equity issues and cost impact associated with Opal scheme not being available to private ferry users.¹⁶

Where ferry operators face little or no competition, we estimated fares that reflect the efficient costs of providing private ferry services and accepted fare increases if the proposed fares do not exceed efficient costs. We consider this ensures passengers pay fair prices to use ferry services, and these prices enable ferry operators to recover the efficient costs and to sustain their business over the long term.

Under our draft decision, fares for two of the seven private ferry operators would remain unchanged in nominal terms for the next four years to 2021. For the other operators our draft decision fares would increase in line with inflation or slightly above inflation.

Several private ferry operators are already offering discounted multi-trip tickets. Private ferry operators are commercial businesses with an incentive to be efficient and profitable. Private ferry operators earn revenue from ticket sales, and operators would make discounted tickets available if they judge it would increase the profitability of their businesses. Hence our draft decision is to determine maximum fares for a single adult ticket, and for operators to decide the availability and the price of such tickets.

The decision to include private ferry services under the Opal system is a matter for the NSW Government. Nevertheless, we note that including private ferry services under the Opal system would require changes to the current contracting arrangements between TfNSW and private ferry operators. Currently, private ferry operators retain fare box revenue. Under the Opal system, fare box revenue is collected by TfNSW on behalf of the NSW Government.

Also, the inclusion of private ferry services in the Opal system does not mean the maximum fares for the services would be set at Opal fares. Private ferry operators are heterogeneous in nature with different service routes and patronage characteristics, and hence the efficient costs of providing private ferry services are different across operators. Irrespective of whether they become part of the Opal network, the maximum fares for private ferry services that reflect efficient costs would not necessarily be the same as existing Opal fares.

¹³ Submissions from D. Borrow Jones and two anonymous individuals.

¹⁴ Submission to IPART Issues paper from S Lovell.

¹⁵ Dangar Island League submission to the Issues Paper, August 2017, p 2.

¹⁶ Ibid, p 2.

The service contracts between TfNSW and private ferry operators cover, among other things, timetabling and frequency of ferry services which is not within the scope of our review.

2.4 Our review process

The process we followed in making our draft decision included public consultation and assessment of ferry operators' pricing proposals based on detailed analysis and expert advice on the efficient costs of providing private ferry services. We began this process by inviting ferry operators to propose fares in May 2017. We received pricing proposals from all operators except for Clarence River Ferries.

We released an Issues Paper in June 2017. The Issues Paper explained our proposed approach for determining maximum fares, summarised ferry operators' pricing proposals and called for stakeholder submissions on the proposed approach and the pricing proposals. We received seven submissions on the Issues Paper which are available on our website. Section 2.3 provided our response to the issues raised in these submissions.

We engaged a consultant, The Centre for International Economics (The CIE), to investigate and provide advice on the efficient costs of providing private ferry services in NSW, and conducted our research and analysis based on The CIE's advice in assessing ferry operators' pricing proposals. The CIE report is available on our website.

We considered matters raised in submissions and the factors discussed in Section 2.1 in preparing this Draft Report. Stakeholders can make submissions to this Draft Report and also attend a public hearing on 23 October where there will be an opportunity to seek clarification or provide comment on our draft decisions.

We will take into account issues raised at the public hearing and in submissions to our Draft Report in making our final decision. We will provide our Final Report and Determination to the Minister for Transport and Infrastructure in mid-December.

3 Our approach for the review

As discussed in Chapter 2, the Minister has asked us to determine the maximum fares for the seven private ferry operators for the period from 2018 to 2021. Our approach ensures we consider all the matters specified in the Act and the Minister's referral outlined in Chapter 2. This Chapter provides an overview of our approach and each of its key steps, and the process we followed in undertaking the review.

We developed an approach to guide our analysis and decision-making for this review, which consisted of the following four steps:

1. For each ferry operator, we assessed the level of competition for customers on the routes it services, and decided on the appropriate form of regulation. The private ferry businesses affected by the review service different routes, and the level of competition differs by route. Based on our assessment of the level of competition, we considered
 - a) a light-handed approach is appropriate for Central Coast Ferries and Matilda Cruises, and
 - b) a more robust approach involving the assessment of the efficient costs of providing private ferry services is appropriate for the remaining ferry operators.
2. We invited each ferry operator to submit a pricing proposal. Based on our assessment of competition and the decision on the appropriate form of regulation in Step 1, we invited:
 - a) Central Coast Ferries and Matilda Cruises to submit pricing proposals with a brief statement of reasons, and
 - b) the remaining operators to submit pricing proposals and provide forecast operating and capital costs and forecast patronage to support them.
3. We assessed whether each pricing proposal is reasonable against the matters contained in section 124 of the *Passenger Transport Act 2014* and the Minister's referral in deciding whether to agree to it. However, the extent of our assessment varied based on the extent of competition faced by each operator.
 - a) For Central Coast Ferries and Matilda Cruises, we considered the amount of the proposed increases is reasonable given the market in which they operate.
 - b) For the remaining operators, we analysed the efficient costs of providing private ferry services and estimated efficient fares. We applied a decision rule, which compares the efficient fares and the proposed fares, to decide whether or not to accept pricing proposals.
4. For all operators, we established a mechanism to manage the risk of a material deviation between forecast and actual fuel costs each year.

Chapters from 4 to 7 discuss in detail how we implemented these steps to reach our draft decision and findings.

4 Current levels of competition

As discussed in Chapter 3, the first step in our approach is assessing the level of competition on the routes covered by private ferry services. Private ferry businesses operate distinct routes, and hence face a different level of competition. Our assessment of competition is important because the level of competition in a market strongly influences the form of regulation needed to protect customers.

In general, price regulation is only required in a monopoly market, where lack of competition can lead to higher prices and poorer service outcomes. On the contrary, in a competitive market, competition is likely to be delivering benefits beyond those that can be achieved through fare regulation and fares determined by the market are likely to reflect efficient costs.

As outlined in our Issues Paper, we undertook desktop research of competition in markets in which private ferry businesses operate. The sections below discuss our approach for assessing the level of competition, which includes identifying:

- ▼ whether there are alternative modes of transport competing with private ferry services (Section 4.1), and
- ▼ whether there is any difference between actual fares and the current maximum fares recommended by IPART (Section 4.2).

4.1 The level of competition face by each ferry operator is different

To examine whether private ferry services covered by this review face competition from other ferry operators and/or other modes of transport, we researched alternative travel options for each ferry route (Table 4.1). Based on this, we formed our view that ferry operators are facing different levels of competition. In particular, we found that:

- ▼ Matilda Cruises, operating in Sydney Harbour, faces the highest level of competition for passengers from other ferry services and other modes of transport compared to the other private ferry operators.
- ▼ Central Coast Ferries also faces a relatively high level of competition from other modes of transport, but less than Matilda Cruises.
- ▼ The remaining five operators face little or no competition, as there are limited alternative public transport options available on routes operated by the five operators.

Brooklyn Ferries submitted that there are other modes of transport such as free ride sharing in private boats, pirate operators,¹⁷ and water taxis, which were not identified as competing transport options for the Brooklyn ferry route in the Issues Paper.¹⁸ We have included these

¹⁷ Brooklyn Ferries described pirate operators as those who operate for cash and hang around wharves and marinas and discretely charge for lifts from acquaintances and friends, which is effectively a ride sharing system for a close group of people.

¹⁸ Brooklyn Ferry Service submission to Issues Paper, August 2017, p 2.

alternative travel options in our assessment of competition, but they do not alter our findings on the level of competition for Brooklyn or Church Point Ferries. This is discussed in Section 4.2.

Table 4.1 Alternative travel options for the ferry routes covered by this review

Operator	Route	Ferry travel time on route	Alternative travel option?
Brooklyn Ferry Service	Brooklyn to Dangar Island	30 mins ^a	▼ Travel option: boat ride sharing; water taxi
Central Coast Ferries	Woy Woy to Empire Bay	30 mins ^b	▼ Travel option: bus; car ▼ Travel time: around 35 mins by bus; 14 minutes by car (8.7 km) ▼ Bus fare: \$3.50 per adult ▼ Frequency: every hour before 12 pm and after 4:30 pm, every 30 mins from 1 pm to around 4:30 pm
Church Point Ferry Service	Scotland Island and western foreshore of Pittwater	~ 25 mins ^c	▼ Travel option: car; water taxi ▼ Travel time: 24 mins (14.5 km) ^c
Clarence River Ferries	Iluka to Yamba	30 mins ^d	▼ Travel option: bus; car ▼ Travel time: 40 mins (direct) to 1 hour and 37 mins (transfer required) by bus; 34 mins (39 km) by car ▼ Bus fare: \$4.84 to around \$16 ^e ▼ Frequency: direct service once at around 7:30 am and indirect service once at around 5 pm
Cronulla and National Park Ferry Service	Cronulla to Bundeena	30 mins	▼ Travel option: car; water taxi ▼ Travel time: 46 mins (35 km) by car
Matilda Cruises	Circular Quay to Darling Harbour Circular Quay to Lane Cove		Numerous travel options
Palm Beach Ferries	Palm Beach to Mackerel Beach	30 mins	▼ Travel option: car ▼ Travel time: 48 mins (35 km) ^f
	Palm Beach to Ettalong and Wagstaffe	~20 mins	▼ Travel option: car ▼ Travel time: 1 hour 50 mins (107 km) ^g

^a Travelling between Brooklyn Ferry Wharf and Dangar Island.

^b Travelling between Woy Woy Wharf and Empire Bay.

^c Travelling between Church Point Wharf, Pittwater and Lovett Wharf, Lovett Bay.

^d Travelling between Iluka Wharf and Yamba Wharf.

^e Estimated based on the number of kilometres between Iluka to Maclean.

^f Travelling between Palm Beach Wharf, Palm Beach and Mackerel Beach Wharf, Great Mackerel Beach.

^g Travelling between Palm Beach Wharf, Palm Beach and Wagstaffe Wharf, Wagstaffe.

Source: Ferry travel times are sourced from operators' websites or Google Map – Brooklyn Ferry Service timetable, <http://brooklynferry.com.au/>; Central Cost Ferries timetable, <http://www.centralcoastferries.com.au/timetable.html>, Church Point Ferry Service timetable, <http://churchpointferry.com.au/ferry-timeable/>; Google map for Clarence River Ferries, Cronulla and National Park Ferry Service, Palm Beach Ferries timetable, <https://www.fantasea.com.au/palmbeachferries-timetable/>; Travel time by car is sourced from Google Map; Travel time by bus for the route operated by Clarence River Ferries is sourced from Google Map. Bus fare is sourced from Busways.

4.2 Central Coast and Matilda Cruises charge less than the maximum fares

As discussed in Chapter 1, we determine a maximum fare. Ferry operators can choose to set their fare below the maximum fare, and may do so to compete with other forms of transport.

In a competitive market, a ferry operator has a price ceiling in that the fare it charges cannot exceed the limit set by the market. This is because if the fare increased beyond the market-determined level, passengers would switch to the competitors offering the same service. In this context, a ferry operator charging below the maximum fare is likely to signal that it is operating in a competitive market.

Table 4.2 shows the maximum fares determined by IPART for 2017, and the actual fares currently being charged by ferry operators. Except Matilda Cruises, all ferry operators are charging the maximum fares. For several years, Matilda Cruises have been charging below the maximum fare due to competition from other ferry operators or other modes of transport. Central Coast Ferries charged below the maximum fare for two years. From July 2017, it increased its fare to the maximum.

In its submission to the Issues Paper, Brooklyn Ferries did not agree with our assessment on the level of competition on its ferry route and listed a number of different modes of transport competing with its service, such as free ride sharing in private boats, pirate operators, and water taxis. Notwithstanding the competitive threats posed by these alternatives, Brooklyn Ferries has been charging the maximum fare.¹⁹

Table 4.2 Actual fares and maximum fares from 1 January 2017

Operator	Routes	IPART maximum fare from 1 January 2017	Actual fare
Brooklyn Ferry Service	Brooklyn to Dangar Island	\$7.30	\$7.30
Central Coast Ferries	Woy Woy to Empire Bay	\$7.80	\$7.80
Church Point Ferry Service	Scotland Island and western foreshore of Pittwater	\$8.30	\$8.30
Clarence River Ferries	Iluka to Yamba	\$8.30	\$8.30
Cronulla and National Park Ferry Service	Cronulla to Bundeena	\$6.40	\$6.40
Matilda Cruises	Circular Quay to Darling Harbour	\$7.40	\$7.00
	Circular Quay to Lane Cove	\$7.40	\$7.00
Palm Beach Ferries	Palm Beach to Mackerel Beach and the Basin	\$8.10	\$8.10
	Palm Beach to Ettalong and Wagstaffe	\$11.60	\$11.60

Note: Fares are current as of 16 May 2017.

Source: IPART, Review of maximum fares for private ferry services in 2017, November 2016, p 2; Ferry operators' websites; Ferry operators' pricing proposals.

¹⁹ For example, see IPART *Review of maximum fares for private ferry services in 2017 – Final Report*, November 2016, p 2; IPART, *Review of maximum fares for private ferry services in 2016 – Final Report*, December 2015, p 8; IPART, *Review of maximum fares for private ferry services and the Stockton ferry service for 2015 – Final Report*, December 2014, p 10.

4.3 Maximum fares to reflect efficient costs of providing ferry services

For Central Coast Ferries and Matilda Cruises, we consider it is not necessary to review the costs of providing these services as fares set by the competitive market are likely to be a better estimate of efficient costs. However, given the recent increase in Central Coast Ferries' fares, we are seeking stakeholder comment on whether our assessment of competition on the route it operates remains appropriate.

For the remaining operators, who provide ferry services in markets with no or limited competition, we consider it necessary to analyse the efficient costs of providing the ferry services and estimate the efficient fares using a building block approach.

5 Ferry operators' pricing proposals

The second step in our approach was to invite ferry operators to propose fares for the period from 1 January 2018 to 31 December 2021. In May 2017, we invited ferry operators to propose fares for their regulated ferry services, and received pricing proposals from all operators except for Clarence River Ferries.

Table 5.1 sets out the ferry operators' pricing proposals.

Table 5.1 Ferry operators' proposed maximum fares from January 2018 to December 2021 (\$nominal, including GST)

Operator	Current maximum fare	2018	2019	2020	2021
Brooklyn Ferry Service	\$7.30	\$7.60	\$8.00	\$8.40	- ^a
Central Coast Ferries	\$7.80	ΔCPI_t	ΔCPI_t	ΔCPI_t	ΔCPI_t
Church Point Ferry Service	\$8.30	\$8.65	\$9.00	\$9.40	\$9.70
Clarence River Ferries	\$8.30	Did not propose fares			
Cronulla and National Park Service	\$6.40	ΔCPI_t	ΔCPI_t	ΔCPI_t	ΔCPI_t
Matilda Cruises – Circular Quay to Darling Harbour	\$7.40	ΔCPI_t	ΔCPI_t	ΔCPI_t	ΔCPI_t
Matilda Cruises – Circular Quay to Lane Cove	\$7.40	ΔCPI_t	ΔCPI_t	ΔCPI_t	ΔCPI_t
Palm Beach Ferries – Mackerel Beach and the Basin ^b	\$8.10	\$8.80	\$9.30	\$9.90	\$10.50
Palm Beach Ferries – Palm Beach to Ettalong and Wagstaffe ^b	\$11.60	\$12.40	\$13.00	\$13.60	\$14.20


^a Brooklyn Ferry Service did not provide a fare proposal for 2021.

^b Palm Beach Ferries' proposed fares were in real terms. We assumed inflation rate of 2.2% for 2018 and 2.5% thereafter.

Source: Ferry operators' pricing proposal; IPART, *Review of maximum fares for private ferry services in 2017 – Final Report*, November 2016, p 2.

Central Coast Ferries and Matilda Cruises proposed that for the next four years their respective maximum fares increase by the change in the CPI. Cronulla Ferries initially proposed to increase its current maximum fare by 10 cents each year, but subsequently revised its proposal to increase fares by the change in the CPI. If the CPI increased by 2.5% each year, the current fare of \$6.40 under Cronulla Ferries' revised proposal would increase by 20 cents each year to \$7.10 between 2018 and 2021.

Brooklyn Ferries proposed to increase its current maximum fare by 30 to 40 cents each year until 2020. Its pricing proposal did not include a proposed fare change for 2021. Church Point Ferries proposed to increase its current maximum fare by 30 to 40 cents each year.



Palm Beach Ferries proposed to increase its current maximum fares by 50 to 80 cents each year.

6 Draft decision on ferry fares

We assessed each pricing proposal against the matters contained in section 124 of the *Passenger Transport Act 2014* and the Minister's referral in deciding whether to agree to it. As discussed previously, the extent of our assessment varied based on the extent of competition face by each ferry operator. The sections below discuss our approaches for assessing ferry operators' pricing proposals and how we reached our draft decision.

6.1 Overview of our draft decision

We assessed pricing proposals from all operators except for Clarence River Ferries. Our draft decision is to:

- ▼ **accept** fares proposed by Brooklyn Ferries, Central Coast Ferries, Church Point Ferries and Matilda Cruises
- ▼ **not accept** Cronulla Ferries and Palm Beach Ferries' proposals and to freeze fares in nominal terms
- ▼ **increase** fares for Clarence River Ferries by 30 cents in nominal terms each year.

Table 6.1 sets out our draft decision on maximum fares for private ferry services for the four year period from 1 January 2018 to 31 December 2021. Fares are in nominal terms.

Table 6.1 Our draft decision on maximum fares for private ferry services

Operator	Current maximum fare	2018	2019	2020	2021
Brooklyn Ferry Service	\$7.30	\$7.60	\$8.00	\$8.40	\$8.80
Central Coast Ferries	\$7.80	\$8.00	ΔCPI_t	ΔCPI_t	ΔCPI_t
Church Point Ferry Service	\$8.30	\$8.70	\$9.00	\$9.40	\$9.70
Clarence River Ferries	\$8.30	\$8.60	\$8.90	\$9.20	\$9.50
Cronulla Ferries	\$6.40	\$6.40	\$6.40	\$6.40	\$6.40
Matilda Cruises Circular Quay – Darling Harbour	\$7.40	\$7.60	ΔCPI_t	ΔCPI_t	ΔCPI_t
Matilda Cruises Circular Quay – Lane Cove	\$7.40	\$7.60	ΔCPI_t	ΔCPI_t	ΔCPI_t
Palm Beach Ferries Palm Beach to Mackerel Beach and the Basin	\$8.10	\$8.10	\$8.10	\$8.10	\$8.10
Palm Beach Ferries Palm Beach to Ettalong and Wagstaffe	\$11.60	\$11.60	\$11.60	\$11.60	\$11.60

Note: The 2018 maximum fares for Central Coast and Matilda Cruises will be updated for the final decision based on actual inflation.

6.2 Central Coast and Matilda Cruises' proposed fares are reasonable

Our draft decision is to accept Central Coast Ferries and Matilda Cruises' pricing proposals to increase current fares by the change in the CPI. Matilda Cruises faces a high level of competition from other ferry services and other modes of transport and has been charging below the maximum fare for several years. Central Coast Ferries also faces a relatively high level of competition from other modes of transport, and charged below the maximum fare for two years. From July 2017, it increased its fare to the maximum. We consider their proposals to be market-driven and efficient.

We would calculate the change in the CPI using the All Groups index number for Sydney as published by the Australian Bureau of Statistics (ABS) for the September quarter each year. The change in the CPI in year t will be calculated as follows.

$$\Delta CPI_t = \left(\frac{CPI_{Sep,t}}{CPI_{Sep,t-1}} \right) - 1$$

Maximum fares for both Central Coast Ferries and Matilda Cruises would increase by 20 cents in 2018 (in nominal terms based on our forecast inflation to September 2017). We will use actual inflation numbers to update the maximum fares for our final decision in December. For each year of the three years from 2019 to 2021, we will publish maximum fares in December of the preceding year using actual inflation numbers.

Draft decision

- 1 That IPART accepts fares proposed by Central Coast Ferries and Matilda Cruises.
 - The maximum fares for Central Coast Ferries and Matilda Cruises would increase annually by the change in the Consumer Price Index (CPI) for the four years from January 2018 to December 2021.
 - Maximum fares for Central Coast Ferries would be \$8.00 in 2018
 - Maximum fares for Matilda Cruises would be \$7.60 in 2018

6.3 Brooklyn and Church Point Ferries' proposed fares are reasonable

Our draft decision is to accept Brooklyn and Church Point's proposed fares. To inform our decision we have analysed the efficient costs of providing ferry services for each of these operators to estimate efficient fares. Box 6.1 provides an overview of our approach to estimating efficient costs and determining maximum fares. The approach ensures we consider all the matters specified in the Act and the Minister's referral as outlined in Chapter 2.

In 2015 when we first estimated efficient fares, Brooklyn Ferries' maximum fare was below the efficient fare. From 2015 to 2017, we increased Brooklyn Ferries' maximum fares by 30

cents each year to bring fares closer to the efficient fare.²⁰ For this determination period, Brooklyn Ferries proposed to increase the maximum fares by 30 to 40 cents each year for three years. Brooklyn Ferries did not propose a fare for 2021.

With fare increase of 30 to 40 cents in each of the next four years in 2021, Brooklyn Ferries' fares would reflect the efficient costs of providing the ferry service. Our draft decision to accept Brooklyn Ferries' proposed fares would mean that the maximum fares reflect the efficient costs of providing the ferry service.

In response to the Issues Paper, Brooklyn Ferries submitted that where our determined fares are below efficient fares, we should provide a funding solution, encouraging additional government subsidy.²¹ A government subsidy can be justified if the subsidy leads to increased ferry patronage and the external benefits the whole community, not only the people who use them. Under our draft decision Brooklyn Ferries' maximum fares would reflect the efficient costs of providing the ferry service until 2021.

Church Point Ferries' proposed annual increases range from 30 cents to 40 cents each year. Church Point Ferries' maximum fares have been at or slightly below the efficient fares since 2015. For the period from 2018 to 2021, Church Point Ferries' proposed fares are either at or marginally above the efficient fares – the proposed fare exceeds the efficient fare by few cents in 2018. Our draft decision is on balance to accept Church Point Ferries' proposed fares. The difference between the proposed fare and the efficient fare is very small and the maximum fare would be at the efficient level in 2021 (the end of the determination period).

Draft decision

- 2 That IPART accepts fares proposed by Brooklyn Ferry Service and Church Point Ferry Service.
 - Brooklyn Ferry Service's maximum fares would be \$7.60 from January 2018, \$8.00 from January 2019, \$8.40 from January 2020 and \$8.80 from January 2021.
 - Church Point Ferry Service's maximum fares would be \$8.70 from January 2018, \$9.00 from January 2019, \$9.40 from January 2020 and \$9.70 from January 2021.

6.4 Cronulla and Palm Beach Ferries' maximum fares would not change

For Cronulla Ferries and Palm Beach Ferries, our draft decision is **not to accept** their pricing proposals and to **freeze** the current maximum fares in nominal terms for the next four years. To inform our decision we have analysed the efficient costs of providing ferry services for each of these operators to estimate efficient fares. Box 6.1 provides an overview of our approach to estimating efficient costs and fares.

²⁰ IPART, *Review of maximum fares for private ferry services and the Stockton ferry service for 2015 – Final Report*, December 2014, p 2; IPART, *Review of maximum fares for private ferry services in 2016 – Final Report and Recommendations*, December 2015, p 2; IPART, *Review of maximum fares for private ferry services in 2017 – Final Report*, November 2016, p 2.

²¹ Brooklyn Ferry Service submission to the Issues Paper, p 5.

Box 6.1 Our approach to estimating efficient costs and determining maximum fares

For the five operators who face little or no competition, we analysed the efficient costs of providing their ferry services and determined efficient fares. An 'efficient fare' is one that will allow the ferry operator to:

- ▼ recover the operating costs of running its business efficiently
- ▼ earn a fair return on the capital it has invested in that business (and regulatory depreciation on this capital), and
- ▼ undertake prudent capital expenditure (for example, to replace an old ferry).

For each operator, calculating efficient fares involved three broad steps:

1. Estimating its total efficient costs for each year of the determination period using a building block approach.
2. Deciding what share of the total efficient costs passengers should pay through fares. To do this, we will subtract from the total efficient costs:
 - a) An amount equal to the government payments the operator receives for providing school travel and concessions tickets, plus any financial viability payments it receives.
 - b) An amount equal to our estimate of the external benefits generated by the use of private ferry services, where this amount is not accounted for by any existing financial viability payments.
3. Calculating the fare for each ferry service that would be required to cover the passengers' share of total efficient costs, based on our forecast estimate of annual patronage.

We engaged The CIE to provide advice on the efficient costs of providing private ferry services. We used The CIE's advice on the efficient costs to estimate efficient fares for each operator using a building block approach. We are not able to provide details of our calculations of efficient fares as our analysis relies on confidential information provided by the ferry operators. Nevertheless, we have conducted thorough analysis of this information in making our draft decision. Further detail on our approach for estimating the efficient fares is provided in Appendix C.

Once we estimated efficient fares, we adopted the following decision rule.

- ▼ If proposed fares are less than or equal to efficient fares, our draft decision is to accept the proposed fares.
- ▼ If proposed fares are greater than efficient fares, our draft decision is not to accept the proposed fares. In determining maximum fares, we consider where current fares are relative to efficient fares:
 - If current maximum fare is below efficient fares, we increase the current maximum fare to the efficient fare.
 - If current maximum fare is higher than efficient fares, we freeze the current maximum fare in nominal terms.

Our decision rule compares the proposed fares with the efficient fares from 2018 to 2021. We consider that this is reasonable as it ensures passengers pay prices that reflect the efficient costs of providing private ferry services, and enables ferry operators to sustain their business over the long term by allowing them to recover the efficient costs. By accepting proposed fares as long as they are below the efficient levels, our decision rule recognises that ferry operators know their market best and are in the best position to decide an appropriate fare level.

Cronulla Ferries' maximum fares are still substantially higher than the efficient fares. Maximum fares have reduced by 6% in real terms as a result of no change in fares (in nominal terms) for three years since January 2014. Although the efficient fares have increased slightly (on average) since our last review due to higher forecast operating costs, they are lower compared to other operators due to higher patronage. Efficient fares for private ferry services are primarily driven by operating costs. Compared to Brooklyn Ferries, which runs a similar number of service hours to Cronulla Ferries, Cronulla Ferries incurs a much higher total cost per service hour, but its cost is shared by larger customer base, resulting in a lower cost per passenger.

Based on our decision rule, our draft decision is not to accept Cronulla Ferries' pricing proposal, and to freeze the fares for the next four years. This would result in real fare reductions of 14% since 2014. We also considered reducing maximum fares (in nominal terms so further in real terms) to transition fares closer to efficient levels. However, Cronulla Ferries' fare box revenue accounts for more than 50% of its total revenue, a further reduction in fares is likely to have a financial impact on Cronulla Ferries. We are seeking stakeholder feedback on whether we should reduce the maximum fares rather than freezing fares to transition fares closer to efficient levels over the next four years.

Palm Beach Ferries' maximum fares have been at or very close to the efficient levels since 2015. Palm Beach Ferries recently undertook a fleet restructure involving replacement and reallocation of vessels. The fleet restructure (including the replacement of ferries at a lower cost) means the efficiency of Palm Beach Ferries' operations is likely to improve, and has resulted in a substantial reduction in capital costs. Also, our forecast patronage has increased by around 5% for the Ettalong service and around 30% for the Mackerel service since the last review. The combined effect is that Palm Beach Ferries has a lower total efficient cost to be recovered from higher patronage, resulting in a lower efficient fare per passenger.

Given the substantial difference between Palm Beach Ferries' efficient fares and the current and proposed fares, we considered reducing maximum fares in nominal terms. However, our draft decision is to leave the current maximum fares unchanged to allow Palm Beach Ferries to keep an efficiency saving resulting from the fleet restructure over the next four years. This is consistent with our approach for other regulated utilities. For regulated water utilities, we established an efficiency carryover mechanism, which allows a water utility to keep an efficiency saving for four years regardless of when the saving is made. This approach removes incentives to delay permanent cost savings from the end of one regulatory period to the beginning of the next, and customers can benefit through lower prices, sooner.²²

Draft decision

- 3 That IPART does not accept fares proposed by Cronulla and National Park Ferry Service and Palm Beach Ferry Service.
 - Cronulla and National Park Ferry Service's maximum fares would be \$6.40 for the four years from January 2018 to December 2021.
 - The maximum fares for Palm Beach Ferry Service's Ettalong route would be \$8.10 for the four years from January 2018 to December 2021.

²² IPART, *Review of prices for Sydney Water Corporation – Final Report*, June 2016, p 18.

- The maximum fares for Palm Beach Ferry Service's Mackerel route would be \$11.60 for the four years from January 2018 to December 2021.

6.5 Clarence River Ferries fares would increase by 30 cents each year

As Clarence River Ferries did not submit a pricing proposal, we used the same approach to estimate efficient costs and fares as we used for the other operators that face little competition (see Box 6.1).

We found that Clarence River Ferries' current maximum fare is well below the efficient fares. Clarence River Ferries' total efficient operating cost is lower than most ferry operators. However, the cost per service hour and the cost per passenger are not lower than most other operators because Clarence River Ferries has fewer service hours and lower patronage. Our draft decision is to increase Clarence River Ferries' maximum fare by 30 cents each year to bring it closer to the level reflecting efficient costs. While there will be still a large difference between the efficient fares and the maximum fares, we consider a 30 cents increase is an appropriate transition considering the potential impact on customers.

In response to the Issues Paper, an anonymous individual submitted that residents in Iluka, an area designated as remote by the Australian Taxation Office (ATO), have no other choice but to catch the ferry during inclement weather. The submitter commented that a further fare increase would make living in a remote area even harder, and recommended freezing the current maximum fare.²³ Clarence River Ferries is currently operating at below efficient costs. We consider that it is important to ensure the operator's business remains sustainable for the benefits of consumers in the long term.

We also considered increasing maximum fares by more than 30 cents to transition fares closer to efficient levels. However, we are concerned about the impacts on passengers. We are seeking stakeholder feedback on whether we should further increase maximum fares to transition fares closer to efficient levels over the next four years.

Draft decision

- 4 That Clarence River Ferries' maximum fares increase by 30 cents each year for the period from 2018 to 2021
 - maximum fares would be \$8.60 from January 2018, \$8.90 from January 2019, \$9.20 from January 2020 and \$9.50 from January 2021.

²³ Submission from an anonymous individual.

7 Fuel adjustment mechanism

Private ferry services tend to be small businesses with limited capacity to hedge against volatility in fuel costs. As our review will determine fares for the next four years, we considered it appropriate to include a mechanism to manage the risk of a material deviation between our forecast and actual fuel costs over this period. This chapter explains our draft decision on the fuel adjustment mechanism.

7.1 Overview of draft decision

Our draft decision is that if fuel costs changed (increased or decreased) by more than 20% in a year, then maximum fares for the following year would increase or decrease by the amount calculated as follows:

$$\Delta \text{MaxFare}_{t+1,i} = \% \text{ of fuel cost}_{t,i} * \Delta \text{Fuel cost}_t \text{ in excess of } \pm 20\%$$

where

- ▼ $\Delta \text{MaxFare}_{t+1,i}$ is the percentage change to be applied to the maximum fare for a ferry operator i in year t
- ▼ $\% \text{ of fuel cost}_{t,i}$ is the proportion of fuel in the total operating cost for a ferry operator i in year t
- ▼ $\Delta \text{Fuel cost}_t$ is the percentage change between the average fuel price in year t and the average fuel price in year $t-1$. To calculate “ $\Delta \text{Fuel cost}_t$ in excess of $\pm 20\%$ ”, if $\Delta \text{Fuel cost}_t$ is a positive number, 0.2 will be subtracted from that number, and if it is a negative number, 0.2 will be added to that number.

7.2 Maximum fares would change to reflect changes in fuel costs

Based on our assessment of efficient costs, fuel accounts for between 5% and around 19% of the total operating costs of running ferry service depending on the operator and the speed of the ferry.

Each year, we will measure the annual change in fuel costs from the previous year, based on the average diesel price for the 12 months to September. The average diesel price will be based on daily average Sydney retail prices supplied by FUELtrac, excluding GST and excise duty. We will then multiply the annual change in fuel costs that exceeds a threshold of $\pm 20\%$ by the proportion of fuel cost in the total operating cost. This will give us the percentage change to apply to the maximum fare for the following year ($\Delta \text{MaxFare}_{t+1,i}$).

For example, if fuel costs **increased** by 30%, and fuel accounts for 20% of a ferry operator's total operating costs, we would **increase** the operator's maximum fare by 2% (ie, the increase in fuel costs that exceeds the threshold of 20% (ie, 10%) multiplied by 20%). Conversely, if fuel costs **decreased** by 30%, and fuel accounts for 20% of a ferry operator's total operating

costs, we would **decrease** the operator's maximum fare by 2% (ie, the reduction in fuel costs that exceeds the threshold of 20% (ie, 10%) multiplied by 20%).

Our draft decision is to adopt a $\pm 20\%$ threshold for the Fuel Adjustment Mechanism. This is higher than the threshold proposed in the Issues Paper (ie, $\pm 10\%$). We considered that to trigger a change to our determination on the maximum fares, the change in fuel costs should be material. With a threshold of $\pm 10\%$, the likely fare change would be only few cents. Fares are rounded to the nearest 10 cents so fares would not likely be adjusted. Our Issues Paper sought stakeholder comment on whether our proposed threshold was appropriate and whether there were any costs other than fuel cost that we should account for in designing our risk management mechanism. Stakeholders did not comment on these.

Table 7.1 sets out the proportions of fuel costs for all private ferry operators. The proportions are based on our assessment of the efficient fuel costs over the determination period. We did not assess efficient costs for Central Coast Ferries and Matilda Cruises. For Central Coast Ferries, we estimated the proportion of fuel costs based on the average proportion of fuel costs of slow ferry service operators. For Matilda Cruises, we estimated it based on the proportion of fuel cost of Palm Beach Ferries' Ettalong service, which is a fast ferry service.

Table 7.1 Fuel Cost Proportions for Private Operators (%)

Operator	2018 Period	2019 Period	2020 Period
Brooklyn Ferry Service	8	8	9
Central Coast Ferries	7	7	7
Church Point Ferry Service	9	10	10
Clarence River Ferries	6	6	6
Cronulla and National Park Ferry Service	5	5	6
Matilda Cruises	19	19	19
Circular Quay to Darling Harbour			
Circular Quay to Lane Cove			
Palm Beach Ferries – Palm Beach to Mackerel Beach and the Basin	6	6	6
Palm Beach Ferries – Palm Beach to Ettalong and Wagstaffe	19	19	19

Source: IPART calculation.

Draft Decision

- That if fuel costs changed (increased or decreased) by more than 20% in a year, then maximum fares for the following year would increase or decrease by the amount calculated as follows:

$\Delta \text{MaxFare}_{t+1,i} = \% \text{ of fuel cost}_{t,i} * \Delta \text{Fuel cost}_t \text{ in excess of } \pm 20\%$, where

- $\Delta \text{MaxFare}_{t+1,i}$ is the percentage change to be applied to the maximum fare for a ferry operator i in year t
- $\% \text{ of fuel cost}_{t,i}$ is the proportion of fuel in the total operating cost for a ferry operator i in year t
- $\Delta \text{Fuel cost}_t$ is the percentage change between the average fuel price in year t and the average fuel price in year $t-1$. To calculate " $\Delta \text{Fuel cost}_t \text{ in excess of } \pm 20\%$ ", if

$\Delta \text{Fuel cost}_t$ is a positive number, 0.2 will be subtracted from that number, and if it is a negative number, 0.2 will be added to that number.

8 Other factors we considered

We are required by the Minister's referral and by section 124 of the *Passenger Transport Act 2014* to consider a range of matters related to the effect of our decisions on stakeholders. Our views on the likely implications of our decisions for four key stakeholder groups – private ferry operators, passengers, the environment and Government – are outlined in this chapter.

We are also required to consider the relativities between private ferry fares and those of Sydney Ferries fares, and standards of service and patronage. Our analysis of these issues is also provided in this chapter.

8.1 Implications for private ferry operators

In making our draft decisions on maximum fares for 2018 to 2021, we considered the implications for fare levels on ferry operators' revenues.

In our 2014 review we revised our approach to determining maximum fares so that fares would transition to reflect the efficient costs. For Brooklyn Ferries and Church Point Ferries, maximum fares would reflect efficient costs of providing the ferry service by 2021 under our draft decisions.

Clarence River Ferries' maximum fare in 2021 would still be well below the efficient fare. Clarence River Ferries' total efficient operating cost is lower than most ferry operators. However, the cost per service hour and cost per passenger are not lower than most other operators because Clarence River Ferries has fewer service hours and lower patronage. Our draft decision increases Clarence River Ferries' maximum fare by 30 cents each year, moving fares closer to the efficient level. While there will be still a large difference between the efficient fares and the maximum fares, we consider a 30 cents a year increase is an appropriate transition considering the potential impact on customers.

Cronulla Ferries' fares are above the efficient cost of providing the services. Our draft decision would result in real fare reductions of 14% since January 2014. We also considered reducing maximum fares (in nominal terms so further in real terms) to transition fares closer to efficient levels. However, Cronulla Ferries' fare box revenue accounts for more than 50% of its total revenue, a further reduction in fares is likely to have a material financial impact on Cronulla Ferries.

For Palm Beach Ferries' our draft decision freezes fares (in nominal terms). Fares would be above its efficient fares. We considered reducing maximum fares in nominal terms to efficient levels. However, given that the reduction in its efficient fares is primarily driven by an efficiency saving resulting from the fleet restructure, it is appropriate to allow Palm Beach Ferries to keep such saving over the next four years by not reducing fares in nominal terms.

Our approach to setting fares over this period would prevent price shocks for passengers as well as revenue shocks for operators. Unlike the operators of rail, metropolitan and outer metropolitan bus services, Sydney Ferry who receive contract payments to provide public transport services, private ferry operators are dependent on fare box revenues.

8.2 Implications for passengers

We determine maximum fares for private ferry services. Operators can choose to set their fare below the maximum fare – for several years Matilda Cruises have been charging below the maximum fare due to competition from other ferry operators or modes of transport. Central Coast Ferries charged below the maximum fare for two years. From July 2017, it increased its fare to the maximum.²⁴

Under our draft decision passengers of the Brooklyn, Central Coast, Clarence River, Church Point and Matilda Cruises services would experience a moderate increase in fares from 2018 to 2021. The increases in the maximum fares for these private ferry services would range from 20 cents and 40 cents per trip, which represents a percentage increase of between 2.2% to 5.3% in each year of the four years between 2018 and 2021, including inflation. These percentage increases are not materially different from those we recommended last year, where fares increased by between 2.7% and 4.3%.²⁵ We have considered the impact on passengers by gradually transitioning the current maximum towards the efficient fare.

We consider passengers of the Palm Beach Ferries services would have a small positive impact, while receiving the same quality of service. This is because our draft decision is to freeze the current maximum fares (in nominal terms) over the four-year determination period. For Cronulla Ferries, there has been a freeze in the maximum fare since January 2014, which implies a reduction of 14% in real terms (ie, excluding inflation) over the 7-year period (ie, from 2014 to 2021 inclusive).

8.3 Implications for the environment

The impact of our draft fare decision on the environment in terms of pollution and congestion is likely to be negligible, given that ferry travel accounts for a small proportion of passenger trips.²⁶

8.4 Implications for the Government

Our decision would result in an increase in the maximum fares for four operators for the four years between 2018 and 2021. This will affect the government through increased payments for fully subsidised student travel under the School Student Travel Scheme (SSTS), and half-fare and Pensioner Excursion Tickets (PET) concessions.

²⁴ IPART *Review of maximum fares for private ferry services in 2017 – Final Report*, November 2016, p 2; IPART, *Review of maximum fares for private ferry services in 2016 – Final Report*, December 2015, p 8; IPART, *Review of maximum fares for private ferry services and the Stockton ferry service for 2015 – Final Report*, December 2014, p 10.

²⁵ IPART *Review of maximum fares for private ferry services in 2017 – Final Report*, November 2016, pp 10, 16.

²⁶ For example, on an average weekday, only around 0.3% of all trips undertaken in the Sydney region are by public ferry. IPART, *Review of external benefits of public transport – Draft Report*, December 2014, p 14.

Generally, the Government provides operators with:

- ▼ a payment based on the maximum child fare for an eligible school student presumed by TfNSW to have travelled under the SSTS. Operators do not record patronage figures for SSTS passengers.
- ▼ a top-up to the full adult fare charged by the operator for concession passengers reported to have travelled by the ferry operator.
- ▼ a payment for passengers who travel with a Gold Opal card, for those operators who previously sold PETs.

As these payments are related to the level of fares charged by ferry operators and/or the maximum fare that they can charge, our draft decision would increase the amount of funding required per student or concession passenger trip for four operators. There should be no impact on funding for the other operators.

8.5 Relativities with Sydney Ferries' services

Matilda Cruises is the only private ferry operator that provides comparable services to those provided by Sydney Ferries on the Circular Quay to Darling Harbour route. There are slight differences in the service route and travel time between the two services, namely:

- ▼ The Sydney Ferries trip uses slow ferries and takes a slightly longer route; from Circular Quay to Darling Harbour via Milsons Point, McMahon's Point and Balmain East and is scheduled to take 23 minutes.
- ▼ The Matilda service uses fast ferries and travels from Circular Quay to Darling Harbour via Luna Park and the estimated travel time is 15 minutes.

Currently, the Sydney Ferries single adult fare is \$5.88 (Opal card fare less than 9km).²⁷

Our draft decision is to accept Matilda Cruises' proposal to increase fares by CPI in each year of the four-year determination period. As discussed, Matilda Cruises is charging less than the maximum fare; the current single adult fare is \$7.00.²⁸ We consider this relativity with Sydney Ferries' fares is appropriate given the differences between the services.

8.6 Service standards

We collect and publish summary data on patronage and service standards from TfNSW. For this review, we have received data for the 12 months to June 2017.

Patronage data is manually collected by operators. Figure 8.1 below shows the breakdown of patronage on private ferries according to passenger type. It illustrates the relativities between numbers of adult full fare-paying passenger trips, and subsidised trips (ie, passengers paying concession/half-fares or using PET/gold opal and patronage counted under the SSTS).

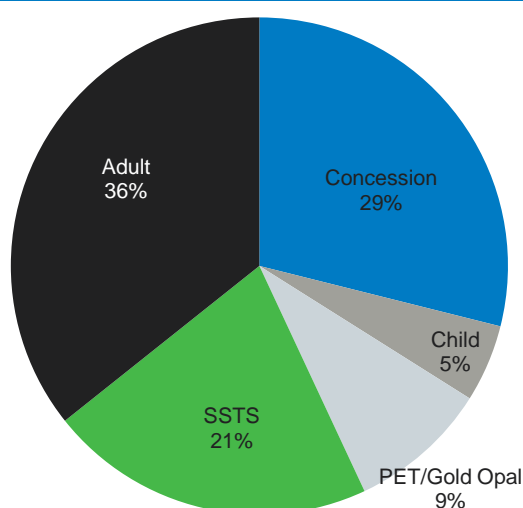
²⁷ NSW Government, Opal ferry fares: <https://www.opal.com.au/en/opal-fares/> Accessed 8 September 2017.

²⁸ Captain Cook Cruises, Darling Harbour Ferry: <https://www.captaincook.com.au/sydney-harbour-cruises/ferries/darling-harbour-ferry/>; Lane Cove Ferry: <https://www.captaincook.com.au/sydney-harbour-cruises/ferries/lane-cove-ferry/lane-cove-city-ferry/> accessed 13 September 2017.

In total, there were just over one million private ferry trips reported across 2016-17. The proportion of patronage by passenger type is very similar to last year:

- ▼ adult full fare ferry trips increased by 2 percentage points to 36%
- ▼ SSTS passengers decreased by two percentage points, and
- ▼ concession (including PET) and child passengers remained unchanged.

Figure 8.1 Patronage on private ferries – 2016-17 (%)



Note: The SSTS patronage is based on the number of issued passes and assumed school trips.

Data source: TfNSW, August 2017.

Ferry operators also provide TfNSW with information on late and cancelled services and the number of safety incidents experienced. For the 12 months to June 2017, the private ferry industry reported 7 incidences of late services and 5 cancelled services, for example due to bad weather. We note that these incidences represent a very low proportion of total services provided (less than 1%). No safety incidents were recorded. This information is summarised in Table 8.1, along with information collected from our previous reviews.

Table 8.1 Summary of KPI data for year ending 30 June

Operator	Late				Cancelled				Safety			
Year ending 30 June	2017	2016	2015	2014	2017	2016	2015	2014	2017	2016	2015	2014
Brooklyn Ferry Service	0	0	0	1	0	0	0	3	0	0	0	0
Central Coast Ferries	1	0	3	0	1	1	0	0	0	0	0	0
Church Point Ferry Service	2	2	2	4	0	0	0	0	0	0	0	0
Clarence River Ferries	0	0	0	0	0	0	0	0	0	0	0	0
Cronulla and National Park Ferry Service	0	0	0	1	0	0	0	2	0	0	0	0
Matilda Cruises – Circular Quay to Darling Harbour	0	0	0	10	0	0	0	5	0	0	0	0
Matilda Cruises – Circular Quay to Lane Cove	0	12	3	0	2	4	4	4	0	0	0	0
Palm Beach Ferries – Palm Beach to Mackerel Beach and the Basin	1	1	1	0	1	0	0	0	0	0	0	0
Palm Beach Ferries – Palm Beach to Ettalong and Wagstaffe	3	2	4	5	1	0	1	3	0	0	0	0

Source: TfNSW.



Appendices



A Referral for the review



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

Referral

I, the Hon Andrew Constance MP, Minister for Transport and Infrastructure, with the approval of the Hon Gladys Berejiklian MP, Premier of New South Wales and the Minister administering the *Independent Pricing and Regulatory Tribunal Act 1992*, under section 123(1) (a) of the *Passenger Transport Act 2014*, refer to the Independent Pricing and Regulatory Tribunal (IPART) the following matter for determination:

Appropriate maximum fares for private ferry services for the four-year period starting 1 January 2018.

In addition to the matters contained in section 124 of the *Passenger Transport Act 2014*, the following specified matters are referred to IPART under section 123(2) (b) of the *Passenger Transport Act 2014* for consideration in undertaking this investigation:


- The pricing of competing modes for private ferry services, including the pricing of Sydney Ferries' fares.

IPART is to publish a draft report and determination as soon as practicable but no later than 15 September 2017.

IPART is to submit its final report and determination under this referral to the Minister for Transport and Infrastructure as soon as practicable but no later than 15 December 2017, or such later date as notified in writing by the Minister.

Signed: 
The Hon Andrew Constance MP
Minister for Transport and Infrastructure

Date: 21/4/17

Signed: 
The Hon Gladys Berejiklian MP
NSW Premier

Date: 14/5/2017

B Requirements of the IPART Act for the review of private ferries maximum fares

Section 124(3) of the *Passenger Transport Act 2014* (NSW) sets out the matters that IPART must consider in making a determination. The section is reproduced in full below.

(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.

C Estimating efficient fares using the building block model

As discussed in Chapter 4, we found that Brooklyn Ferry Service (Brooklyn Ferries), Church Point Ferry Service (Church Point Ferries), Clarence River Ferries (Clarence River), Cronulla and National Park Ferry Service (Cronulla Ferries) and Palm Beach Ferries operate in markets with no or limited competition. For these operators, we analysed the total efficient costs of providing ferry services, and calculated efficient fares for the next four years using a building block approach to determine the maximum fares. For each operator, calculating efficient fares involved three broad steps:

1. Estimating its total efficient costs for each year of the determination period using a building block approach (Section C.1 and Section C.2).
2. Deciding what share of the total efficient costs passengers should pay through fares (see Section C.3). To do this, we will subtract from the total efficient costs:
 - a) An amount equal to the government payments the operator receives for providing school travel and concessions tickets, plus any financial viability payments it receives.
 - b) An amount equal to our estimate of the external benefits generated by the use of private ferry services, where this amount is not accounted for by any existing financial viability payments.
3. Calculating the fare for each ferry service that would be required to cover the passengers' share of total efficient costs, based on our forecast estimate of annual patronage (see Section C.4).

C.1 Estimating total efficient costs using a building block approach

The building block approach is commonly used by IPART²⁹ and other regulators to estimate the total revenue a business needs to generate to recover the efficient costs of providing the regulated services to the required standard over the price determination period.

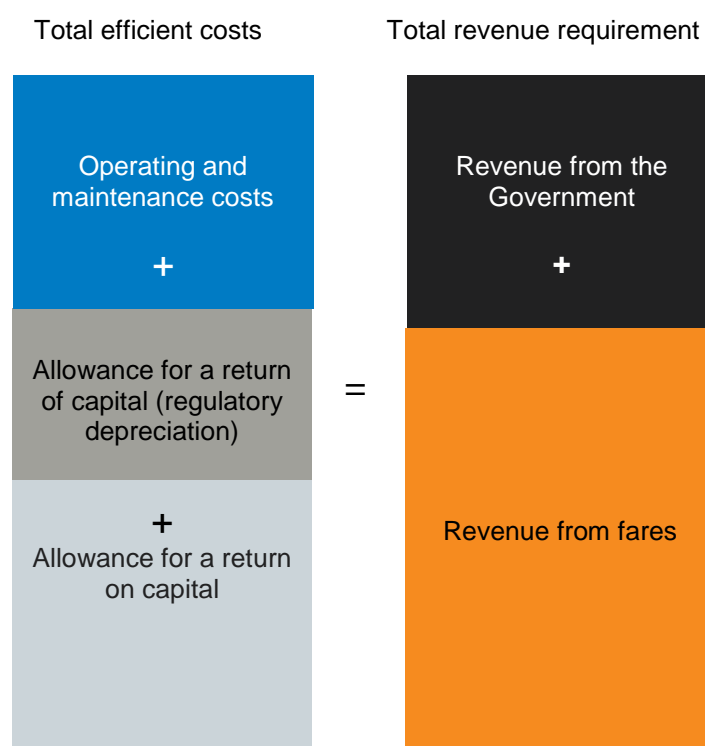
The building block approach typically includes the following components:

- ▼ an efficient level of operating expenditure (operating, maintenance and administration expenses)
- ▼ an allowance for a return on assets that ferry operators used to provide the contracted services
- ▼ an allowance for a return of those assets (depreciation), and
- ▼ an allowance for tax and working capital.

²⁹ <https://www.ipart.nsw.gov.au/Home/Industries/Special-Reviews/Regulatory-policy/IPART-cost-building-block-and-pricing-model?qDh=0> accessed 14 September 2017.

Under the private ferry service contracts, operators receive payments for providing school travel and concession tickets and some receive viability payments. In calculating the efficient fares, we subtracted these payments from the total efficient costs. This is discussed in more detail below.

Figure C.1 Revenue requirement under the building block approach



Note: Our building block model also includes allowances for regulatory taxation and working capital. These are not shown in the figure because they represent a small proportion of the total revenue requirements for private ferries. The figure is not to scale.

C.2 Key inputs to the building block model

The sections below explain our approach for estimating efficient operating and capital expenditure, an allowance for a return on and of assets, and an allowance for tax and working capital.

C.2.1 Efficient operating expenditure

As in previous reviews, the efficient operating expenditures include labour costs, fuel, insurance, repairs and maintenance, berthing and mooring fees and 'other costs'. 'Other costs' comprise but not limiting to cash collection costs, office rent, communication costs, financial services, external consultants and advertising.

We engaged The CIE to provide advice on the total efficient operating and capital costs proposed by operators to provide the contracted level of services for the four years between 2018 and 2021. Brooklyn, Church Point Ferries, Cronulla Ferries and Palm Beach Ferries have submitted their forecast operating and capital costs over the determination period. The

CIE reviewed the operators' forecast operating and capital costs, and assessed whether they are reasonably efficient based on their estimated efficient benchmarks. As Clarence River did not provide cost information, The CIE estimated its efficient costs based on the average efficient costs of all other operators. During this process, The CIE consulted with all ferry operators including Clarence River, and the operators had an opportunity to provide further information on costs.

The CIE assessed operators' proposed costs by reference to cost benchmarks from our 2014 review of the industry after adjusting for annual changes in costs to 2017. Due to the characteristics of the industry (fleet choices, differences in routes, service level obligations and business structure), The CIE found that it is not possible to definitively determine whether an operator is efficient. Rather, The CIE compared costs across operators and against industry cost benchmarks to determine whether an operator's cost forecasts are reasonably efficient, and whether cost changes expected by the operator are reasonable.

Overall, The CIE found that:

- ▼ Brooklyn Ferries and Church Point Ferries' total operating costs are below reasonably efficient costs.
- ▼ Cronulla Ferries and Palm Beach Ferries' total operating costs exceed reasonably efficient costs.

Except for Brooklyn and Church Point, reported labour costs exceed efficient costs


The CIE's recommended efficient labour costs are based on its benchmark efficient labour costs per service hour. The CIE estimated different benchmark labour costs for different vessel sizes based on Indec's efficient labour cost benchmarks in 2014, accounting for recent growth in labour costs in the private ferry industry. The CIE found that over the period from 2013 to 2017 labour costs across private ferry operators increased on average by 3.3% p.a.

The CIE found that except for two operators, operators' reported labour cost per service hour exceeded the efficient benchmark labour costs.

Operators' reported repairs and maintenance costs generally exceed efficient costs

The CIE's recommended efficient repairs and maintenance costs are based on its benchmark efficient repairs and maintenance cost per service hour. The CIE considered that Indec's benchmark repairs and maintenance costs estimated in 2014 remain appropriate, and assessed the efficiency of operators' reported costs against them. It found that most operators' reported repairs and maintenance costs per service exceed reasonably efficient costs.

In our previous reviews, we recommended all ferry services replace old vessels and made an allowance for the associated costs in our building block model, and this was reflected in the efficient repairs and maintenance costs. To date only Palm Beach Ferries has replaced its vessels, and other operators are operating with vessels well beyond their useful economic life. In this case, The CIE considered it not appropriate to compare operators' reported repairs and maintenance costs (reflecting their existing old vessels) against the efficient



repairs and maintenance costs in isolation. Therefore, The CIE also assessed the efficiency of the reported repairs and maintenance costs, accounting for capital ownership costs. If vessels were not replaced, reported repairs and maintenance costs would be higher with lower ownership costs than otherwise. This was then compared to the lower efficient repairs and maintenance costs with higher ownership costs resulting from vessel replacement. Two operators' reported repairs and maintenance costs were above the efficient costs even when ownership costs were accounted for.

All operators' reported fuel, insurance and mooring costs are considered efficient

The CIE considered operators' reported fuel, insurance and mooring costs to be efficient. Therefore, the recommended efficient fuel, insurance and mooring costs are based on the reported costs.

Except for one operator, reported 'other' operating costs exceed efficient costs

'Other' operating costs include items such as office costs, advertising, consumables and uniforms. The CIE's recommended 'other' operating costs are based on its efficient cost benchmark per service hour.

The CIE estimated the efficient cost benchmark per service hour based on Indec's cost benchmark in 2014. It adjusted Indec's cost benchmark to account for the fact that approximately 40% of 'other operating costs' relate to non-salary labour costs such as uniforms and staff training, which vary across ferry operators based on the number of full time employees (FTEs) employed. Hence The CIE's cost benchmark varies across ferry operators to account for differences in the number of FTEs employed.

The CIE found that most operators' reported 'other' operating cost per service hour exceeded substantially the benchmark efficient cost.

Efficient costs for Clarence River Ferries are based on benchmark efficient costs

As Clarence River Ferries did not provide cost information, the recommended efficient costs for Clarence River Ferries are based on:

- ▼ The CIE's benchmark efficient costs per service hour for labour, repairs and maintenance and other operating costs, and
- ▼ the average fuel, insurance and mooring costs across the industry.

C.2.2 Efficient capital expenditure

The maintenance and replacement of vessels represent the largest proportion of capital expenditure incurred by private ferry operators. As in previous reviews capital allowance also includes ferry refurbishment and engine replacement. Non-vessel related capital expenditure comprises office buildings, equipment and furniture and vehicles.

The CIE assessed operators' forecast capital costs, and recommended the efficient capital costs for Brooklyn Ferries, Church Point Ferries, Clarence River Ferries, Cronulla Ferries and Palm Beach Ferries.

In assessing efficient capital costs, The CIE recommended:

- ▼ except for Palm Beach Ferries (Mackerel), allowing engine rebuilds and replacements every 10,000, and 20,000 service hours, respectively, and for Palm Beach Ferries (Mackerel), allowing engine rebuilds and replacements every 20,000 and 60,000 hours – the timing of the capital allowances for engine rebuilds and replacements has been aligned to that of the capital allowances that were granted for vessel acquisition in our previous reviews. This is a change from Indec's approach, which we adopted in our previous reviews, where engine rebuilds and replacements were allowed every three years and six years, respectively.
- ▼ estimating capital allowances for engine works based on total service hours. This is a change from Indec's approach, where capital allowances for engine works were estimated per vessel. The CIE's amendment recognises that ferry operators manage the timing for vessels to be serviced depending on their use (ie, service hours), and that ferry operators may swap vessels between routes and/or allocate particular vessel to other services.
- ▼ adopting operators' reported costs for engine works – where this is not provided, estimate costs for engine works based information provided by other operators and the capacity of the vessel.
- ▼ adopting \$21,000 for refurbishment cost for a slow ferry and \$105,000 for a fast ferry, consistent Indec's advice for our previous reviews, and
- ▼ adopting operators' reported other capital costs as the efficient costs.

As discussed above, The CIE's recommended capex for engine works is estimated based on service hours, not per vessel, irrespective of how many main and spare ferries are being utilised by ferry operators. For the purpose of rolling forward the RABs, we have allocated 75% of the allowance for engine works to the main ferry and the rest to the spare ferry.

Overall, The CIE found that, with the exception of one operator, proposed capital costs (where provided) exceed the efficient capital allowance over the determination period. The CIE also noted that heritage ferries used by operators are popular amongst patrons and are aged well over the assumed 15 or 25 year economic life, and as a result most operators' expected capital expenditure does not align to the timing and type of capital expenditure recommended in this and previous reviews. Service quality is determined by TfNSW under its contracts with operators. Fares should reflect the efficient costs of providing required level of service. As fares are regulated, if operators choose to provide a higher standard of service than required, we do not consider that passengers should pay for this unless there is evidence of customers' willingness to pay.

Majority of the recommended capex are for engine works and general refurbishment

Most ferry operators were given allowances for the acquisition of new ferries during the last determination period. Therefore, the majority of The CIE's recommended efficient capital costs relate to engine works (ie, engine rebuild/replacement) or general refurbishment.

- ▼ Contrary to Brooklyn Ferries' proposal, The CIE did not recommend an allowance for hull sheathing as capital allowances were granted to purchase new vessels in the previous review period.
- ▼ Church Point Ferries did not propose capital allowances for engine rebuild or replacement, but The CIE recommended capital allowances for a rebuild and replacement in 2019 and 2021, respectively. The CIE considered Church Point Ferries' proposal to replace a ferry to be prudent and efficient, and recommended an allowance for ferry replacement. However, the recommended amount is slightly lower than that proposed by Church Point Ferries.
- ▼ For Cronulla Ferries, The CIE recommended engine replacement in 2018 and a rebuild in 2020 based on the timing of the allowance for vessel acquisition in the previous period. It also considered refurbishment of both vessels to be necessary in 2019 and 2020.

The CIE considered Palm Beach Ferries' fleet restructure to be efficient

Palm Beach Ferries recently re-organised its vessels operating on the regulated service routes. As a result of the re-structure, a spare ferry is shared between the two regulated routes serviced by the operator. The fleet restructure also included the replacement of a ferry at a lower capital cost. The CIE considered that the re-structure improves the efficiency of the regulated ferry services. Therefore, we have updated Palm Beach Ferries' RAB based on The CIE's advice on the value of the current fleet in operation. As a result, Palm Beach Ferries' RAB has decreased by around 50% since the end of the last determination period.

We included 50% of the efficient capex for the spare ferry

In our previous reviews, we allowed each ferry operator to maintain an extra ferry as a spare. However, since a spare ferry is unlikely to be used as intensively as the main ferry, we included 50% of the efficient capex for the spare ferry. We maintain the same approach for all operators except for Palm Beach Ferries. Under the new fleet structure, Palm Beach Ferries has one spare ferry, which is shared between two routes. Hence we recommend including a full amount of the recommended capex for Palm Beach Ferries' spare ferry, Escapade shared across the two routes.

C.2.3 Allowances for regulatory depreciation and a return on assets

Rolling forward the regulatory asset base at end of 2017

In our review in 2014 we included capital expenditure to replace very old ferries for some operators. Although they were not planning any ferry replacement we considered that it was prudent to do so as the old ferries were utilised far beyond their conventional useful economic lives. As a result, the efficient prices that we recommended for 2015 to 2017 provided for operators to replace old ferries although they did not incur these costs.

For this review, we rolled forward the asset base of the contracted ferry services at the close of 2017 to the price setting period commencing 1 January 2018.

Allowance for a return on assets

The allowance represents the opportunity cost of assets that ferry operators invest to provide the contracted ferry services (such as ferry, wharf infrastructure, office accommodation and equipment).

We calculated this allowance by rolling forward the value of the asset base each year, taking into account any new capital expenditure and multiplying the value of the asset base in each year by the rate of return. We used our standard approach to estimate the WACC range and for our draft decision we apply the midpoint WACC of 5.6% to estimate the allowance for a return on assets (see Table C.1).

Table C.1 Real post-tax WACC range and midpoint

	Low	Mid	High
Real post-tax WACC	5.3%	5.6%	5.9%

Note: Market data sampled to 30 June 2017.

Source: IPART calculation.

Details on our WACC calculation and parameters are set out in Appendix D.

C.2.4 Allowance for a return of assets (depreciation)

Operators need to recover the cost of the assets used in providing ferry services over their economic lives. To calculate this allowance, we used the standard economic asset lives of 25 years for 'slow' ferries and 15 years for 'fast' ferries and the straight line depreciation method we used in previous reviews.

C.2.5 Working capital and regulatory taxation

We also included in the total efficient costs regulatory taxation and working capital which represent a small proportion of the total efficient costs.

C.3 Determining passengers' share of total efficient costs

After we determined the total efficient costs using a building block model, we subtracted government payments and external benefits as detailed in C.3.2 below from the total efficient costs to estimate the proportion that should be paid by the passengers through fares. In estimating the efficient fare for the private ferry services we used forecast annual patronage based on the average patronage for the last three years, taking into account patronage under different types of tickets (eg, adult, child and concession tickets) based on information from ferry operators, where provided. A summary of multi-trip ticket information is provided in Table C.2

Table C.2 Summary of multi-trip ticket information

Operator	Multi-trip ticket type (trips per ticket)	Discount rate implied by current ticket price
Brooklyn Ferry Service	Ferry Ten (10)	10%
	Ferry Twenty (20)	13%
Church Point Ferry Service	Total Adult 12 ^a	37%
Clarence River Ferries	Info not available	Info not available
Cronulla and National Park Ferry Service	Weekly (10) ^b	36%
	10 Ride (10)	16%
	Family (6) ^c	38%
Palm Beach Ferries	Ferry Ten (10)	10% for Ettalong
		10% for Mackerel

a Church Point Ferry Service sells other multi-trip tickets such as Adult Return, Concession 12, Concession Return and Child Return

b Weekly ticket allows unlimited trips per week, but we assumed 10 trips per week for the purpose of calculating the implied discount rate.

Source: Operators' pricing proposals; Church Point Ferry Service, <http://churchpointferryservice.com>; Cronulla and National Park Ferry Service, <http://www.cronullaferries.com.au>; Palm Beach Ferry Service, <http://www.palmbeachferries.com.au> accessed 8 September 2017

When incorporating multi-trip tickets in our building block model we assumed that the percentage discount implied by the current ticket price will remain unchanged in over the determination period 2018 to 2021.

C.3.1 Government payments for school travel and concession tickets and viability payments

Ferry operators may receive a number of different government payments, including:

- ▼ School Student Travel Scheme (SSTS): this relates to government payments for services that carry school children. The total SSTS payment is notional and is calculated based on the following formula:

$$\text{Semester payment} = \text{number of eligible children} \times \text{single child fare price} \times 2 \times \text{number of school days in semester} \times \text{average number of days travelled (77\% for school children or 75\% for TAFE)}^{30}$$

- ▼ Gold Opal travel which replaces the Pensioner Excursion Ticket (PET): The total government payment relating to Gold Opal travel is calculated based on the following formula:

$$\text{Payment} = \text{number of Gold Opal trips} \times (2 \times \text{full adult ticket})$$

- ▼ Concession payments: The total government payment relating to Concession tickets is calculated as follows:

$$\text{Payment} = \text{number of Concession tickets sold} \times \text{half the adult ticket price.}$$

³⁰ We have assumed 75% for all as we do not have information on the split between TAFE and school students. This is a conservative assumption.

- ▼ Viability payments: The viability payments are made to certain operators based on consultant advice in 2010. The total amounts are indexed by the change in CPI each year.

We subtracted these government payments from the total efficient costs to be recovered from fares.

C.3.2 External benefits

When a person chooses to use a public transport service there are costs and benefits to that person, and to the wider community (including other users of public transport). In the context of this review, people can choose between public and private transport (eg, private ferry and private cars or boats). If private ferry services benefit the whole community, not only the people who use them, a portion of the total efficient costs should be paid by the NSW community as a whole through the Government subsidy. The higher the value of external benefits, the lower the revenue requirement, leading to lower fares. As discussed above, some operators are already receiving a form of subsidy through financial viability payments.

As discussed in Chapter 2, Brooklyn Ferries and Dangar Island League submitted that our external benefits should include a broader range of external benefits including social and community benefits of private ferry services. Examples included:

- ▼ avoided congestion and private boating incidents on the water
- ▼ avoided congestion at the wharf and
- ▼ higher property values compared to other areas where ferry services are not provided.

External benefits associated with ferry services would also include avoided congestion (at the wharf and on the water), reduced boat moorings and avoided private boating incidents associated with private ferry services. To estimate how much private boat use is avoided and thus congestion and accidents on the water, we need to estimate how many people currently using private ferry services would choose to use private boats if private ferry services were not available, and what impact this additional private use would have on the travel times of existing private boat users and boating incidents. If the private ferry services were not provided it is not clear whether users would substitute travel by private boat, water taxi, boat ride share or not travel at all. If journeys would be replaced by private vessels the impacts on increased water incidents and wharf congestion would need to be estimated.

It is only the uninsured component of water incidents – vessel damage and health costs that are relevant for estimating external benefits. We estimate that the number of boating incidents in private ferry operators' service areas is likely to be small inferring from the 2015-16 boating incident statistics in NSW. In 2015-16 there were 22 incidents in total involving a (recreational) personal watercraft, five serious injury incidents and zero fatality incidents in NSW. In addition, the overall incident rate was 178.1 per 100,000 (ie, 0.18%). More than 25% of recreational boating incidents involving at least one personal watercraft occurred on the Georges River and Botany Bay waterway.³¹ Given this, if there were

³¹ Transport for NSW, *Boating incidents in NSW – Statistical report for the 10-year period ended 30 June 2016, January 2017*, p 10.

avoided incidents in private ferry operators' service areas, the value of external benefits of avoided private boating incidents would likely be small. The total value of external benefits including such a value would not exceed the government subsidy most private ferry operators are currently receiving through financial viability payments.

To estimate any avoided wharf congestion costs if the ferry service were not to operate we would need to estimate how many people currently using its ferry services would choose to use their private boats in peak times and whether there is sufficient wharf capacity to accommodate any increased peak usage. If there is insufficient capacity at the wharf, options to address wharf congestion include time of use wharf access charges or capital expenditure to expand wharf capacity. In the short to medium term, increasing wharf access charge in peak times would be a more efficient than expanding capacity.

There may be some external benefits associated with improved mobility and social inclusion, but the benefits largely arise from physical access to public transport and frequency of services rather than fare levels. Noting that the risk factors for social exclusion include household income, we support the view that well-targeted concession fares are an appropriate way of incorporating these benefits into fare setting, rather than reducing fares for everyone, and not just those who need financial assistance.

We note that while our external benefits do not include external benefits discussed above, the total value of external benefits including such values would not exceed the government subsidy most private ferry operators are currently receiving through financial viability payments.

Existing viability payments cover more than external benefits from these services

To quantify the amount of external benefits associated ferry services, we:

- ▼ estimated the amount of patronage in the peak period as the proportion of daily commuter services to total daily services multiplied by total annual patronage, and
- ▼ multiplied the peak period trips by the estimate of net external benefits of \$0.94 per passenger journey for Sydney Ferries.³²

We then compared our estimates of the external benefits with the existing financial viability payments provided to each ferry service. We found that the existing viability payments are more than the estimated values of external benefits. Therefore, we did not include any additional external benefit in estimating the efficient fares.

C.4 Calculating an efficient fare

The last step in our building block approach is calculating the efficient fare for each ferry service that would be required to cover the passengers' share of total efficient costs using our forecast estimate of annual patronage.

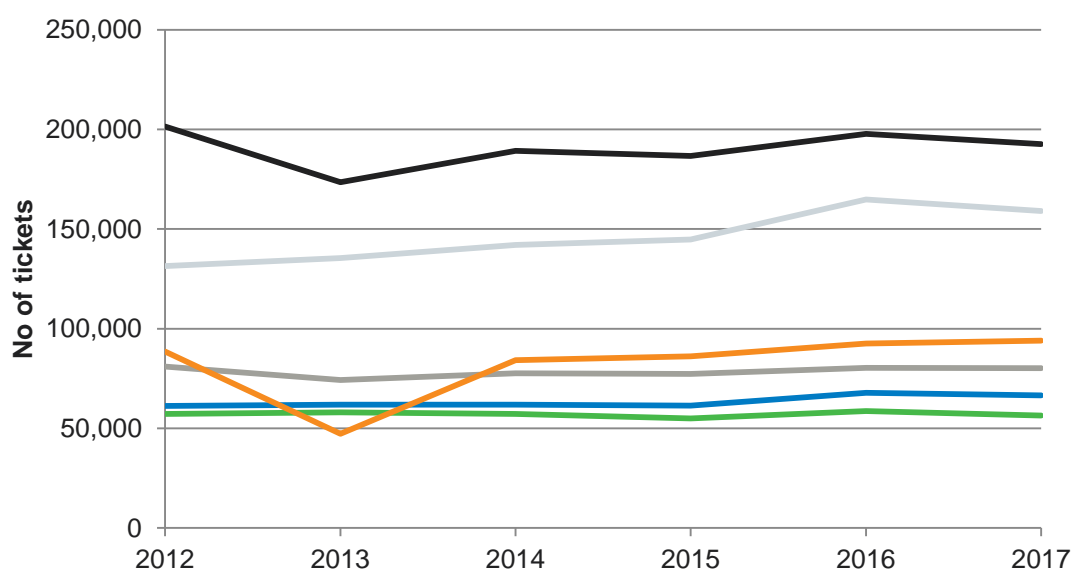
In our previous reviews, we estimated patronage forecast based on the average of the last three years of historical data (where available) for each operator, and updated it each year.

³² This estimate is based on our externality model used for our 2016 public transport review.

We analysed historical trends in patronage levels as they can provide a reasonable indication of future patronage growth.

Figure C.2 shows annual reported patronage levels for all private ferry operators since 2012. We did not identify individual operators due to confidentiality. Overall, we found that the annual patronage for the majority of operators has remained relatively stable. For one operator, the level of patronage has increased in recent years. Note that our analysis excludes the patronage level reported under the School Student Travel Scheme (SSTS). This is because the SSTS patronage is a notional number intended for calculating SSTS payments, and does not reflect the actual number of students travelled under the scheme.

Figure C.2 Annual patronage levels excluding SSTS



Note: We have not identified individual operators due to confidentiality.

Data source: TfNSW and Secretariat's analysis.

In our view, the average patronage over the most recent three years (where available) is a reasonable guide to future patronage. Therefore, for this review we used forecast patronage equivalent to an average number of patronage for the last three years and held constant over the determination period from 2018 to 2021.

D Weighted Average Cost of Capital (WACC)

As discussed in Appendix C, the rate of return is a key input to our calculation for the allowance for a return on assets. We calculate the allowance for a return on assets by multiplying the weighted average cost of capital (WACC) by the RAB.

Our approach is to use a post-tax WACC to determine a rate of return.³³ We first estimate a WACC range based on current and long term market data. Then we selected a point within the range (established by the mid-points of the two WACC ranges) using our uncertainty index. As our assessment of market uncertainty is currently within one standard deviation from the long term average of zero (ie, economic uncertainty is neutral), we have used the midpoint of the range of WACC values.³⁴

We have also considered the level of the industry-specific parameters (ie, the equity beta and the gearing level) by investigating:

- ▼ the risks of providing ferry services, and
- ▼ the value of equity beta and gearing levels of companies that face similar risks to the ferry businesses we are regulating.

Table D.1 sets out the market and industry specific parameters that underpin our WACC calculation. This is followed by our consideration of the industry-specific parameters – equity beta and gearing for the ferry industry.

Table D.1 WACC parameters and values

	WACC – current data			WACC – long-term averages			WACC range		
	Low	Mid	High	Low	Mid	High	Low	Mid	High
Nominal risk free rate	2.5%	2.5%	2.5%	4.1%	4.1%	4.1%			
Inflation	2.4%	2.4%	2.4%	2.4%	2.4%	2.4%			
Debt margin	2.1%	2.1%	2.1%	3.2%	3.2%	3.2%			
Market risk premium	7.4%	9.5%	11.5%	5.5%	6.0%	6.5%			
Gearing	60%	50%	40%	60%	50%	40%			
Gamma	0.25	0.25	0.25	0.25	0.25	0.25			
Equity beta	0.8	0.9	1.0	0.8	0.9	1.0			
Nominal vanilla WACC	6.1%	7.8%	10.2%	7.8%	8.4%	9.3%	7.8%	8.1%	8.4%
Real post-tax WACC	3.6%	5.3%	7.7%	5.3%	5.9%	6.7%	5.3%	5.6%	5.9%

Note: Market data sampled to 30 June 2017.

Source: IPART calculations.

³³ IPART, *Review of WACC Methodology - Final Report*, December 2013.

³⁴ See IPART, *Review of WACC Methodology - Final Report*, December 2013, p 23 for further details on our decision rule for selecting a point within the range of WACC values.

D.1 Industry-specific parameters

To determine the appropriate level for the equity beta and the gearing, we have evaluated the risks faced by private ferry operators. We have compared these risks to other businesses/industries we regulate. We have also investigated market evidence available from companies providing ferry services that are listed on stock exchanges.

In determining the equity beta and gearing level, our current practice is to adopt benchmark values (rather than the values of the regulated entity). This ensures that customers will not bear the costs associated with inefficient funding and capital structures. This is consistent with regulatory practice in Australia.

Equity beta and gearing ratio

The equity beta measures the extent to which the return of a particular security varies with the overall return of the market. It represents the systematic or market-wide risk of a security that cannot be eliminated by holding it as part of a diversified portfolio. It is important to note that the equity beta does not measure business-specific or diversifiable risks.

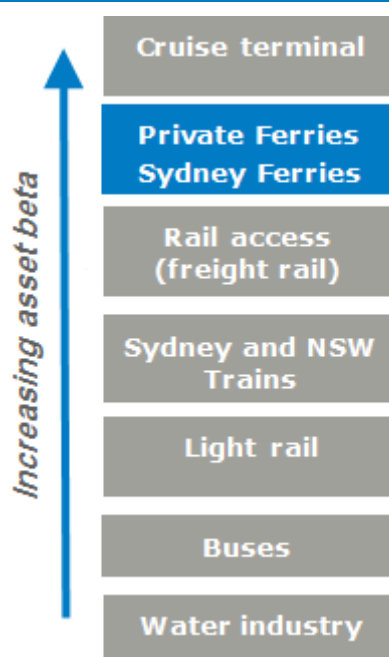
The gearing ratio is the ratio of the value of debt to the total value of assets in the business' capital structure. Gearing is used to weigh the costs of debt and equity in estimating the WACC. Since, all else being equal, debt funding is cheaper than equity funding, the lower the level of gearing the higher the WACC and vice versa.

Our draft decision is to use:

- ▼ an equity beta of 0.8 to 1.0, and
- ▼ a gearing ratio ranging from 60% to 40%.

This decision implies that the level of risk faced by a ferry operator is higher than the risk faced by other public transport modes (Figure D.1). We came to this judgment after considering the relative risks involved in providing private ferry passenger services compared to other modes of transport. We also placed limited weight on beta and gearing values for a range of proxies for the private ferries.

Figure D.1 Implied relative risks of utilities regulated by IPART



Data source: IPART analysis.

Risks relative to other industries

In principle, ferry and bus operators are likely to respond faster in the short to medium term to changes in patronage than rail operators due to the more capital intensive nature of rail business. However, the high level of profit variability of the ferry operators affects the levels of risk they face. By contractual arrangements private ferry operators are required to provide a set number of services, regardless of the number of passengers and more importantly, they earn fare box revenue from ticket sales which is variable.

This is likely to expose private ferry operators to revenue volatility as revenue is directly related to the number of passengers, although some private ferry operators may receive a viability payment. The scheduling requirements also limit the ability of ferry operators to respond to changes in patronage. Further, ferry operators are likely to have a higher proportion of tourist passengers than rail and bus operators. Ferry operators are therefore more exposed to fluctuations in the tourism cycle than bus and rail operators.

Market evidence

Table D.2 presents the listed companies providing ferry passenger services.

Table D.2 Gearing and equity beta of private ferry comparator firms

Company	Country	Gearing (%)	Equity beta	Asset beta
Reederei Herbert	Germany	no data	0.07	n/a
Viking Line	Finland	33	0.21	0.14
Hainan Strait Shipping Co	China	2	0.82	0.8
Superdong Fast Ferry	Vietnam	0	0.37	0.37
Raja Ferry	Thailand	5	1.76	1.67
Attica Holdings	Greece	37	-0.01	0
ANEK Lines	Greece	89	0.00	0
Minoan Lines	Greece	32	0.00	0
Tokai Kisen	Japan	35	0.20	0.06
Sado Steam Ship	Japan	72	0.11	0.03
Irish Continental	Ireland	27	0.61	0.45
Penguin International	Singapore	2	0.89	0.87
Shun Tak Holdings	HongKong	28	0.95	0.69
Mean		30.2	0.46	0.42
Median		29.8	0.21	0.26

Source: Bloomberg, accessed 30 August 2017, IPART calculation.

The data in Table D.2 suggests that, for private ferry operators the level of gearing ranges from 0% to 89% and the average is 30%. Also, the equity beta ranges from -0.01 to 1.76 and the average is 0.46.

We have placed limited weight on the evidence from the market due to a number of concerns we have with the data. For example:

- ▼ Table D.2 shows that gearing and beta values range widely. However, we note the average gearing level from this sample is at the lower end of the selected range of our analysis shown in Table D.1.
- ▼ The beta estimation method (regression of stock returns on market returns) may be subject to estimation errors.
- ▼ Also, most of the comparators provide more than just ferry transport services. These include property management, tourism and hospitality sectors and investment manager

Our WACC decision rule

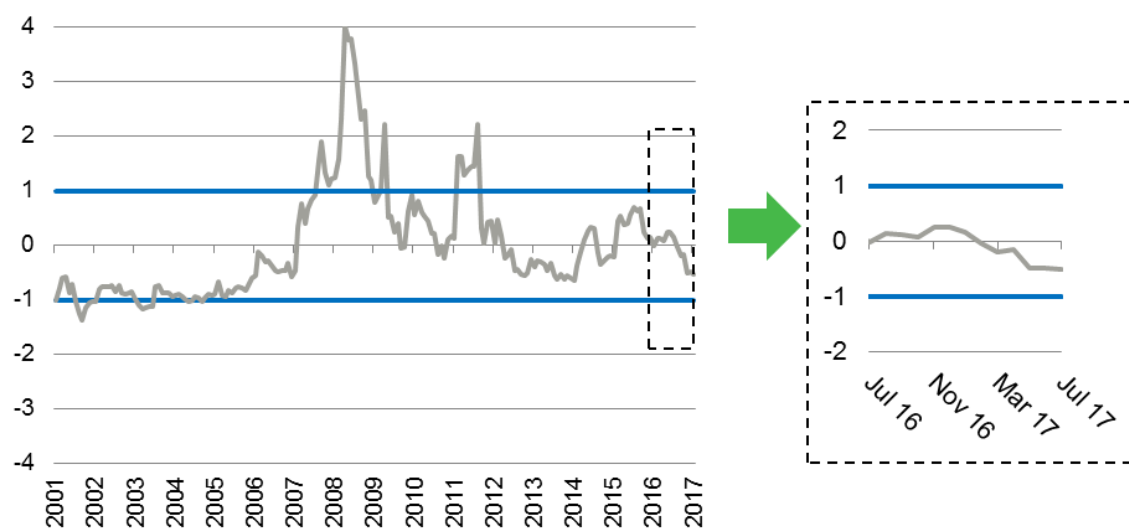
We use the uncertainty index to help us choosing a WACC point estimate from within the WACC range:

- ▼ If the uncertainty index is within or at one standard deviation from the long term average of zero (ie, economic uncertainty is neutral), we will select the midpoint WACC.

- ▼ If the uncertainty index is more than one standard deviation from the long term average of zero, we will consider moving away from the midpoint WACC. We will have regard to the value of the uncertainty index and additional financial market information.³⁵

Figure D.2 shows that the uncertainty index is currently within one standard deviation from the long term average of zero. Based on IPART's decision rule, we recommend the midpoint of the real post-tax WACC range, 5.6%, as the point estimate WACC.

Figure D.2 Uncertainty index



Data source: Thomson Reuters DataStream and IPART calculation.

³⁵ IPART, *Review of WACC Methodology - Final Report, December 2013*, p 23

E Draft Determination



Private Ferry Services

**Appropriate maximum fares for private ferry services from 1
January 2018**

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Preliminary

1 Background

1.1 Passenger Transport Act

- (a) Under section 123(1) of the Passenger Transport Act, the Minister may refer to IPART, with the approval of the Minister administering the IPART Act, all or any of the services provided by one or more public passenger services for determination of, or a recommendation as to:
 - (1) appropriate maximum fares for the services;
 - (2) appropriate maximum fares for specified fares or classes of fares for the service or services.
- (b) Under section 124(1) of the Passenger Transport Act, IPART is to conduct investigations and report to the Minister on the appropriate maximum fares if a referral is made under section 123(1).
- (c) By letter dated 16 May 2017, IPART received a referral from the Minister, with the approval of the Minister administering the IPART Act, to investigate and report on the determination of appropriate maximum fares for Private Ferry Services.

1.2 IPART Act

- (a) The following provisions of the IPART Act apply in making a determination under Part 7 of the Passenger Transport Act:
 - (1) sections 13A-14A (in relation to the approaches to be applied in making pricing determinations); and
 - (2) Divisions 6 and 7 of Part 3 (in relation to the publication of reports and conduct of investigations).
- (b) In accordance with section 13A of the IPART Act, IPART has:
 - (1) fixed the maximum Fares for Private Ferry Services supplied during the 2018 Period of the Determination Period; and
 - (2) set a methodology for fixing maximum Fares for Private Ferry Services supplied during the 2019, 2020 and 2021 Periods of the Determination Period.

2 Application of this determination

- (a) This determination sets out the formulae to be applied to determine the maximum Fares for Private Ferry Services.
- (b) This determination commences on 1 January 2018 (**Commencement Date**).
- (c) This determination applies from the Commencement Date until the earlier of:

- (1) 31 December 2021; and
- (2) the date on which this determination is replaced,
(**Determination Period**).

3 Compliance with this determination

- (a) Under section 125(2) of the Passenger Transport Act, Transport for NSW may not determine a Fare under a fares order that exceeds any maximum Fare determined by IPART, or that is determined otherwise than in accordance with a methodology determined by IPART, under Part 7 of the Passenger Transport Act.
- (b) Under section 125(6) of the Passenger Transport Act, a person may not demand a Fare that exceeds any maximum Fare determined by Transport for NSW.

4 Approach to determining maximum Fares

- (a) In making a determination on the maximum Fares for Tickets for Private Ferry Services, IPART has had regard to a broad range of matters including:
 - (1) the matters specified by the Minister in the referral pursuant to section 123(2)(b) of the Passenger Transport Act; and
 - (2) the matters set out in section 124(3) of the Passenger Transport Act.
- (b) In accordance with section 124(6) of the Passenger Transport Act and section 13A of the IPART Act, IPART has set a methodology for fixing the maximum Fares for Tickets for Private Ferry Services.
- (c) As required by section 13A(3) of the IPART Act, IPART's reasons for setting a methodology for fixing maximum Fares are set out in Schedule 12.

5 Pricing Schedules

- (a) Schedule 1 sets out maximum Fares for Tickets for Private Ferry Services provided on the Brooklyn to Dangar Island Route during each Period of the Determination Period.
- (b) Schedule 2 sets out maximum Fares for Tickets for Private Ferry Services provided on the Woy Woy to Empire Bay Route during each Period of the Determination Period.
- (c) Schedule 3 sets out maximum Fares for Tickets for Private Ferry Services provided on the Church Point and Scotland Island Route during each Period of the Determination Period.
- (d) Schedule 4 sets out maximum Fares for Tickets for Private Ferry Services provided on the Iluka to Yamba Route during each Period of the Determination Period.
- (e) Schedule 5 sets out maximum Fares for Tickets for Private Ferry Services provided on the Cronulla to Bundeena Route during each Period of the Determination Period.

- (f) Schedule 6 sets out maximum Fares for Tickets for Private Ferry Services provided on the Circular Quay to Darling Harbour Route during each Period of the Determination Period.
- (g) Schedule 7 sets out maximum Fares for Tickets for Private Ferry Services provided on the Circular Quay to Lane Cove Route during each Period of the Determination Period.
- (h) Schedule 8 sets out maximum Fares for Tickets for Private Ferry Services provided on the Palm Beach to Mackerel Beach Route during each Period of the Determination Period.
- (i) Schedule 9 sets out maximum Fares for Tickets for Private Ferry Services provided on the Palm Beach to Ettalong Route during each Period of the Determination Period.
- (j) Schedule 10 sets out the Fuel Cost Adjustment applicable to maximum Fares for Tickets for Private Ferry Services for the 2019 Period to 2021 Period of the Determination Period.

6 Definitions and interpretation

Schedule 11 sets out definitions and interpretation provisions used in this determination.

Schedule 1 Maximum Fares for Private Ferry Services provided on the Brooklyn to Dangar Island Route

1 Application

This Schedule 1 sets out the maximum Fares for Private Ferry Services provided on the Brooklyn to Dangar Island Route during the Determination Period.

2 Maximum Fares for Private Ferry Services on the Brooklyn to Dangar Island Route

The maximum Fare for a Private Ferry Service supplied under a Ticket on the Brooklyn to Dangar Island Route is:

- (a) for the 2018 Period, the amount specified in **Table 1** below for the 2018 Period; and
- (b) for each Period other than the 2018 Period, the amount specified in **Table 1** below for the applicable Period multiplied by the Fuel Cost Adjustment for the applicable Period.

[**Note:** the Fuel Cost Adjustment is calculated in accordance with clause 3 of Schedule 10 and will only apply to an amount specified in **Table 1** for the 2019, 2020 and 2021 Periods if the circumstances identified in clause 1(b) of Schedule 10 exist in respect of the relevant Period.]

Table 1 Maximum Fares for Private Ferry Services on the Brooklyn to Dangar Island Route (\$)

	2018 Period	2019 Period	2020 Period	2021 Period
Ticket	7.60	8.00	8.40	8.80

Schedule 2 Maximum Fares for Private Ferry Services provided on the Woy Woy to Empire Bay Route

1 Application

This Schedule 2 sets out the maximum Fares for Private Ferry Services provided on the Woy Woy to Empire Bay Route during the Determination Period.

2 Maximum Fares for Private Ferry Services on the Woy Woy to Empire Bay Route

The maximum Fare for a Private Ferry Service supplied under a Ticket on the Woy Woy to Empire Bay Route is:

- (a) for the 2018 Period, the amount specified in **Table 2** below for the 2018 Period; and
- (b) for each Period other than the 2018 Period, the amount specified in **Table 2** below for the applicable Period multiplied by the Fuel Cost Adjustment for the applicable Period.

[**Note:** the Fuel Cost Adjustment is calculated in accordance with clause 3 of Schedule 10 and will only apply to an amount specified in **Table 2** for the 2019, 2020 and 2021 Periods if the circumstances identified in clause 1(b) of Schedule 10 exist in respect of the relevant Period.]

Table 2 Maximum Fares for Private Ferry Services on the Woy Woy to Empire Bay Route (\$)

	2018 Period	2019 Period	2020 Period	2021 Period
Ticket	8.00	$Fare_{2018} \times (1 + \Delta CPI_1)$	$Fare_{2019} \times (1 + \Delta CPI_2)$	$Fare_{2020} \times (1 + \Delta CPI_3)$

Where:

Fare₂₀₁₈, **Fare₂₀₁₉**, and **Fare₂₀₂₀** are the maximum Fares for a Ticket for a Private Ferry Service provided on the Woy Woy to Empire Bay Route for the relevant Period.

ΔCPI₁, **ΔCPI₂**, and **ΔCPI₃** each have the meaning given to those terms in clause 1.2 of Schedule 11.

Schedule 3 Maximum Fares for Private Ferry Services provided on the Church Point and Scotland Island Route

1 Application

This Schedule 3 sets out the maximum Fare for Private Ferry Services provided on the Church Point and Scotland Island Route during the Determination Period.

2 Maximum Fares for Private Ferry Services on the Church Point and Scotland Island Route

The maximum Fare for a Private Ferry Service supplied under a Ticket on the Church Point and Scotland Island Route is:

- (a) for the 2018 Period, the amount specified in **Table 3** below for the 2018 Period; and
- (b) for each Period other than the 2018 Period, the amount specified in **Table 3** below for the applicable Period multiplied by the Fuel Cost Adjustment for the applicable Period.

[**Note:** the Fuel Cost Adjustment is calculated in accordance with clause 3 of Schedule 10 and will only apply to an amount specified in **Table 3** for the 2019, 2020 and 2021 Periods if the circumstances identified in clause 1(b) of Schedule 10 exist in respect of the relevant Period.]

Table 3 Maximum Fares for Private Ferry Services on the Church Point and Scotland Island Route (\$)

	2018 Period	2019 Period	2020 Period	2021 Period
Ticket	8.70	9.00	9.40	9.70

Schedule 4 Maximum Fares for Private Ferry Services provided on the Iluka to Yamba Route

1 Application

This Schedule 4 sets out the maximum Fares for Private Ferry Services provided on the Iluka to Yamba Route during the Determination Period.

2 Maximum Fares for Private Ferry Services on the Iluka to Yamba Route

The maximum Fare for a Private Ferry Service supplied under a Ticket on the Iluka to Yamba Route is:

- (a) for the 2018 Period, the amount specified in **Table 4** below for the 2018 Period; and
- (b) for each Period other than the 2018 Period, the amount specified in **Table 4** below for the applicable Period multiplied by the Fuel Cost Adjustment for the applicable Period.

[**Note:** the Fuel Cost Adjustment is calculated in accordance with clause 3 of Schedule 10 and will only apply to an amount specified in **Table 4** for the 2019, 2020 and 2021 Periods if the circumstances identified in clause 1(b) of Schedule 10 exist in respect of the relevant Period.]

Table 4 Maximum Fares for Private Ferry Services on the Iluka to Yamba Route (\$)

	2018 Period	2019 Period	2020 Period	2021 Period
Ticket	8.60	8.90	9.20	9.50

Schedule 5 Maximum Fares for Private Ferry Services provided on the Cronulla to Bundeena Route

1 Application

This Schedule 5 sets out the maximum Fares for Private Ferry Services provided on the Cronulla to Bundeena Route during the Determination Period.

2 Maximum Fares for Private Ferry Services on the Cronulla to Bundeena Route

The maximum Fare for a Private Ferry Service supplied under a Ticket on the Cronulla to Bundeena Route is:

- (a) for the 2018 Period, the amount specified in **Table 5** below for the 2018 Period; and
- (b) for each Period other than the 2018 Period, the amount specified in **Table 5** below for the applicable Period multiplied by the Fuel Cost Adjustment for the applicable Period.

[Note: the Fuel Cost Adjustment is calculated in accordance with clause 3 of Schedule 10 and will only apply to an amount specified in **Table 5** for the 2019, 2020 and 2021 Periods if the circumstances identified in clause 1(b) of Schedule 10 exist in respect of each of the relevant Period.]

Table 5 Maximum Fares for Private Ferry Services on the Cronulla to Bundeena Route (\$)

	2018 Period	2019 Period	2020 Period	2021 Period
Ticket	6.40	6.40	6.40	6.40

Schedule 6 Maximum Fares for Private Ferry Services provided on the Circular Quay to Darling Harbour Route

1 Application

This Schedule 6 sets out the maximum Fares for Private Ferry Services provided on the Circular Quay to Darling Harbour Route during the Determination Period.

2 Maximum Fares for Private Ferry Services on the Circular Quay to Darling Harbour Route

The maximum Fare for a Private Ferry Service supplied under a Ticket on the Circular Quay to Darling Harbour Route is:

- (a) for the 2018 Period, the amount specified in **Table 6** below for the 2018 Period; and
- (b) for each Period other than the 2018 Period, the amount specified in **Table 6** below for the applicable Period multiplied by the Fuel Cost Adjustment for the applicable Period.

[**Note:** the Fuel Cost Adjustment is calculated in accordance with clause 3 of Schedule 10 and will only apply to an amount specified in **Table 6** for the 2019, 2020 and 2021 Periods if the circumstances identified in clause 1(b) of Schedule 10 exist in respect of the relevant Period.]

Table 6 Maximum Fares for Private Ferry Services on the Circular Quay to Darling Harbour Route (\$)

	2018 Period	2019 Period	2020 Period	2021 Period
Ticket	7.60	$Fare_{2018} \times (1 + \Delta CPI_1)$	$Fare_{2019} \times (1 + \Delta CPI_2)$	$Fare_{2020} \times (1 + \Delta CPI_3)$

Where:

Fare₂₀₁₈, **Fare₂₀₁₉**, and **Fare₂₀₂₀** are the maximum Fares for a Ticket for a Private Ferry Service provided on the Circular Quay to Darling Harbour Route for the relevant Period.

ΔCPI_1 , ΔCPI_2 , and ΔCPI_3 each have the meaning given to those terms in clause 1.2 of Schedule 11.

Schedule 7 Maximum Fares for Private Ferry Services provided on the Circular Quay to Lane Cove Route

1 Application

This Schedule 7 sets out the maximum Fares for Private Ferry Services provided on the Circular Quay to Lane Cove Route during the Determination Period.

2 Maximum Fares for Private Ferry Services on the Circular Quay to Lane Cove Route

The maximum Fare for a Private Ferry Service supplied under a Ticket on the Circular Quay to Lane Cove Route is:

- (a) for the 2018 Period, the amount specified in **Table 7** below for the 2018 Period; and
- (b) for each Period other than the 2018 Period, the amount specified in **Table 7** below for the applicable Period multiplied by the Fuel Cost Adjustment for the applicable Period.

[**Note:** the Fuel Cost Adjustment is calculated in accordance with clause 3 of Schedule 10 and will only apply to an amount specified in **Table 7** for the 2019, 2020 and 2021 Periods if the circumstances identified in clause 1(b) of Schedule 10 exist in respect of the relevant Period.]

Table 7 Maximum Fares for Private Ferry Services on the Circular Quay to Lane Cove Route (\$)

	2018 Period	2019 Period	2020 Period	2021 Period
Ticket	7.60	$Fare_{2018} \times (1 + \Delta CPI_1)$	$Fare_{2019} \times (1 + \Delta CPI_2)$	$Fare_{2020} \times (1 + \Delta CPI_3)$

Where:

Fare₂₀₁₈, **Fare₂₀₁₉**, and **Fare₂₀₂₀** are the maximum Fares for a Ticket for a Private Ferry Service provided on the Circular Quay to Lane Cove Route for the relevant Period.

ΔCPI_1 , ΔCPI_2 , and ΔCPI_3 each have the meaning given to those terms in clause 1.2 of Schedule 11.

Schedule 8 Maximum Fares for Private Ferry Services provided on the Palm Beach to Mackerel Beach Route

1 Application

This Schedule 8 sets out the maximum Fares for Private Ferry Services provided on the Palm Beach to Mackerel Beach Route during the Determination Period.

2 Maximum Fares for Private Ferry Services on the Palm Beach to Mackerel Beach Route

The maximum Fare for a Private Ferry Service supplied under a Ticket on the Palm Beach to Mackerel Beach Route is:

- (a) for the 2018 Period, the amount specified in **Table 8** below for the 2018 Period; and
- (b) for each Period other than the 2018 Period, the amount specified in **Table 8** below for the applicable Period multiplied by the Fuel Cost Adjustment for the applicable Period.

[**Note:** the Fuel Cost Adjustment is calculated in accordance with clause 3 of Schedule 10 and will only apply to an amount specified in **Table 8** for the 2019, 2020 and 2021 Periods if the circumstances identified in clause 1(b) of Schedule 10 exist in respect of the relevant Period.]

Table 8 Maximum Fares for Private Ferry Services on the Palm Beach to Mackerel Beach Route (\$)

	2018 Period	2019 Period	2020 Period	2021 Period
Ticket	8.10	8.10	8.10	8.10

Schedule 9 Maximum Fares for Private Ferry Services provided on the Palm Beach to Ettalong Route

1 Application

This Schedule 9 sets the maximum Fares for Private Ferry Services provided on the Palm Beach to Ettalong Route during the Determination Period.

2 Maximum Fares for Private Ferry Services on the Palm Beach to Ettalong Route

The maximum Fare for a Private Ferry Service supplied under a Ticket on the Palm Beach to Ettalong Route is:

- (a) for the 2018 Period, the amount specified in **Table 9** below for the 2018 Period; and
- (b) for each Period other than the 2018 Period, the amount specified in **Table 9** below for the applicable Period multiplied by the Fuel Cost Adjustment for the applicable Period.

[**Note:** the Fuel Cost Adjustment is calculated in accordance with clause 3 of Schedule 10 and will only apply to an amount specified in **Table 9** for the 2019, 2020 and 2021 Periods if the circumstances identified in clause 1(b) of Schedule 10 exist in respect of the relevant Period.]

Table 9 Maximum Fares for Private Ferry Services on the Palm Beach to Ettalong Route (\$)

	2018 Period	2019 Period	2020 Period	2021 Period
Ticket	11.60	11.60	11.60	11.60

Schedule 10 Fuel Cost Adjustment to maximum Fares

1 Application

- (a) Subject to paragraph (b) below, this Schedule 10 sets out the formulae for determining the Fuel Cost Adjustment to maximum Fares for Tickets for Private Ferry Services.
- (b) This Schedule 10 applies only where the percentage change (in absolute terms) between the:
 - (1) Average Fuel Price for the current Fuel Cost Review Period; and
 - (2) Average Fuel Price for the Fuel Cost Review Period immediately prior to the current Fuel Cost Review Period,
 is greater than 20%.

2 IPART notification of Fuel Cost Adjustment

- (a) Following the end of each Fuel Cost Review Period during the Determination Period, but before the commencement of the following Period, IPART will notify a Private Operator and Transport for NSW if, under the determination, a Fuel Cost Adjustment is to be made to the maximum Fare for a Ticket applicable to the Private Operator in the following Period.

[Note: For example, if the Fuel Cost Adjustment is to apply to a maximum Fare for Private Ferry Services supplied during the 2019 Period, IPART will provide the notification under clause 2(a) to the relevant Private Operator and Transport for NSW after 30 September 2018 (the end of the Fuel Cost Review Period), but by no later than 31 December 2018 (the day before the commencement of the 2019 Period).]

- (b) A notice under paragraph (a) will identify the maximum Fare for a Ticket to be applied by the Private Operator in the following Period, as adjusted by the Fuel Cost Adjustment.
- (c) IPART may publish a notice under paragraph (a) on its website.

3 Calculation of the Fuel Cost Adjustment

The Fuel Cost Adjustment is calculated as follows:

- (a) **For the 2019 Period:**

$$\text{Fuel Cost Proportion}_{2018} \times [\Delta \text{Average Fuel Price}_{2017-2018} \pm 0.2]$$

Where:

Fuel Cost Proportion₂₀₁₈ is Fuel Cost Proportion for the relevant Private Operator identified in Table 10 for the 2018 Period; and

$\Delta\text{Average Fuel Price}_{2017-2018}$ is the percentage change between the Average Fuel Price for the Fuel Cost Review Period ending 30 September 2018 and the Average Fuel Price for the Fuel Cost Review Period ending 30 September 2017, calculated as follows:

$$\Delta\text{Average Fuel Price}_{2017-2018} = \frac{\text{Average Fuel Price}_{2017-2018}}{\text{Average Fuel Price}_{2016-2017}} - 1$$

Where:

Average Fuel Price₂₀₁₇₋₂₀₁₈ is the Average Fuel Price for the Fuel Cost Review Period ending 30 September 2018; and

Average Fuel Price₂₀₁₆₋₂₀₁₇ is the Average Fuel Price for the Fuel Cost Review Period ending 30 September 2017.

[**Note:** Clause 3(d) of this Schedule 10 identifies when 0.2 is to be added to, or subtracted from, the $\Delta\text{Average Fuel Price}_{2017-2018}$ in calculating the Fuel Cost Adjustment for the 2019 Period.]

(b) For the 2020 Period:

$$\text{Fuel Cost Proportion}_{2019} \times [\Delta\text{Average Fuel Price}_{2018-2019} \pm 0.2]$$

Where:

Fuel Cost Proportion₂₀₁₉ is the Fuel Cost Proportion for the relevant Private Operator identified in Table 10 for the 2019 Period; and

$\Delta\text{Average Fuel Price}_{2018-2019}$ is the percentage change between the Average Fuel Price for the Fuel Cost Review Period ending 30 September 2019 and the Average Fuel Price for the Fuel Cost Review Period ending 30 September 2018, calculated as follows:

$$\Delta\text{Average Fuel Price}_{2018-2019} = \frac{\text{Average Fuel Price}_{2018-2019}}{\text{Average Fuel Price}_{2017-2018}} - 1$$

Where:

Average Fuel Price₂₀₁₈₋₂₀₁₉ is the Average Fuel Price for the Fuel Cost Review Period ending 30 September 2019; and

Average Fuel Price₂₀₁₇₋₂₀₁₈ is the Average Fuel Price for the Fuel Cost Review Period ending 30 September 2018.

[**Note:** Clause 3(d) of this Schedule 10 identifies when 0.2 is to be added to, or subtracted from, the $\Delta\text{Average Fuel Price}_{2018-2019}$ in calculating the Fuel Cost Adjustment for the 2020 Period.]

(c) For the 2021 Period:

$$\text{Fuel Cost Proportion}_{2020} \times [\Delta\text{Average Fuel Price}_{2019-2020} \pm 0.2]$$

Where:

Fuel Cost Proportion₂₀₂₀ is the Fuel Cost Proportion for the relevant Private Operator identified in Table 10 for the 2020 Period; and

ΔAverage Fuel Price₂₀₁₉₋₂₀₂₀ is the percentage change between the Average Fuel Price for the Fuel Cost Review Period ending 30 September 2020 and the Average Fuel Price for the Fuel Cost Review Period ending 30 September 2019, calculated as follows:

$$\Delta \text{Average Fuel Price}_{2019-2020} = \frac{\text{Average Fuel Price}_{2019-2020}}{\text{Average Fuel Price}_{2018-2019}} - 1$$

Where:

Average Fuel Price₂₀₁₉₋₂₀₂₀ is the Average Fuel Price for the Fuel Cost Review Period ending 30 September 2020; and

Average Fuel Price₂₀₁₈₋₂₀₁₉ is the Average Fuel Price for the Fuel Cost Review Period ending 30 September 2019.

[**Note:** Clause 3(d) of this Schedule 10 identifies when 0.2 is to be added to, or subtracted from, the **ΔAverage Fuel Price**₂₀₁₉₋₂₀₂₀ in calculating the Fuel Cost Adjustment for the 2021 Period.]

(d) Where the **ΔAverage Fuel Price**_i in any of the above formulae is calculated:

- (1) as a **positive** number, 0.2 will be **subtracted** from that number to determine the amount of the Fuel Cost Adjustment; or
- (2) as a **negative** number, 0.2 will be **added** to that number to determine the amount of the Fuel Cost Adjustment.

Table 10 Fuel Cost Proportions for Private Operators (%)

Private Operator (by Route)	2018 Period	2019 Period	2020 Period
Brooklyn to Dangar Island Route	8	8	9
Woy Woy to Empire Bay Route	7	7	7
Church Point and Scotland Island Route	9	10	10
Iluka to Yamba Route	6	6	6
Cronulla to Bundeena Route	5	5	6
Circular Quay to Darling Harbour Route	19	19	19
Circular Quay to Lane Cove Route	19	19	19
Palm Beach to Ettalong Route	19	19	19
Palm Beach to Mackerel Beach Route	6	6	6

Schedule 11 Definitions and interpretation

1 Definitions

1.1 Defined Terms

2018 Period means the period beginning on the Commencement Date and ending on 31 December 2018 (inclusive).

2019 Period means the 12 month period beginning on 1 January 2019 and ending on 31 December 2019 (inclusive).

2020 Period means the 12 month period beginning on 1 January 2020 and ending on 31 December 2020 (inclusive).

2021 Period means the 12 month period beginning on 1 January 2021 and ending on 31 December 2021 (inclusive).

Adult means a person who is aged 16 years or over, and is not entitled to a concession fare.

[Note: As at the date of this determination, Transport for NSW has specified that the persons aged between 4 and 16 years are entitled to pay a concession fare and that those persons aged 16 years and over, who are not otherwise entitled to a concession fare, are required to pay adult fares for travel on public transportation services.]

Average Fuel Price means the daily average retail price of diesel fuel in Sydney (excluding GST and excise duty) published by FUELtrac averaged over a Fuel Cost Review Period.

Brooklyn to Dangar Island Route means the route between two or more of the following ferry wharves:

- (a) Brooklyn Public Wharf, Dangar Road, Brooklyn NSW 2083;
- (b) Little Wobby Wharf, Little Wobby NSW 2256;
- (c) Dangar Island Ferry Wharf, Neotsfield Avenue, Dangar Island NSW 2083; and
- (d) any other ferry wharf used to provide ferry services on the same line of route from time to time.

Church Point and Scotland Island Route means the route between two or more of the following ferry wharves:

- (a) Church Point Wharf, Pittwater Road, Church Point NSW 2108;
- (b) Bells Wharf, Vivian Street, Scotland Island NSW 2105;
- (c) Carols Wharf, Richard Road, Scotland Island NSW 2105;
- (d) Eastern Wharf, Lowanna Street, Scotland Island NSW 2105;

- (e) Tennis Court Wharf, Pitt View Street, Scotland Island NSW 2105;
- (f) Hall's Wharf, Bona Crescent, Morning Bay NSW 2108;
- (g) Lovett Wharf, Lovett Bay NSW 2105;
- (h) South Elvina Wharf, Normanhurst Street, Elvina Bay NSW 2105; and
- (i) any other ferry wharf used to provide ferry services on the same line of route from time to time.

Circular Quay to Darling Harbour Route means the route between two or more of the following ferry wharves:

- (a) Circular Quay NSW 2000;
- (b) Pier 26, Darling Harbour NSW 2000;
- (c) Jeffrey Street Wharf, Jeffrey Street, Kirribilli NSW 2061; and
- (d) any other ferry wharf used to provide ferry services on the same line of route from time to time.

Circular Quay to Lane Cove Route means the route between two or more of the following ferry wharves:

- (a) Wharf 6, Circular Quay NSW 2000;
- (b) Jeffrey Street Wharf, Jeffrey Street, Kirribilli NSW 2061;
- (c) Kirribilli Wharf, Holbrook Avenue, Kirribilli NSW 2061;
- (d) Birchgrove Wharf, Louisa Road, Birchgrove NSW 2041;
- (e) Greenwich Point Wharf, Serpentine Road, Greenwich NSW 2065;
- (f) Greenwich Wharf, Bay Street, Greenwich NSW 2065;
- (g) Northwood Wharf, Northwood Road, Northwood NSW 2066;
- (h) Longueville Wharf, Stuart Street, Longueville NSW 2066;
- (i) Hunters Hill Wharf, Alexandra Street, Hunters Hill NSW 2110;
- (j) Riverview College Wharf, Wharf Lane, Riverview NSW 2066;
- (k) Pier 26, Darling Harbour NSW 2000; and
- (l) any other ferry wharf used to provide ferry services on the same line of route from time to time.

Commencement Date means the Commencement Date defined in clause 2(b) of the Preliminary section of this determination.

Cronulla to Bundeena Route means the route between Cronulla Wharf, Tonkin Street, Gunnamatta Bay, Cronulla NSW 2230 and Bundeena Wharf, Brighton Street, Bundeena NSW 2230, and includes any other ferry wharf used to provide ferry services on the same line of route from time to time.

Determination Period means the Determination Period defined in clause 2(c) of the Preliminary section of this determination.

Fare means a fare payable by an Adult for a Ticket to undertake a Trip on a Private Ferry Service.

Ferry Service has the meaning given to that term in the Passenger Transport Act.

Fuel Cost Adjustment means the percentage increase or decrease (as the case may be) to the maximum Fare for a Ticket for a Private Ferry Service applicable in a Period, calculated in accordance with Schedule 10.

Fuel Cost Proportion means the percentage identified for each Private Operator and relevant Period in Table 10 of Schedule 10.

[**Note:** the percentage represents the efficient cost of acquiring diesel fuel incurred by a Private Operator, as a percentage proportion of the efficient total operating cost incurred by the Private Operator, in providing a Private Ferry Service during a Period.]

Fuel Cost Review Period means:

- (a) the period beginning on 1 October 2016 and ending on 30 September 2017; and
- (b) thereafter, each 12 month period beginning on 1 October and ending on 30 September.

GST has the meaning given to that term in *A New Tax System (Goods and Services Tax) Act 1999* (Cth).

Iluka to Yamba Route means the route between Iluka Wharf, Charles Street, Iluka NSW 2466 and Yamba Wharf, River Street, Yamba NSW 2464, and includes any other ferry wharf used to provide ferry services on the same line of route from time to time.

IPART means the Independent Pricing and Regulatory Tribunal of New South Wales established under the IPART Act.

IPART Act means the *Independent Pricing and Regulatory Tribunal Act 1992* (NSW).

Minister means the Minister administering the Passenger Transport Act.

Palm Beach to Ettalong Route means the route between two or more of the following ferry wharves:

- (a) Palm Beach Public Wharf, Barrenjoey Road, Palm Beach NSW 2108;
- (b) Wagstaffe Wharf, Mulhall Street, Wagstaffe NSW 2257; and
- (c) Ettalong Wharf, Ferry Road, Ettalong Beach NSW 2257; and
- (d) any other ferry wharf used to provide ferry services on the same line of route from time to time.

Palm Beach to Mackerel Beach Route means the route between two or more of the following ferry wharves:

- (a) Palm Beach Public Wharf, Barrenjoey Road, Palm Beach NSW 2108;

- (b) Bennets Wharf, Ku-Ring-Gai National Park, Coasters Retreat NSW 2108;
- (c) Bonnie Doon Wharf, Ku-Ring-Gai National Park, Coasters Retreat NSW 2108;
- (d) The Basin Wharf, Ku-Ring-Gai Chase NSW 2083;
- (e) Currawong Wharf, Currawong Beach NSW 2108;
- (f) Mackerel Beach Wharf, Ross Smith Parade, Great Mackerel Beach NSW 2108; and
- (g) any other ferry wharf used to provide ferry services on the same line of route from time to time.

Passenger Service Contract has the meaning given to that term in the Passenger Transport Act.

Passenger Transport Act means the *Passenger Transport Act 2014* (NSW).

Period means any one or more of (as the context requires):

- (a) 2018 Period;
- (b) 2019 Period;
- (c) 2020 Period; and
- (d) 2021 Period.

For the avoidance of doubt, where this determination is replaced in part, the new determination may stipulate the date on which a Period ends in so far as this determination is replaced.

Private Ferry Services means Ferry Services provided by a Private Operator and to which Division 2 of Part 7 of the Passenger Transport Act applies.

Private Operator means a party to a Passenger Service Contract under which that party provides Private Ferry Services on one of the following routes:

- (a) Brooklyn to Dangar Island Route;
- (b) Woy Woy to Empire Bay Route;
- (c) Church Point and Scotland Island Route;
- (d) Iluka to Yamba Route;
- (e) Cronulla to Bundeena Route;
- (f) Circular Quay to Darling Harbour Route;
- (g) Circular Quay to Lane Cove Route;
- (h) Palm Beach to Mackerel Beach Route; or
- (i) Palm Beach to Ettalong Route.

Ticket means the proof of entitlement to undertake a Trip on a Private Ferry Service.

Transport for NSW means Transport for NSW as constituted under the *Transport Administration Act 1988* (NSW).

Trip means a single instance of travel on a Private Ferry Service consisting of getting on a ferry once, travelling on that ferry, and getting off that ferry once.

Woy Woy to Empire Bay Route means the route between two or more of the following ferry wharves:

- (a) Woy Woy Wharf, The Boulevard, Woy Woy NSW 2256;
- (b) Veterans Hall Wharf, Henderson Road, Saratoga NSW 2251;
- (c) Lintern Street Wharf, Lintern Street, Davistown NSW 2251;
- (d) Central Wharf, Davistown Road, Davistown NSW 2251;
- (e) Pine Avenue Wharf, Pine Avenue, Davistown NSW 2251;
- (f) Empire Bay Wharf, Kendall Road, Empire Bay NSW 2257; and
- (g) any other ferry wharf used to provide ferry services on the same line of route from time to time.

1.2 Consumer Price Index

- (a) CPI means:
 - (1) the consumer price index, All Groups index number for Sydney as published by the Australian Bureau of Statistics; or
 - (2) if the Australian Bureau of Statistics does not or ceases to publish the index, then CPI will mean an index determined by IPART.
- (b) ΔCPI_1 , ΔCPI_2 , and ΔCPI_3 are calculated as follows:

$$\Delta CPI_1 = \left(\frac{CPI_{\text{September 2019}}}{CPI_{\text{September 2018}}} \right) - 1$$

$$\Delta CPI_2 = \left(\frac{CPI_{\text{September 2020}}}{CPI_{\text{September 2019}}} \right) - 1$$

$$\Delta CPI_3 = \left(\frac{CPI_{\text{September 2021}}}{CPI_{\text{September 2020}}} \right) - 1$$

each as calculated and notified by IPART.

- (c) The subtext (for example September 2019) when used in relation to the CPI in paragraph (b) above refers to the CPI for the quarter and year indicated (in the example, the September quarter for 2019).

2 Interpretation

2.1 General provisions

In this determination:

- (a) headings are for convenience only and do not affect the interpretation of this determination;
- (b) a reference to a schedule, annexure, clause or table is a reference to a schedule to, clause of, or table in, this determination unless otherwise indicated;
- (c) a construction that would promote a purpose or object expressly or impliedly underlying the IPART Act or the Passenger Transport Act is to be preferred to a construction that would not promote that purpose or object;
- (d) words importing the singular include the plural and vice versa;
- (e) a reference to a law or statute includes regulations, rules, codes and other instruments (including licences) under it and consolidations, amendments, re-enactments or replacements of them or of the law or statute itself;
- (f) where a word is defined, other grammatical forms of that word have a corresponding meaning;
- (g) a reference to a month is a calendar month;
- (h) a reference to a person includes a reference to the person's executors, administrators, successors, substitutes (including, but not limited to, persons taking by novation), replacements and assigns;
- (i) a reference to an officer includes a reference to the officer which replaces it or which substantially succeeds to its powers or functions;
- (j) a reference to a body, whether statutory or not:
 - (1) which ceases to exist; or
 - (2) whose powers or functions are transferred to another body,
 is a reference to the body which replaces it or which substantially succeeds to its powers or functions.

2.2 Explanatory notes, simplified outline, examples and clarification notices

- (a) Explanatory notes and worked examples do not form part of this determination, but in the case of uncertainty may be relied on for interpretation purposes.
- (b) IPART may publish a clarification notice in the NSW Government Gazette to correct any manifest error in or to clarify any part of this determination. Such a clarification notice is taken to form part of this determination.

2.3 Maximum Fares inclusive of GST

Maximum Fares specified in this determination include GST.

2.4 Rounding Rule

- (a) All maximum Fares provided for in this determination are to be rounded to the nearest 10 cents.
- (b) For the avoidance of doubt, if an unrounded fare is equal to \$Y and 5×Z cents (where Z is equal to 1, 3, 5, 7, 9, 11, 13, 15, 17 or 19), then the rounded ticket price for that ticket will be \$Y and 5×(Z+1) cents.

Schedule 12 Statement of reasons why IPART has chosen to set a methodology for fixing a maximum price

Under section 124(6) of the Passenger Transport Act and section 13A of the IPART Act, IPART may fix maximum prices, or may set a methodology for fixing maximum prices, for services provided by one or more public passenger services.

In this determination, IPART has set a methodology for fixing the maximum Fares that Private Operators may charge for Private Ferry Services for the 2019 Period, 2020 Period and 2021 Period.

IPART has set a methodology because it is impractical to make a determination directly fixing the maximum Fares for Private Ferry Services.

IPART's decision is to apply a Fuel Cost Adjustment to the maximum Fares for Private Ferry Services for the 2019 Period to 2021 Period. A Fuel Cost Adjustment is a mechanism allowing IPART to account for material deviations between the forecast and actual fuel costs of Private Operators during the Determination Period, in circumstances where Private Operators have limited capacity to independently hedge against volatility in fuel costs.

It would be impractical to apply a Fuel Cost Adjustment through a determination directly fixing a price on a building block approach, because directly fixing the Fare would not adequately account for actual variations in future fuel costs. A methodology provides the necessary flexibility to apply a Fuel Cost Adjustment that allows maximum Fares to vary with material deviations in forecast and actual fuel costs during the Determination Period.