

Attachment A – Information required by the Commission

This Attachment contains the information, data and documents provided by GPC in response to the Commission's request outlined on pages 2 and 3 of the Form.

For the Commission's convenience, we have repeated each item outlined on pages 2 and 3 of the Form before providing GPC's response.

Notifying party

1. Provide details of the notifying party, including:

1.1. name, address (registered office), telephone number, and ACN

| | |
|------------------|--|
| Name | Gladstone Ports Corporation Limited |
| Address | 40 Goondoon Street Gladstone Queensland 4680 |
| Telephone | +61 7 4976 1333 |
| ACN | 131 965 896 |

1.2. contact person's name, telephone number, and email address;

| | |
|------------------|---|
| Name | Peter O'Sullivan, Chief Executive Officer |
| Telephone | +61 7 4976 1300 |
| Email | osullivanp@gpcl.com.au |

1.3. a description of business activities; and

GPC is a Government Owned Corporation, formed in 1914, that facilitates the trade of Central Queensland's major resource industries, including coal, liquefied natural gas (**LNG**) and alumina, in addition to agriculture and bulk products.

GPC is the "port authority" under the *Transport Infrastructure Act 1994* (Qld) (**TIA**) for three port precincts – the Port of Gladstone (**Port**), the Port of Rockhampton and the Port of Bundaberg.²

Under the TIA, GPC is responsible for establishing, managing and operating efficient and effective port facilities and services within its Port and for providing and arranging for the provision of ancillary services or works necessary or convenient for the effective and efficient operation of the Port.³

GPC, as the port authority for the Port of Gladstone, is empowered to arrange for the provision of ancillary services necessary for the effective operation of the port,⁴ and to impose a charge for the use of its port area, either by reference to a ship using its port, or by reference to the goods loaded or unloaded in its port.⁵

GPC's approval is required to operate a tug service in the Port of Gladstone.⁶

² Schedule 1 of the *Transport Infrastructure (Ports) Regulation 2016* (Qld).

³ *Transport Infrastructure Act 1994* (Qld), section 275(1).

⁴ *Transport Infrastructure Act 1994* (Qld), section 275(1).

⁵ *Transport Infrastructure Act 1994* (Qld), section 279.

⁶ The operation of tug services in the Port of Gladstone is a controlled activity as defined under 289B of the *Transport Infrastructure Act 1994* (Qld). Pursuant to the Port Notice 03/17 – Managing Controlled Activities (issued under section 282(1)), the operation of a tug service at the Port of Gladstone requires approval of the Port Authority (section 282 and Part 4A of Chapter 8).

GPC also owns and operates some of the cargo handling facilities within the Port of Gladstone.⁷ The figure below sets out the wharf centres located at the Port of Gladstone and the company that owns and / or operates each centre.

Figure 1: Wharf centres at the Port of Gladstone

| Wharf centre | Owner | Operator |
|------------------------|---|---|
| Auckland Point | <ul style="list-style-type: none"> GPC | <ul style="list-style-type: none"> Auckland Point No 1 is operated by GPC Auckland Point No 2 is operated by Grain Corp Auckland Point No 3 is a multi-user berth Auckland Point No 4 is a multi-user berth⁸ |
| Barney Point | <ul style="list-style-type: none"> GPC | <ul style="list-style-type: none"> GPC |
| Boyne Wharf | <ul style="list-style-type: none"> GPC | <ul style="list-style-type: none"> Boyne Smelters Limited |
| Curtis Island | <ul style="list-style-type: none"> Australia Pacific LNG Santos GLNG Queensland Curtis LNG | <ul style="list-style-type: none"> Australia Pacific LNG Santos GLNG Queensland Curtis LNG |
| Fisherman's Landing | <ul style="list-style-type: none"> Fisherman's Landing No 1 (Bauxite) is owned by Rio Tinto Alcan (Yarwun) Fisherman's Landing No 2 (Rio Tinto) is owned by Rio Tinto Alcan (Yarwun) Fisherman's Landing No 4 (Cement Australia) is owned by GPC Fisherman's Landing No 5 is owned by GPC⁹ | <ul style="list-style-type: none"> Fisherman's Landing No 1 (Bauxite) is operated by Rio Tinto Alcan (Yarwun) and is also a multi-user berth Fisherman's Landing No 2 (Rio Tinto) is operated by Rio Tinto Alcan (Yarwun) and is also a multi-user berth Fisherman's Landing No 4 (Cement Australia) is a multi-user berth Fisherman's Landing No 5 is a multi-product berth¹⁰ |
| RG Tanna Coal Terminal | <ul style="list-style-type: none"> GPC | <ul style="list-style-type: none"> GPC |
| South Trees | <ul style="list-style-type: none"> Queensland Alumina Limited | <ul style="list-style-type: none"> Queensland Alumina Limited |

⁷ Gladstone Ports Corporation, *Operations* (accessed 16 January 2018): <http://www.gpcl.com.au/operations>.

⁸ Queensland Marine Safety, *Port Procedures and Shipping Information – Gladstone* (September 2017), pp. 44 – 45.

⁹ Queensland Marine Safety, *Port Procedures and Shipping Information – Gladstone* (September 2017), pp. 49 – 50.

¹⁰ Queensland Marine Safety, *Port Procedures and Shipping Information – Gladstone* (September 2017), pp. 49 – 50.

| Wharf centre | Owner | Operator |
|------------------------------|---|---|
| Wiggins Island Coal Terminal | <ul style="list-style-type: none"> Aquila Resources Glencore New Hope Group Wesfarmers Curragh Yancoal | <ul style="list-style-type: none"> Aquila Resources Glencore New Hope Group Wesfarmers Curragh Yancoal |

Further information about GPC can be found at: www.gpcl.com.au/about-us

1.4. email address for service of documents in Australia.

| | |
|-------|--|
| Name | Sharon Henrick, Partner, Head of Competition Law and Regulatory, King & Wood Mallesons |
| Email | sharon.henrick@au.kwm.com |

Details of the notified conduct

2. Indicate whether the notified conduct is for:

- 2.1. exclusive dealing (s 47 of the *Competition and Consumer Act 2010 (Cth)*) (the Act);
- 2.2. resale price maintenance (s 48); or
- 2.3. collective bargaining (s 93AB).

The notified conduct is for exclusive dealing under section 47(6) and section 47(7).

3. Provide details of the notification conduct, including:

- 3.1. a description of the notified conduct;
- 3.2. any relevant documents detailing the terms of the notified conduct;
- 3.3. the rationale for the notified conduct;
- 3.4. any time period relevant to the notified conduct.

GPC is proposing to require that all vessels requiring towage services at the Port of Gladstone use the services of the holder of the exclusive 'tug licence' for the Port of Gladstone for the period commencing on 1 January 2020 and up to 31 December 2027.

GPC is proposing to engage in the notified conduct by awarding a new exclusive licence through a competitive tender process to provide harbour towage services at the Port of Gladstone for a term of up to eight years, commencing at a date yet to be determined but commencing no later than 1 January 2020 and expiring no later than 31 December 2027.

Further information regarding the notified conduct, including its rationale, is provided in GPC's submission (see Attachment B, sections 4, 5, 6 and 7).

4. Provide documents submitted to the notifying party's board or prepared by or for the notifying party's senior management for purposes of assessing or making a decision in relation to the notified conduct and any minutes or record of the decision made.

GPC provides a copy of the following documents in **Confidential Attachment A-1** in response to this question:

- A document titled ‘Resolution No. 5.7 – Towage Licence Approach – ACCC Submission’ (dated December 2017), which was prepared for a GPC board meeting held on 20 December 2017.¹¹
- A document titled ‘Matters arising from human resources committee meeting and GPC ordinary board meeting held on 20 December 2017’.
- Two documents prepared by PricewaterhouseCoopers at the request of GPC, being:
 - a report titled ‘Gladstone Ports Corporation – Economic assessment of future towage configuration options’ (dated November 2017); and
 - a longer report also titled ‘Gladstone Ports Corporation – Economic assessment of future towage configuration options’ (dated November 2017), which attaches a memorandum in Appendix C prepared by Aurecon titled ‘Analysis of tug provider options’ (dated 13 November 2017).
- A letter from GPC to each of ConocoPhillips Australia Pty Ltd, QGC Pty Limited and GLNG Operations Pty Limited, dated 13 December 2017, setting out GPC’s proposal for future towage licence arrangements at the Port of Gladstone.
- Letters received from each of ConocoPhillips Australia Pty Ltd, QGC Pty Limited and GLNG Operations Pty Ltd in support of GPC’s proposal, which GPC received in December 2017.

5. Provide the names and/or a description of the persons or classes of persons who may be directly impacted by the notified conduct (including targets in collective bargaining or boycott conduct) and detail how or why they might be impacted.

The notified conduct may affect companies that currently import and/or export in the Gladstone area commodities including aluminium, petroleum, bauxite, caustic soda, calcite, ilmenite, magnesia, liquid ammonia, fly ash, cement, coal, nickel, grain and LNG.

These companies may be impacted by the notified conduct to the extent they are directly, or indirectly, users of the Port of Gladstone and require harbour towage services because they will be required to acquire such services from GPC’s exclusive licence holder.

Although GPC is unable to provide an exhaustive list of every affected party, the figure below lists the key companies that export or import major commodities, and shipping agencies, currently operating within the Port of Gladstone.

Figure 2: Key companies that import or export major commodities, and shipping agencies, currently operating within the Gladstone

| Company | Description |
|--|--|
| <i>Exporters and importers</i> | |
| Cement Australia Pty Ltd (Cement Australia) | Cement Australia produces and distributes cement. It operates Australia’s largest cement plant at Fisherman’s Landing in Gladstone. |
| Conoco Phillips Australia Pty Limited (Conoco Phillips) | Conoco Phillips holds a 37.5% interest in the Australia Pacific LNG joint venture, which is a producer of natural gas located in Queensland. Australia Pacific LNG produces gas from coal seams in eastern Australia, including in |

¹¹ Please note that the confidential and legally privileged content of this document has been redacted from the copy provided to the Commission in Attachment A-1.

| Company | Description |
|--|---|
| | the Bowen and Surat basins. Its operations include an LNG export facility on Curtis Island. ¹² |
| Orica Limited (Orica) | Orica is a mining and civil services company that operates an ammonium nitrate production facility in Gladstone. |
| Origin Energy Limited (Origin) | Origin is engaged in energy exploration, production, power generation and retailing. It operates an LNG project near Gladstone. |
| Queensland Alumina Limited (QAL) | QAL is owned by Rio Tinto Aluminium and Rusal. It produces alumina in Gladstone. |
| Rio Tinto Alcan (Rio Tinto) | Rio Tinto is a mining company that operates the Yarwun alumina refinery near Gladstone. |
| Royal Dutch Shell plc (Shell) | Shell is the operator and majority interest holder in the QGC venture, which is a producer of natural gas located in Queensland. QGC produces natural gas from wells drilled into coal seams in the Surat Basin. Its operations include a two-train LNG export facility on Curtis Island. ¹³ |
| Santos Ltd (Santos) | Santos operates and holds a 30% interest in the GLNG joint venture, which is a producer of natural gas located in Queensland. GLNG incorporates the development of coal seam gas resources in the Bowen and Surat Basins. GLNG's operations include a two-train liquefaction and storage facility on Curtis Island. ¹⁴ |
| Shipping agencies | |
| AsiaWorld Shipping Service Pty Ltd (AsiaWorld Shipping Service) | AsiaWorld Shipping Services is one of the shipping agencies providing services at the Port of Gladstone. They specialise in project and break bulk cargoes. |
| Australian Ships Agencies – Gladstone | Australian Ships Agencies is one of the shipping agencies providing services at the Port of Gladstone |
| Gladstone Port Logistics | Gladstone Port Logistics is one of the shipping agencies providing services at the Port of Gladstone. |
| Gulf Agency Company (Australia) Pty Ltd (GAC) | GAC is one of the shipping agencies providing services at the Port of Gladstone. |
| Hetherington Kingsbury Shipping Agency | Hetherington Kingsbury Shipping Agency is one of the shipping agencies providing services at the Port of Gladstone. |

¹² Conoco Phillips Australia Pty Limited, *Australia Pacific LNG* (accessed 23 January 2018): <http://www.conocophillips.com.au/what-we-do/our-projects-activities/australia-pacific-lng/>; Australia Pacific LNG, *About Us* (accessed 23 January 2018): <https://www.aplng.com.au/about-us.html>.

¹³ Shell, *About QGC* (accessed 23 January 2018): <http://www.shell.com.au/about-us/projects-and-locations/qgc/about-qgc.html>.

¹⁴ Santos Ltd, *What we do – GLNG* (accessed 23 January 2018): <https://www.santos.com/what-we-do/assets/glng/>.

| Company | Description |
|---|---|
| Inchcape Shipping Services | Inchcape Shipping Services is one of the shipping agencies providing services at the Port of Gladstone. |
| Ironmonger Shipping Agencies | Ironmonger Shipping Agencies is one of the shipping agencies providing services at the Port of Gladstone. |
| LBH Australia (LBH) | LBH is a port agency that focuses on bulk commodities. It provides services at the Port of Gladstone. |
| McArthur Shipping & Agency | McArthur Shipping & Agency is one of the shipping agencies providing services at the Port of Gladstone. |
| Monson Agencies Australia (Monson Agencies) | Monson Agencies is a shipping agency that specialises in bulk commodities. It provides services at the Port of Gladstone. |
| Sturrock Grindrod Maritime (Sturrock Grindrod) | Sturrock Grindrod is a shipping and logistics company. It provides shipping agency services at the Port of Gladstone. |
| Toll Remote Logistics | Toll Remote Logistics provides logistics support solutions, including vessel husbandry and onshore/offshore logistics, to organisations operating in difficult and isolated environments. |
| Wilhemsen Ships Service Pty Ltd (Wilhemsen) | Wilhemsen is a maritime industry group providing shipping agency services at the Port of Gladstone. |

Market information and concentration

6. Describe the products and/or services supplied, and the geographic areas supplied, by the notifying parties. Identify all products and services in which two or more parties to the notified conduct overlap (compete with each other) or have a vertical relationship (e.g. supplier-customer).

The products and/or services supplied by GPC, and the geographic areas in which they are supplied, are set out in GPC's response to item 1.3 above.

There are no relevant overlapping services. During the term of the proposed new exclusive licence, the successful tenderer will supply harbour towage services to vessels using the Port of Gladstone.

GPC has a supplier-customer relationship with users of the Port of Gladstone. Under the TIA, GPC has the power to impose charges on users at the Port of Gladstone. Users who enter and use the Port must comply with GPC's port rules.¹⁵ These comprise Port Notices issued under the TIA that allow GPC to control certain activities in the Port of Gladstone in accordance with the TIA.¹⁶ Failure to comply with the rules is an offence.¹⁷

GPC will have a licensor-licensee relationship with the holder of the new towage licence.

¹⁵ Gladstone Ports Corporation, *Port Notices and Rules* (accessed 18 January 2018): <http://www.gpcl.com.au/operations/port-notices-and-rules>.

¹⁶ *Transport Infrastructure Act 1994* (Qld), section 282.

¹⁷ *Transport Infrastructure Act 1994* (Qld), section 828J.

The winner of the competitive tender process will be the holder of an exclusive licence with GPC for the provision of harbour towage services in the Port of Gladstone, commencing on a date to be determined (but no later than 1 January 2020) for a period of up to eight years.

The holder of the new exclusive licence will be obligated to supply harbour towage services to users at the Port of Gladstone in accordance with the terms of the exclusive licence.

7. Describe the relevant industry or industries. Where relevant, describe the sales process, the supply chains or any products or services involved, and the manufacturing process.

GPC’s response to this item is provided in its submission (see Attachment B, sections 8 and 9).

8. In respect of overlapping products and/or services identified, provide estimated market shares for each of the parties where readily available.

The figure below sets out Ibis World’s estimate of shares (by revenue) held by each major harbour towage service provider in Australia.

Figure 3: Estimate of shares for harbour towage services in Australia in 2017

| Provider | Estimated share |
|----------------------|-----------------|
| MMA Offshore Limited | 21.8% |
| Svitzer Australia | 18.6% |
| Bhagwan Marine | 11.6% |
| Serco Group | 7.0% |
| Other | 41.0% |

Source: Ibis World, ‘Navigation, Towage and Services to Water Transport in Australia’ (February 2017), p. 3.

The companies who are included in the estimated 41.0% share held by “other” providers include SMIT Marine (GPC’s current towage service provider), Riverwijs, Westug, Bhagwan Marine, BHP Towage Services, Rivotow Marine and Daltugs.

9. Describe the competitive constraints on the parties to the proposed conduct, including any likely changes to those constraints should authorisation be granted. You should address:

9.1. existing or potential competitors;

The figure below sets out the existing providers of harbour towage services in Australia. All of these providers could compete for the exclusive licence to supply harbour towage services at the Port of Gladstone, either alone or in collaboration with one of the other providers at their discretion.

Figure 4: Providers of harbour towage service providers in Australia

| Provider | Description |
|-----------------------------------|--|
| MMA Offshore Limited (MMA) | MMA is an ASX listed company headquartered in Fremantle, Western Australia. It was founded in 1982 with a single vessel and has since grown to operate over 50 vessels, including harbour and anchor handling tugboats, barges and platform supply, multi-purpose survey and accommodation vessels. MMA specialises in providing marine services to oil and gas extractors. It is currently |

| Provider | Description |
|---|--|
| | <p>one of the four towage providers at the Port of Dampier in Western Australia.</p> <p>MMA's main operations base in Dampier has logistics, private wharf and ship repair facilities capable of servicing the range of vessels engaged in offshore support activities. It also operates a supply base in Broome, Western Australia.</p> <p>In June 2014, MMA expanded outside of Australia with its acquisition of the subsidiaries of Jaya Holdings Limited, a Singapore-based offshore vessel operator and shipbuilder with operations in Asia, Middle East and Africa.</p> <p>In the last three financial years, MMA earned revenues of \$591.2 million (FY2014-2015), \$391.6 million (FY2015-2016) and \$378.1 million (FY2016-2017).¹⁸</p> |
| <p>Svitzer Australia Pty Ltd (Svitzer)</p> | <p>Svitzer, a subsidiary of the Denmark-based AP Moller-Maersk, entered the Australian market in 2007 upon acquiring Adstream Marine Limited. It now has a presence in 35 ports in Australia.</p> <p>Svitzer provides a number of marine services, including ship assistance services such as harbour towage, salvage, emergency response, lines and mooring, and offshore support services. It performs approximately 50,000 tugboat jobs each year.</p> <p>Significant projects that Svitzer has been involved in include winning a \$650 million contract in 2013 to provide tugboats and a pilot boat for the Wheatstone LNG Terminal in Western Australia, and securing a 10-year contract with the Ichthys LNG project in the Northern Territory in December 2015.</p> <p>Over the last three years, it is estimated that Svitzer's revenue has grown steadily at between 2.9 to 3.6% per year, to stand at an estimated \$321.6 million at year end December 2017.¹⁹</p> |
| <p>Bhagwan Marine Pty Ltd (Bhagwan Marine)</p> | <p>Bhagwan Marine entered the industry in 2000 and has its head office in Geraldton, Western Australia. It has established itself, and increased its market share, through acquisitions in the Northern Territory and Queensland.</p> <p>The company operates in five locations around Australia and currently has more than 150 vessels and marine assets servicing the oil and gas, resources, port services, towage and construction industries. Bhagwan Marine's fleet includes crew transfer vessels, dive support vessels, flat top barges, landing craft, multi cats, tugs and utility vessels.</p> <p>Bhagwan Marine is estimated to have earned revenue of \$201.5 million for FY 2016-17.²⁰</p> |
| <p>Serco Group Pty Limited</p> | <p>Serco Group Pty Limited is a subsidiary of the UK company Serco Group plc, and the parent company of DMS Maritime Pty Ltd (DMS Maritime) which was established in 1997.</p> <p>DMS Maritime now offers maritime and asset management services, having originally provided port and support craft services to the Royal Australian Navy. The Navy is still a key customer, as is the Department of Immigration and Border Protection and</p> |

¹⁸ Ibis World, *Industry Report I5219: Navigation, Towage and Services to Water Transport in Australia* (February 2017), p. 22.

¹⁹ Ibis World, *Industry Report I5219: Navigation, Towage and Services to Water Transport in Australia* (February 2017), p. 22.

²⁰ Ibis World, *Industry Report I5219: Navigation, Towage and Services to Water Transport in Australia* (February 2017), p. 23.

| Provider | Description |
|---|--|
| | <p>the Australian Fisheries Management Authority.</p> <p>Services offered by DMS Maritime include ship refuelling, general harbour and alongside services, and it provides tugboats, water taxis and lighters. All major navy ports in Australia are serviced by DMS Maritime.</p> <p>DMS Maritime's revenue at year end December 2017 is estimated to have been \$121.6 million, a slight increase from \$119.8 million at year end December 2016.²¹</p> |
| SMIT Marine Australian Pty Ltd (SMIT Marine) | <p>SMIT Marine is a wholly-owned subsidiary of SMIT Lamnalco.</p> <p>SMIT Marine is the current provider of towage services to GPC. The company provides towage and related marine services in 30 countries, and has a fleet of 130 vessels worldwide.²²</p> <p>SMIT Marine previously provided towage services at the Port of Newcastle in conjunction with Svitzer. However, in mid-2015, SMIT Marine ceased its operations at the ports of Newcastle, Port Botany and Melbourne and outsourced these operations to Svitzer. It cited unviability and the difficulty of being competitive with only four tugboats.²³</p> |
| Riverwijs Marine Pty Ltd (Riverwijs Marine) | <p>Riverwijs Marine is an alliance between the Australian company Riverside Marine and the Danish international towage and salvage company Svitzer.</p> <p>Riverwijs provides LNG Terminal towage at the Withnell Bay Export Terminal in the Port of Dampier, Western Australia, and at the Pluto LNG Terminal in the Port of Dampier. It provides harbour towage services at the Port of Dampier and the Port of Bunbury, and emergency towage first response for the Australian Maritime Safety Authority in North West Australia.</p> <p>RiverWijs' head office is based in Fremantle and it operates 8 tugboats across Dampier, Bunbury and Burrup.²⁴</p> |
| Westug Pty Ltd (Westug) | <p>Westug has been in operation for 20 years and provides marine towage services, marine consultancy, vessel management, project planning, marine crewing and work vessels for lease or charter.</p> <p>It has a fleet consisting of 13 vessels and has offices in Dampier, Cape Lambert and Carnarvon. Westug's head office is located in Perth.²⁵</p> |
| BHP Billiton (Towage Services) | <p>BHP Billiton (Towage Services) Pty Ltd provides towage services to the Port of Port Hedland on a non-exclusive licence, and operates 18 tugboats. In May 2016 it was joined by a second towage service, Pilbara Marine (a subsidiary of the Fortescue Metals Group), at the Port of Port Hedland.²⁶</p> |

²¹ Ibis World, *Industry Report I5219: Navigation, towage and services to water transport in Australia* (February 2017), p. 23.

²² Smit Lamnalco, *About us* (accessed 19 January 2018): <https://smitlamnalco.com/about-us/>.

²³ Newcastle Herald, *Trouble for the tugboats* (accessed November 2017): <http://www.theherald.com.au/story/3230079/trouble-for-the-tugboats/>.

²⁴ Riverside Marine, *Business units* (accessed 19 January 2018): <http://www.riversidemarine.com.au/BusinessUnits/RiverWijs/tabid/72/Default.aspx>; RiverWijs, 'Our fleet' (accessed 19 January 2018): <http://www.riverwijs.com.au/our-fleet/>.

²⁵ Westug, *Welcome to Westug* (accessed 19 January 2018): <http://westug.com/index.html>.

²⁶ Government of Western Australia, *Second tug operator for Port Hedland* (Media Statement, 30 May 2016).

| Provider | Description |
|--|--|
| Pty Ltd | |
| Rivtow Marine Pty Ltd (Rivtow Marine) | Rivtow Marine is a Riverside Marine company operating in the Australian harbour towage market. It has a fleet of 18 tugs under management at Port Hedland, Western Australia. In 2016, it was awarded a contract to manage tugs at the Port of Hay Point, Queensland for BHP Billiton Mitsubishi Alliance. ²⁷ |
| Daltug Pty Ltd (Daltug) | Daltug is an Australian proprietary company operating the tugs and lines launch services to vessels at Dalrymple Bay Coal Terminal, Queensland. ²⁸ |

9.2. the likelihood of entry by new competitors;

There are relatively high barriers to entry to compete in a market for supplying harbour towage services. As the Commission has previously recognised, there is a high upfront investment cost and risk associated with the provision of harbour towage services.

In particular, the Commission has previously found the following costs to entry:²⁹

“The ‘lumpy’ nature of the investments. Investment in a harbour towage operation involves significant upfront capital costs. A provider of harbour towage will generally require multiple tugs to be able to meet the needs of shipping customers. In particular, most ships require more than one tug per voyage. Further, the high cost of delays from waiting for tug jobs (relative to the costs of idle capacity for tugs) mean that most shipping customers are willing to pay higher prices (which include a provision for the idle capacity of an operator’s tugs) than to accept long delays in receiving towage services. A towage operator will therefore likely need several tugs to reach a minimum efficient scale. These minimum investments in towage services are large relative to the size of the market in most ports.

Sunk costs. A substantial fraction of the capital costs of entry into harbour towage are recoverable upon exit (that is, not sunk). This is because tugs are a mobile asset and therefore can be sold into other markets. Nonetheless, there are a range of costs associated with towage operations that cannot be recouped on exit, these include crew training costs, modifications to tugs to meet Australian requirements, costs of tug demobilisations and crew redundancy payments. The PC noted that these costs, while not large, were ‘not insubstantial’ ...”

GPC’s submission³⁰ and PricewaterhouseCoopers’ report³¹ provide information about the barriers to entry to compete in a market for the provision of harbour towage services.

However, in Australia, new competitors have entered as a result of winning a competitive tender process for the award of an exclusive licence to supply harbour towage services at a port. The competitive tender process allows competition for the market.

For example:

²⁷ RivTow Marine, *Home* (accessed 17 January 2018): <http://rivtowmarine.com.au>.

²⁸ Maritime Safety Queensland, *Port Procedures and Information for Shipping – Hay Point* (January 2016), p. 46; Department of Industry, Innovation and Science, *ABN Look up – Current details for ABN 89 085 136 009* (accessed 22 January 2018): <https://abr.business.gov.au/SearchByAbn.aspx?SearchText=89085136009>.

²⁹ Australian Competition and Consumer Commission, *Statement of Reasons in respect of the ACCC’s review of a notification lodged by Gladstone Ports Corporation* (Notification no. N93770) (27 June 2012), pp. 11-12.

³⁰ Attachment B, section 12.1.

³¹ PricewaterhouseCoopers, *Future towage arrangements at the Port of Gladstone* (March 2018), pp. iii, 47-48.

- SMIT Lamnalco, through its subsidiary SMIT Marine, entered the market following GPC's competitive tender process in 2009. The competitive tender process allowed SMIT Marine to vie for the work that Svitzer had previously undertaken at the Port of Gladstone and was undertaking at a number of other Australian ports.
- Westug Management entered the market as a result of being awarded an exclusive licence to provide towage services for Hammersley Iron at the Port of Dampier.
- RivTow Marine won a contract to supply towage services in Port Hedland following a competitive tender process in 2015.³²

GPC's submission³³ and PricewaterhouseCoopers' report³⁴ provide further information on how the award of a competitive tender process for an exclusive licence reduces or removes barriers to entry by allowing tenderers to avoid or reduce the sunk costs of entry.

9.3. any countervailing power of customers and/or suppliers;

As PricewaterhouseCoopers has noted in its report, the option for port customers to provide their own towage services is really only viable for a very small number of large customers (and would probably attract a significant cost penalty).³⁵

Research conducted by Charles River Associates indicates that certain port users, such as major exporters, have the ability to substitute between ports and that ability is a major source of their countervailing power.³⁶

Therefore, while some port users may have limited ability to bypass a towage provider with an exclusive licence to operate at the Port of Gladstone, they may instead have the ability to bypass the Port of Gladstone altogether.

Importantly, tenderers will be required to demonstrate that their charges will only allow them to recover their reasonable costs plus an efficient margin, and meet specified service levels.

The new exclusive licence will provide protections for users from unreasonable or undue increases in charges similar to the protections that exist in SMIT Marine's current exclusive licence, which were designed to ensure that users do not pay monopoly rates for towage services.

SMIT Marine recovers its costs through pricing mechanisms in its exclusive licence, which comprise of a pricing framework for standard harbour towage and another framework for LNG towage. Under both pricing frameworks, SMIT Marine is restricted from increasing prices except as permitted by the exclusive licence.

Further information about the standard harbour towage and LNG pricing frameworks under SMIT Marine's current exclusive licence is set out in PricewaterhouseCoopers' report.³⁷

9.4. any other relevant factors.

The holder of the new exclusive licence for harbour towage services at the Port of Gladstone will be competitively constrained for the reasons discussed in GPC's submission (Attachment B).³⁸

³² Sydney Morning Herald, *BHP axes Port Hedland tug operator in favour of non-unionised rival* (10 November 2015): <http://www.smh.com.au/business/mining-and-resources/bhp-axes-port-hedland-tug-operator-in-favour-of-nonunionised-rival-20151109-gkucth.html>

³³ Attachment B, section 12.

³⁴ PricewaterhouseCoopers, *Future towage arrangements at the Port of Gladstone* (March 2018), pp. iii, 47-48.

³⁵ PricewaterhouseCoopers, *Future towage arrangements at the Port of Gladstone* (March 2018), p. 48.

³⁶ Charles River Associates, *Port companies and market power – A qualitative analysis* (29 April 2002), pp. 27, 58, 59 & 73.

³⁷ PricewaterhouseCoopers, *Future towage arrangements at the Port of Gladstone* (March 2018), pp. 13-17.

Public benefit

- 10. Describe the benefits to the public that are likely to result from the notified conduct. Provide information, data, documents or other evidence relevant to the ACCC's assessment of the public benefits.**

GPC's response to this item is set out in its submission (see Attachment B, section 12).

Public detriment including any competition effects

- 11. Describe any detriments to the public that are likely to result from the notified conduct, including those likely to result from any lessening of competition. Provide information, data, documents, or other evidence relevant to the ACCC's assessment of the detriments.**

GPC's response to this item is set out in its submission (see Attachment B, section 13).

Contact details of relevant market participants

- 12. Identify and/or provide contact details (phone number and email address) for likely interested parties, such as actual or potential competitors, customers and suppliers, trade or industry associations and regulators.**

GPC's response to this item is provided at **Attachment A-2**.

Any other information

- 13. Provide any other information you consider relevant to the ACCC's assessment of the notified conduct.**

GPC has provided additional information that it considers relevant to the Commission's assessment in its submission (Attachment B) and in a report prepared by PricewaterhouseCoopers (Attachment C).

³⁸ Attachment B, sections 12 and 13.

Gladstone Ports Corporation Limited

Submission in support of
notification for exclusive dealing

PUBLIC VERSION

13 March 2018

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Submission in support of notification for exclusive dealing

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Submission in support of notification for exclusive dealing

1 Executive Summary

1.1 The Commission should allow the notification

Gladstone Ports Corporation Limited (**GPC**) submits that:

- (a) the notified conduct will not have the purpose or the likely effect of substantially lessening competition in a market;
- (b) the notified conduct will result in public benefits; and
- (c) the likely benefits to the public of the notified conduct will outweigh any public detriments arising from the notified conduct.

Therefore, the Commission should allow the notification.

1.2 Likely public benefits

In summary, the notified conduct will result in the following public benefits:

- (a) **Increased competitive pressure:** Compared to other possible towage arrangements, GPC's competitive tender process for an exclusive licence will generate more competitive pressure. The certainty created by the exclusivity will induce towage operators to tender where they may not have been prepared to respond to a tender for a non-exclusive licence. This is because the certainty created by the exclusivity will lower the risk premium for tenderers and will allow tenderers to offer lower pricing proposals without compromising service levels.
- (b) **Lower costs and efficiencies for Port users:** Compared to other possible towage arrangements, the competitive pressure generated by GPC's competitive tender process for an exclusive licence will generate lower costs and efficiencies for users of the Port of Gladstone for the duration of the exclusive licence. This is because
 - (i) the returns to scale for the towage service providers at the Port would not decrease until the Port achieves substantially greater throughput than it is currently forecast to achieve over the eight year term of the proposed licence;
 - (ii) the unique characteristics of the Port's single lane channel and its trade and vessel mix mean it would be inefficient for two towage service providers to operate in the Port without substantial capital expenditure to widen the channel; and
 - (iii) the tender process will require all tenderers to commit to pricing principles for standard harbour and liquefied natural gas (**LNG**) towage services for the duration of the new exclusive licence.
- (c) **Avoiding costs and inefficiencies:** The towage operator and users of the Port of Gladstone will avoid costs and inefficiencies that would arise in the absence of exclusivity, including costs of constructing and managing a second berthing facility.

1.3 No substantial lessening of competition or other public detriment

The Port of Gladstone will not support an efficient and successful second towage operator between 1 January 2020 and 31 December 2027.

Rather, allowing GPC to engage in the notified conduct will avoid the costs of an unsuccessful second towage operator, and the costs of installing and coordinating a second facility at the Port of Gladstone to berth the tug boats of a second towage operator.

Consequently, the notified conduct will not have the effect or likely effect of substantially lessening competition in any market or result in any public detriment.

2 Statutory framework

Under section 93(3) of the *Competition and Consumer Act 2010* (Cth), the Commission may revoke a notification for exclusive dealing where the Commission is satisfied that:

- (a) the notified conduct would have the purpose or would be likely to have the effect of substantially lessening competition within the meaning of section 47; or
- (b) the proposed conduct would not be likely to result in a benefit to the public; or
- (c) the likely benefit to the public from the notified conduct would not outweigh the likely detriment to the public from the notified conduct.

In assessing the effects of the notified conduct, the Commission may apply the 'future with and without test'. That test involves comparing the situation in the relevant market in the future with the notified conduct in place (the factual), with the situation in the relevant market without the notified conduct (the counterfactual).

3 Previous determinations concerning harbour towage services at the Port of Gladstone

3.1 Current exclusive towage arrangement with SMIT Marine

On 6 February 2009, GPC lodged an exclusive dealing notification (N93770) for its proposal to require all vessels requiring towage services in the Port of Gladstone to use the services of the holder of the exclusive tug licence between 1 January 2011 and 31 December 2018.

The protection conferred on GPC as a result of the notification commenced on 20 February 2009. This was confirmed in writing by the Commission on 1 May 2009. The holder of the exclusive licence had yet to be determined at the time of the notification and the Commission's determination because GPC's competitive tender process for the award of the licence was not then complete.

As a result of GPC's competitive tender process, SMIT Marine Australia Pty Ltd (**SMIT Marine**) was awarded the exclusive licence to provide harbour towage services at the Port of Gladstone. SMIT Marine's exclusive licence commenced on 1 January 2011 and will expire on 31 December 2018.¹

In November 2011, Svitzer Australia Pty Ltd (**Svitzer**) applied to the Commission for revocation of notification N93770. On 27 June 2012, the Commission

¹ SMIT Marine's exclusive licence had an initial term of five years, with an option to extend for a further three years. In 2015, GPC exercised the option to extend the term of the licence for a further three years, ending 31 December 2018.

determined not to revoke the notification and published its statement of reasons for the decision.

3.2 Previous exclusive towage arrangement with Svitzer Australia

Prior to 1 January 2011, Svitzer held the exclusive licence for the provision of harbour towage services at the Port of Gladstone. Svitzer's exclusive licence was the subject of third line forcing notifications (N90695, N92443 and N93738).

4 Notified conduct

GPC is proposing to require all vessels requiring towage services at the Port of Gladstone to use the services of the holder of the exclusive 'tug licence' for the Port of Gladstone for the period commencing on 1 January 2020 and expiring no later than on 31 December 2027.

GPC is proposing to commence engaging in the notified conduct by awarding a new exclusive licence through a competitive tender process to provide harbour towage services at the Port of Gladstone for a term of up to eight years.

5 Rationale for award of new exclusive licence

GPC is proposing to award a new exclusive licence and to require all vessels needing harbour towage services acquire such services from the exclusive licensee at the Port of Gladstone. In GPC's view, an exclusive licence will be the most efficient way to deliver harbour towage services at the Port of Gladstone over the potential eight year term of the licence. In particular, GPC considers that an exclusive licence will deliver harbour towage services to users at the Port of Gladstone at the lowest cost, on average.

Although the new exclusive licence may not commence until 1 January 2020 (for the reasons discussed in section 6 below), GPC is seeking legal protection for the proposed exclusive licence prior to commencing its competitive process to provide bidders with commercial certainty and to facilitate a more competitive tender process (as explained further below in section 12.2(b)).

6 Timing of competitive tender process and award of new exclusive licence

Since October 2017, GPC and Maritime Safety Queensland (**MSQ**),² in conjunction with the LNG proponents, have been reviewing and updating the LNG towage requirements at the Port of Gladstone. Any revisions to the minimum standard for LNG towage provision following this review may, in turn, significantly impact the minimum standard for LNG towage services at the Port during the new licensing period.

² Maritime Safety Queensland is a branch of the Queensland Government's Department of Transport and Main Roads. It is responsible for improving maritime safety for shipping and small craft through regulation and education, minimising vessel-sourced waste and responding to marine pollution, providing essential maritime services (such as aids to navigation and vessel traffic services) and encouraging and supporting innovation in the maritime industry. Maritime Safety Queensland is also responsible for delivering a range of services on behalf of the national regulator (the Australian Maritime Safety Authority) under the *Marine Safety (Domestic Commercial Vessel) National Law Act 2012* (Cth).

Consequently, there may be sub-optimal outcomes in the provision of harbour towage services at the Port of Gladstone if the new harbour towage licence is issued prior to the finalisation of the LNG towage minimum standards.

GPC expects this review to be completed by December 2018. GPC anticipates that there will be incremental amendments to the Port Procedures Manual relating to LNG towage in March 2018 as a result of the review.

GPC anticipates that its competitive tender process for the new exclusive licence will commence in May 2018 and complete by September 2018.

As previously discussed with the Commission in relation to the Central Queensland Ports Authority's notification, a new provider of towage services would require up to approximately 18 months from the time of winning the tender to adequately prepare to commence licence.³

Given GPC's understandable desire not to commence its competitive tender process until the review of LNG towage requirement is complete and its results are reflected in the tender documents, if SMIT Marine is not awarded the new exclusive licence, the incoming provider will require lead-in time to begin supplying harbour towage services at the Port of Gladstone, including because the new provider will need to procure the necessary tug boats to commence operating at the Port.

Consequently, if a new provider is to be fairly considered for the award of the new exclusive licence, they will need sufficient lead-in time to mobilise and establish operations before they will be able to commence operations.

7 Competitive tender process and pricing framework

GPC has yet to finalise the tender documents for the proposed competitive tender process. However, PricewaterhouseCoopers' report provides a description of the key features of the competitive tender process and the contract that will be attached to the tender documents.⁴

Further, in exchange for support from the LNG industry (and as confirmed in GPC's letters to each of ConocoPhillips Australia Pty Ltd, QGC Pty Limited and GLNG Operations Pty Limited on 13 December 2017 in Confidential Attachment A-1), the new exclusive licence will also be subject to the following factors:

- (a) An open competitive tender process that realises the best commercial outcome.
- (b) All Port users will be treated fairly and equitably to ensure there are no subsidisation of costs between users.
- (c) LNG companies will be invited to participate in the tender construct to ensure their interests are accommodated.
- (d) GPC will continue to work in close consultation with the LNG industry throughout the Commission's exclusive dealing notification process and GPC's competitive tender process.

³ Australian Competition and Consumer Commission, *Adjudication / Meeting Minutes in relation to Central Queensland Ports Authority notification N92443* (29 June 2006), p. 1.

⁴ PricewaterhouseCoopers, *Future towage arrangements at the Port of Gladstone* (March 2018), pp. 51-54.

8 Overview of towage services in Australia

8.1 Harbour towage services

Harbour towage services are provided using tug vessels (also known as 'tugboats' or 'tugs').

Ocean-going ships require towage assistance when moving through restricted clearances in channels and berth areas due to the ship's size and restricted manoeuvrability. Tugs assist ocean ships on arrival and departure from ports, and protect other vessels and port facilities from damage.⁵

The type of towage services required at a particular port will depend on the physical features of that port, as well as weather conditions and the type and size of ships handled. Most ports have towage services that are available at all times and tugboats may be booked with 2-hours' notice.⁶

Vessel towage requirements range from a single tug for a small Handy-size vessel and up to four tugs for an LNG vessel. Tugs used for LNG vessels have special requirements due to the flammability of LNG over and above other tugs.

8.2 Regulation of harbour towage licensing in Queensland

As the Commission is aware from its previous reviews of notifications concerning harbour towage services at the Port of Gladstone, port authorities are able to use licences for towage services to specify standards and pricing.⁷ In particular, as a statutory port authority, GPC's approval is required to operate a tug service in the Port of Gladstone.⁸

Port authorities are required to consult with the portfolio Minister before commencing any process to issue, grant, renew or enter into any licence, approval, contract or service arrangements for the provision of towage services within its port.⁹

Prior to commencing this consultation process, a statutory port authority is also required to consider all relevant legislation, State policies and any applicable guidelines for Government-owned corporations (or 'GOCS').

The Queensland Government's guidelines stipulate that, where a port authority intends on granting an exclusive licence, it must seek a letter of support or other documentation from the Australian Competition and Commission indicating that the Commission is not opposed to the licence.¹⁰

⁵ Australian Competition and Consumer Commission, *Decision in respect of a notification lodged by Gladstone Ports Corporation Limited regarding towage services at the Port of Gladstone (Notification no. N93770)* (1 May 2009), p. 5.

⁶ Ibis World, *Industry Report I5219: Navigation, Towage and Services to Water Transport in Australia* (February 2017), p. 11.

⁷ Australian Competition and Consumer Commission, *Decision in respect of a notification lodged by Gladstone Ports Corporation Limited regarding towage services at the Port of Gladstone (Notification no. N93770)* (1 May 2009), p. 6.

⁸ The operation of tug services in the Port of Gladstone is a controlled activity as defined under section 289B of the *Transport Infrastructure Act 1994* (Qld). Pursuant to the Port Notice 03/17 – Managing Controlled Activities (issued under section 282(1)), the operation of a tug service at the Port of Gladstone requires approval of the Port Authority (section 282 and Part 4A of Chapter 8).

⁹ Queensland Government Department of Treasury, *Guidelines for the Issue of Harbour Towage Licences by Port GOCS* (19 April 2010), p. 1.

¹⁰ Queensland Government Department of Treasury, *Guidelines for the Issue of Harbour Towage Licences by Port GOCS* (19 April 2010), p. 1.

Towage operators must meet vessel safety and other standards prescribed by MSQ pursuant to the *Marine Safety (Domestic Commercial Vessel) National Law Act 2012* (Cth).

8.3 Features of the Australian towage industry

As the Commission recognised in its recent decision concerning Port of Townsville Limited's and Far North Queensland Ports Corporation Limited's application for authorisation,¹¹ the majority of Australian ports have a single towage provider.

PricewaterhouseCoopers' report summarises the number of towage service providers at selected bulk ports in Australia as at FY2017.¹²

In its report, PricewaterhouseCoopers describes the following features of harbour towage services at bulk commodity ports in Australia:¹³

- (a) Ports that have had multiple towage service providers (e.g. at the Port of Newcastle, Port of Melbourne and Port of Botany) have, over time, reverted to a single towage service provider after the second operator exited the market. For example, SMIT Lamnalco stopped providing harbour towage services at the Port of Newcastle less than a year after purchasing PB Towage in January 2015. Media reports suggested that SMIT struggled to compete with only four tugs (out of a total of 12 tugs) providing services in the port at the time.
- (b) Ports that have been able to sustain multiple towage providers (e.g. Port of Hedland and Port of Dampier) typically have much larger annual throughput volumes and significantly higher vessel calls or, in the case of Hay Point, the two towage providers are not in direct competition with each other as each operator services separate segments comprising the separate coal export terminals at the port.

BHP is currently the only towage provider at Port Hedland, although it subcontracts the towage operations to RivTow Marine Pty Ltd and Teekay Shipping (Australia) Pty Ltd. In May 2016, Fortescue Metals Group (**FMG**) secured an additional towage licence from the Pilbara Ports Authority and is due to commence its towage operations in 2019. However, as PricewaterhouseCoopers' report notes,¹⁴ it is possible that each of FMG and BHP will service their own vessels, rather than engage in direct competition with each other.

8.4 Exclusive licence arrangements at Australian ports

In addition to the Port of Gladstone, other ports with current exclusive licences for the provision of towage services include the Port of Townsville, Port of Cairns, Port of Mourilyan and Port of Lucinda.

The Commission most recently considered the use of an exclusive licence for harbour towage services in its decisions concerning an application for

¹¹ Australian Competition and Consumer Commission, *Determination: Application for authorisation lodged by Port of Townsville Limited and Far North Queensland Ports Corporation Limited in respect of joint tendering and licensing arrangements for harbour towage services* (9 December 2016), p. 4.

¹² PricewaterhouseCoopers, *Future towage arrangements at the Port of Gladstone* (March 2018), p. 24.

¹³ PricewaterhouseCoopers, *Future towage arrangements at the Port of Gladstone* (March 2018), pp. 23-24, 33-34.

¹⁴ PricewaterhouseCoopers, *Future towage arrangements at the Port of Gladstone* (March 2018), p. 33.

authorisation and a third line forcing notification lodged by the Port of Townsville Limited and the Far North Queensland Ports Corporation Limited, in relation to the Ports of Townsville, Cairns, Mourilyan and Lucinda.¹⁵

In summary, the Commission found that the exclusive licence arrangement at the Ports of Townsville, Cairns, Mourilyan and Lucinda would be likely to result in benefits by providing greater certainty of volume and promoting competition for the market in circumstances where competition in the market was unlikely. The Commission determined that these likely benefits to the public would outweigh the likely detriments to the public.

8.5 Demand drivers for harbour towage at Australia's principal bulk commodities ports

Demand for towage industry services is dependent on shipping volumes (including international, inland and coastal trade). Typically, the demand for towage services increases as the number of calls made by commercial vessels increases. However, the size of vessels and tugboats, and the relative efficiency of alternative means of transport (such as land-based transport), will also impact demand.

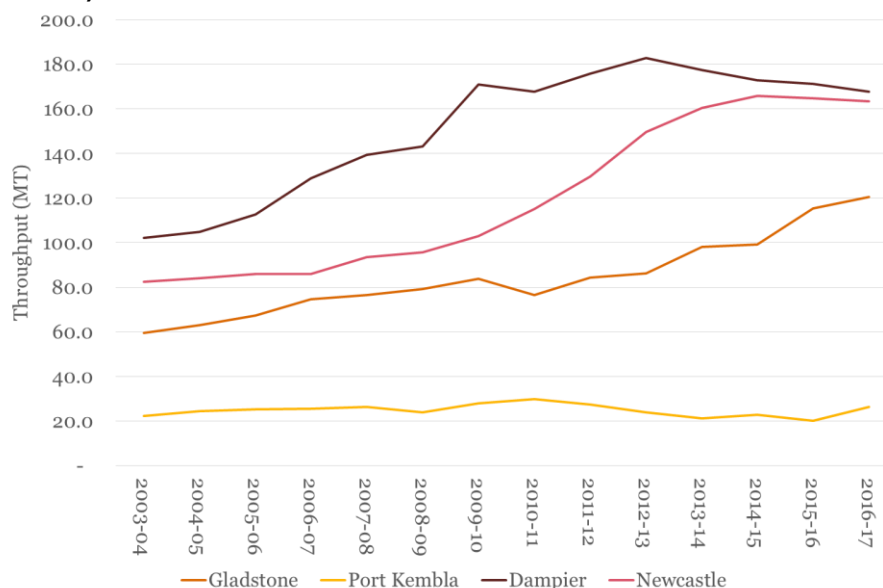
Certain materials, such as grains and minerals, are consistently transported by water. Changes in demand for such commodities have an effect on the demand for towage services.¹⁶

The figure below sets out the total cargo discharged (including imports) and total cargo loaded (including exports) at the Ports of Gladstone, Kembla, Dampier and Newcastle between FY2004 and FY2017, inclusive.

¹⁵ Australian Competition and Consumer Commission, *Determination: Application for authorisation lodged by Port of Townsville Limited and Far North Queensland Ports Corporation Limited in respect of joint tendering and licensing arrangements for harbour towage services* (9 December 2016); Australian Competition and Consumer Commission, *Statement of Reasons in respect of notifications N99117 and N99118 lodged by Port of Townsville Limited & Far North Queensland Ports Corporation Limited regarding harbour towage services at the ports of Townsville, Cairns, Mourilyan and Lucinda* (9 December 2016).

¹⁶ Ibis World, *Industry Report I5219: Navigation, Towage and Services to Water Transport in Australia* (February 2017), pp. 12-13.

Figure 1: Total cargo discharged and loaded by selected ports (FY2004 to FY2017)



Source: Australian Bureau of Statistics, Bureau of Infrastructure, Transport and Regional Economics, Ports Australia, Pilbara Ports Authority, North Queensland Bulk Ports Corporation, Gladstone Ports Corporation, Port Authority of New South Wales, NSW Ports and PricewaterhouseCoopers' analysis.¹⁷

Total throughput at the majority of the selected bulk ports steadily increased during the ten years to FY2014, with growth slowing, stagnating or steadily declining at some ports during the three years before FY2017. Total throughput at the Port of Gladstone has continued to steadily increase to FY2017. Total throughput at the Ports of Dampier and Gladstone exhibited a similarly high average annual growth rate during the 14 years to FY2017, growing at 3.9% and 5.6%, respectively. Port Kembla has exhibited a different trend, with average annual growth increasing at a rate of only 1.3% per annum, on average.

The figure below sets out the total number of commercial vessel calls and total cargo discharged or loaded at each selected port during FY2017. The relativities between the total numbers of vessel calls and total port throughput demonstrate that a higher number of vessel calls is typically associated with more throughput at a port.

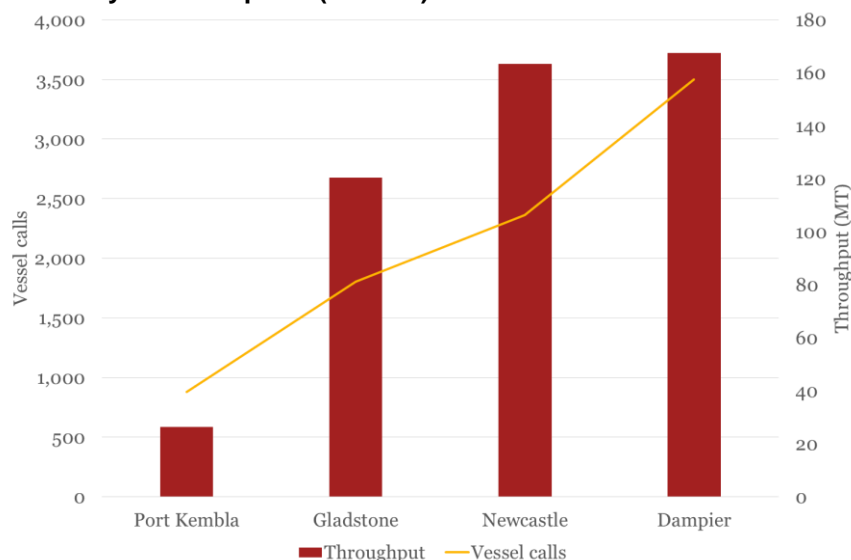
The number of vessel calls cannot be relied on solely to determine whether a port can efficiently provide more than one towage provider, because the number of vessel calls does not relate to the size of vessels entering or exiting a port.

¹⁷ Where available, financial year data has been sourced from Australian Bureau of Statistics (2017) *Customised report: International Merchandise Trade, Australia* (cat. no. 5422.0); and Bureau of Infrastructure, Transport and Regional Economics, *Unpublished data, Australian Coastal Freight* (2017): <https://bitre.gov.au/publications>. For FY2015, data was sourced from Ports Australia, *Trade Statistics* (2014): <http://www.portsaustralia.com.au>. For FY2017, data is sourced from Pilbara Ports Authority, *Annual Report* (2017): <https://www.pilbaraports.com.au>; North Queensland Bulk Ports Corporation, *Annual Report* (2017): <https://nqbp.com.au>; Gladstone Ports Corporation, *Annual Report* (2017): <http://www.gpcl.com.au>; Port Authority of New South Wales, *Annual Report* (2017): <https://www.portauthoritynsw.com.au>; Pilbara Ports Authority, *Port of Dampier Handbook* (2017): <https://www.pilbaraports.com.au>; Port Authority of New South Wales, *Other Port Services – Port Kembla* (2017): <https://www.portauthoritynsw.com.au>; NSW Ports, *Port Kembla Trade Statistics Bulletin - 1 July 2016 to 30 June 2017* (2017): <https://www.nswports.com.au>; Port of Newcastle, *Port of Newcastle 2016 Trade Report* (2016): <http://www.portofnewcastle.com.au>. Please note that as the Port of Newcastle total port throughput is not published by financial year, the throughput amount reflects the total throughput for calendar year 2016 for FY2017.

The size of the vessels has an implication for the number and type of tugs required to service demand at that particular port.

This said, Figure 2 indicates that growth in total throughput is associated with a higher demand for commercial vessel calls and, therefore, implies a higher demand for towage services.

Figure 2: Total commercial vessel calls and total cargo discharged and loaded by selected ports (FY2017)



Source: Pilbara Ports Authority, North Queensland Bulk Ports Corporation, Gladstone Ports Corporation, Port Authority of New South Wales and NSW Ports.¹⁸

9 Harbour towage services at the Port of Gladstone

9.1 The Port of Gladstone

The Port of Gladstone is located approximately 525 kilometres north of Brisbane and is Queensland’s largest multi-commodity port, with the world’s fourth-largest coal-export terminal.

Other products exported from the Port include LNG (since December 2014), alumina, aluminium and bauxite.

In FY2017:

¹⁸ Pilbara Ports Authority, *Annual Report (2017)*: <https://www.pilbaraports.com.au>; North Queensland Bulk Ports Corporation, *Annual Report (2017)*: <https://nqbp.com.au>; Gladstone Ports Corporation, *Annual Report (2017)*: <http://www.gpcl.com.au>; Port Authority of New South Wales, *Annual Report (2017)*: <https://www.portauthoritynsw.com.au>; Pilbara Ports Authority, *Port of Dampier Handbook (2017)*: <https://www.pilbaraports.com.au>; Port Authority of New South Wales, *Other Port Services – Port Kembla (2017)*: <https://www.portauthoritynsw.com.au/>; NSW Ports, *Port Kembla Trade Statistics Bulletin - 1 July 2016 to 30 June 2017 (2017)*: <https://www.nswports.com.au>; Port of Newcastle, *Port of Newcastle 2016 Trade Report (2016)*: <http://www.portofnewcastle.com.au>. Please note that the total port throughput is not published by financial year for the Port of Newcastle. The throughput amount reflects the total throughput for calendar year 2016 for FY2017.

- (a) the Port of Gladstone hosted about 1,805 vessels,¹⁹ comprising approximately 120.4 million tonnes of cargo;²⁰ and
- (b) about 56.9% of this tonnage was coal, about 16% was LNG,²¹ and about 22.5% related to the alumina industry.²²

There are currently ten tugs (plus one spare tug held in reserve) providing towage services at the Port of Gladstone. The fleet is divided into an LNG fleet (which primarily services the LNG users) and a standard harbour fleet (which is predominantly used to service the other port users).²³ PricewaterhouseCoopers' report provides further information about the current towage fleet at the Port of Gladstone, the characteristics of the Port and the nature of towage services at the Port, including an explanation of the single lane channel at the Port.²⁴

9.2 Demand for towage services at the Port of Gladstone

The nature of harbour towage services at the Port of Gladstone has changed significantly since the tender process for GPC's exclusive licence with SMIT Marine in 2009. The changes include changes in vessel type and mix and changes to minimum tug standards required to service different types of vessels at the Port.

While trade has increased, the Port of Gladstone has not experienced the level of increase in vessel traffic anticipated in 2009, other than for the LNG trade.

PricewaterhouseCoopers' report demonstrates the following:²⁵

- (a) While the number of vessel calls has typically increased year-on-year, it has not reached the levels initially forecast in the tender for the current exclusive licence with SMIT Marine in 2009. In FY2017, there were only 1,788 vessel calls at the Port of Gladstone (resulting in 8,670 tug jobs). During the tender process in 2009 for the current exclusive licence, the number of vessel calls was forecast to be around 2,400.
- (b) During the term of the current exclusive licence with SMIT Marine, the number of standard harbour vessel calls at the Port of Gladstone has been relatively static – in FY2011 there were 1,316 standard harbour vessel calls and in FY2017 there were 1,490 standard harbour vessel calls.
- (c) The number of tug jobs at the Port of Gladstone has increased over the term of the exclusive licence with SMIT Marine from 1 January 2011 to the end of FY2017. This increase has been driven by the commencement of LNG exports from the Port. PricewaterhouseCoopers forecasts that approximately 8,928 tug jobs will be required for FY2018, mostly driven by an increase in LNG exports from the Port.

¹⁹ Gladstone Ports Corporation, *Annual Report 2016/2017*, p. 15.

²⁰ Gladstone Ports Corporation, *Annual Report 2016/2017*, p. 15.

²¹ Gladstone Ports Corporation, *Annual Report 2016/2017*, pp. 15-16.

²² Gladstone Ports Corporation, *Annual Report 2016/2017*, p. 16.

²³ PricewaterhouseCoopers, *Future towage arrangements at the Port of Gladstone* (March 2018), p. 5.

²⁴ PricewaterhouseCoopers, *Future towage arrangements at the Port of Gladstone* (March 2018), pp. 4-7, 25-27.

²⁵ PricewaterhouseCoopers, *Future towage arrangements at the Port of Gladstone* (March 2018), p. 6-7.

The figure below summarises GPC's forecast of the demand for tug jobs from FY2019 to FY2027.²⁶

Figure 3: Forecast tug job demand from FY2019 to FY2027

| Vessel type | FY2019 | FY2020 | FY2021 | FY2022 | FY2023 | FY2024 | FY2025 | FY2026 | FY2027 |
|-------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| LNG | 2,720 | 2,736 | 2,736 | 2,736 | 2,736 | 2,864 | 2,864 | 2,864 | 2,864 |
| All other | 6,379 | 6,501 | 6,621 | 6,576 | 6,611 | 6,713 | 6,713 | 6,718 | 6,718 |
| Total | 9,099 | 9,237 | 9,357 | 9,312 | 9,347 | 9,557 | 9,577 | 9,582 | 9,582 |

Source: GPC

9.3 Current towage pricing framework

PricewaterhouseCoopers' report outlines the current towage pricing framework at the Port of Gladstone.²⁷ As explained in the report, under SMIT Marine's current exclusive licence:²⁸

- (a) SMIT Marine is able to recover its costs through two separate pricing mechanisms – one for the standard harbour fleet and the other for the LNG tug fleet; and
- (b) GPC and SMIT Marine have agreed to certain operational and pricing principles that allow inter-operability between the LNG and standard harbour towage fleets in order to most efficiently meet demand for all services at the Port without unreasonably increasing prices for any class of customers at the Port.

9.4 Recent pricing trends at the Port of Gladstone

PricewaterhouseCoopers' analysis of pricing trends for towage services at the Port demonstrates that for LNG charges, although the capital and operating costs increased as the LNG tugs were commissioned at the Port, the average charge per LNG tug job has reduced over time as the number of LNG tug jobs has grown.²⁹

According to PricewaterhouseCoopers' analysis, towage costs at the Port of Gladstone are towards the lower end of the cost range compared to other ports.³⁰

10 The area of competition

In the Commission's decision in respect of GPC's notification in 2009 (N93770), the Commission identified the relevant area of competition for assessing the notification to be the provision of harbour towage services at the Port of Gladstone.

²⁶ PricewaterhouseCoopers, *Future towage arrangements at the Port of Gladstone* (March 2018), p. 40.

²⁷ PricewaterhouseCoopers, *Future towage arrangements at the Port of Gladstone* (March 2018), p. 8-11.

²⁸ PricewaterhouseCoopers, *Future towage arrangements at the Port of Gladstone* (March 2018), pp. 12-15.

²⁹ PricewaterhouseCoopers, *Future towage arrangements at the Port of Gladstone* (March 2018), pp. 15-16.

³⁰ PricewaterhouseCoopers, *Future towage arrangements at the Port of Gladstone* (March 2018), p. 17.

However, the Commission also considered the following areas of competition as relevant:

- (a) the provision of harbour towage services in central Queensland; and
- (b) the provision of harbour towage services in Australia.³¹

The Commission's view of the relevant areas of competition remained unchanged in its review of GPC's notification in 2012.³²

The relevant areas of competition have remained unchanged since 2009. Although LNG exports have commenced at the Port of Gladstone since the Commission's previous determinations, and SMIT Marine has an LNG fleet and a standard harbour fleet, the exclusive licence between GPC and SMIT Marine included principles that provide for inter-operability between the LNG fleet and standard harbour fleet.

GPC and SMIT Marine agreed to the inter-operability principles in order to most efficiently meet demand for all towage services at the Port. PricewaterhouseCoopers' analysis demonstrates that the inter-operability principles resulted in the greatest benefits to both LNG customers and other port users.³³

In the case of the conduct described in this notification, GPC submits that the most relevant area of competition is the provision of all harbour towage services at the Port of Gladstone.

Having said that, GPC submits that the Commission's conclusion on the competitive effects, public benefits and/or public detriments resulting from the notified conduct will not be affected by whether there is a separate market for towage services for LNG ships at the Port.

11 Future with and without

11.1 Factual

GPC submits that the appropriate factual scenario for the Commission's assessment is that all vessels requiring towage services in the Port of Gladstone will continue to be required to use the services of the holder of the new exclusive licence from 1 January 2020 for up to eight years, until up to 31 December 2027 at the latest.

11.2 Counterfactual

The Gladstone towage market has not developed sufficiently to be able to support a second towage operator. GPC's submission is based on PricewaterhouseCoopers' analysis that a single provider remains the most cost-effective option for towage services at the Port of Gladstone and, were there to

³¹ Australian Competition and Consumer Commission, *Decision in respect of a notification lodged by Gladstone Ports Corporation Limited* (2009), p. 9.

³² Australian Competition and Consumer Commission, *Statement of Reasons in respect of the ACCC's review of a notification lodged by Gladstone Ports Corporation* (27 June 2012), p. 5.

³³ PricewaterhouseCoopers, *Future towage arrangements at the Port of Gladstone* (March 2018), p. 14.

be more than one provider, it would be hard for any one towage provider to achieve an efficient level of fleet utilisation.³⁴

Therefore, the most likely counterfactual scenario is one where the Port of Gladstone would operate with a single towage provider without an exclusive licence.

GPC considers that the Productivity Commission's findings in its 2002 Inquiry into the Economic Regulation of Harbour Towage and Related Services, which were adopted by the Commission in its 27 June 2012 decision not to revoke notification N93770,³⁵ and more recently in the 9 December 2016 decision not to revoke notifications N99117 and N9918,³⁶ continue to be applicable.

In that report, the Productivity Commission stated:

"There is consensus that low demand levels, combined with "lumpy" investments (due to minimum tug fleets needed to offer appropriate service levels) and economies of scale in towage operations, means that most, if not all Australian ports can efficiently support only one provider of towage services at a time . . .

There is some suggestion that economies of scale for a (minimum) tug fleet (and one operator) could be exhausted at around 8000 tug jobs per year. This need not imply, however, that two operators would be efficient at this scale of operation - returns to scale may not decrease until much higher volumes are reached. The Port of Singapore, with 84 000 tug jobs per year, has issued six licences equivalent to 14000 tug jobs per licence. . .

Nevertheless, in the future, a few Australian ports (Melbourne, Sydney and possibly Brisbane) may be able to accommodate more than one provider. Dampier currently has two operators, each serving one of the two terminal owners, Woodside Energy and Hammersley Iron. Yet at the Port of Newcastle, which has around 7000 tug jobs per year, a period of head-to-head competition in the 1990s culminated in the incumbent buying out the entrant.

Perhaps the strongest evidence of the natural monopoly characteristics of harbour towage is that even in large ports where entry is open, only one operator seems to have been able to survive. (This currently is being tested in the Port of Melbourne.) Thus, on the basis of current and foreseeable towage technology and demand levels, towage services at most, if not all, Australian ports appear to be local natural monopolies ..."³⁷

Based on the Productivity Commission's analysis and framework, GPC submits that it is unlikely the Port of Gladstone could support more than one towage provider beyond the short term due to economies of scale.

PricewaterhouseCoopers' report demonstrates why the threshold of 8,000 tug jobs per year, which was specified in the Productivity Commission's report as the point at which economies of scale might be exhausted, is not by itself sufficient to

³⁴ PricewaterhouseCoopers, *Future towage arrangements at the Port of Gladstone* (March 2018), pp. 28-46.

³⁵ Australian Competition and Consumer Commission, *Statement of Reasons in respect of the ACCC's review of a notification lodged by Gladstone Ports Corporation* (27 June 2012), p. 11.

³⁶ Australian Competition and Consumer Commission, *Statement of Reasons in respect of notifications N99117 and N99118 lodged by Port of Townsville Limited & Far North Queensland Ports Corporation Limited* (9 December 2016), p. 9.

³⁷ Productivity Commission, *Economic Regulation of Harbour Towage and Related Services: Inquiry Report*, Report No. 24 (20 August 2002), pp. xxvi-xxvii.

determine whether a multi-provider model could function cost-competitively at the Port of Gladstone.³⁸ This is because:

- (a) as set out in the passage above, the Productivity Commission estimated that economies of scale **could** be exhausted by a single towage operator with around 8,000 tug jobs a year, **but envisaged that returns to scale for two operators may not decrease until “much higher volumes” are reached**; and
- (b) as explained in PricewaterhouseCoopers’ report,³⁹ due to the unique characteristics of the channel and the vessel and trade mix in the channel, the Port of Gladstone is one of the more operationally complex ports for the provision of towage services.

Consequently, although the number of tug jobs at the Port is forecast to increase to 9,582 by FY2027 (see section 9.2 above), PricewaterhouseCoopers’ analysis demonstrates that it falls well short of the volumes required for two providers to operate efficiently at the Port of Gladstone.

The report prepared by PricewaterhouseCoopers outlines the reasons why an open market structure supporting head-to-head competition of multiple towage providers at the Port is unlikely to be feasible, and why a single towage provider remains the optimal solution for towage at the Port of Gladstone under the Productivity Commission’s framework.⁴⁰

In summary, PricewaterhouseCoopers analysed the following towage configurations at the Port:

- (a) one provider to service all users at the Port;
- (b) one provider to service LNG users and a second provider servicing all other Port users;
- (c) one provider to service LNG users, a second provider to service Party A’s fleet and a third provider to service all other Port users;
- (d) one provider to service Party A’s fleet and a second provider to service all other Port users.

As explained on pages 32-34 of the report, PricewaterhouseCoopers has not undertaken a detailed analysis of an ‘open market’ scenario in which multiple towage providers compete head-to-head for all users at the Port in the same detail as the configurations above. This is because it would require cross-hiring arrangements to be established, which would effectively replicate one of the other towage configuration options outlined above.

Further, PricewaterhouseCoopers concludes that an ‘open market’ configuration is unlikely to be feasible at the Port for the following reasons:

³⁸ PricewaterhouseCoopers, *Future towage arrangements at the Port of Gladstone* (March 2018), pp. 22, 32-34.

³⁹ PricewaterhouseCoopers, *Future towage arrangements at the Port of Gladstone* (March 2018), pp. 25-27.

⁴⁰ PricewaterhouseCoopers, *Future towage arrangements at the Port of Gladstone* (March 2018), pp. 32-34.

- (a) Many bulk operator commodity ports in Australia only have a single towage provider because the scale of operations is insufficient to sustain more than a single provider.⁴¹
- (b) Ports operating with multiple towage service providers have, over time, tended to revert to a single towage service provider after the second operator exited the market. For example, SMIT Lamnalco reportedly ceased providing services in the Port of Newcastle after purchasing PB Towage in 2015 because it struggled to be competitive with only four tugs out of a total 12 tugs providing services in the Port at the time.⁴²
- (c) Other ports with multiple towage service providers typically have much larger annual throughput volumes and significantly higher vessel calls (e.g. Port Hedland and Port of Dampier). Alternatively, in the case of Hay Point, the two towage service providers do not compete directly because each services the separate coal export terminals at that port.⁴³
- (d) In the case of Port Hedland, where there are multiple towage service provider, it is unclear whether a truly open market structure will eventuate. While BHP is currently the only towage service provider at the port, Fortescue Metals Group (**FMG**) secured an additional towage licence from the Pilbara Ports Authority in 2016. FMG has ordered six tugs and plans to commence operations in 2019. However, it is not clear how the market will operate. PricewaterhouseCoopers notes the possibility that each company will provide towage services to its own vessels, effectively creating market segments serviced by each provider rather than an open market structure, similar to that which exists at Hay Point.⁴⁴

12 Public benefits

12.1 Public benefits from increasing competition for the market

Compared to other towage arrangements (including non-exclusive licences), a tender for an exclusive licence has the potential to increase competition for the provision of harbour towage services at the Port of Gladstone and will encourage new entry to the market.

The potential to increase competition for the provision of harbour towage services represents a benefit of an exclusive licence that would not accrue from other towage arrangements at the Port.

A. The Commission's previous determinations

The Commission found in respect of GPC's existing notification N93770 on 1 May 2009 that, based on a counterfactual where the Port of Gladstone operates with a single towage provider without an exclusive licence, the notified conduct would be likely to generate public benefits in the form of increased efficiency and

⁴¹ PricewaterhouseCoopers, *Future towage arrangements at the Port of Gladstone* (March 2018), pp. 23-25.

⁴² PricewaterhouseCoopers, *Future towage arrangements at the Port of Gladstone* (March 2018), p. 33.

⁴³ PricewaterhouseCoopers, *Future towage arrangements at the Port of Gladstone* (March 2018), pp. 23-25.

⁴⁴ PricewaterhouseCoopers, *Future towage arrangements at the Port of Gladstone* (March 2018), p. 33.

cost savings.⁴⁵ In particular, the Commission found the notified conduct has the potential to increase competition for the provision of harbour towage services at the Port by providing an incentive for competitors of the incumbent to tender for the market where they may not have been prepared to compete in the market.

The Commission also found the notified conduct would be likely to limit the uncertainty that may restrict a competitor or incumbent from seeking to operate at the Port.⁴⁶

The Commission found these benefits had been realised when it decided not to revoke GPC's notification on 27 June 2012.⁴⁷

Similarly, in 2016, the Commission also found that the grant of an exclusive licence would be likely to increase competition for the provision of harbour towage services at the ports of Cairns, Mourilyan, Lucinda and Townsville by providing an incentive for competitors of the incumbents to tender for the market where they may not have been prepared to compete in the market.⁴⁸

B. An exclusive licence will continue to increase competition for the market

The award of an exclusive licence for harbour towage services will provide certainty for the successful tenderer that they will supply harbour towage services to all users of the Port of Gladstone.

In contrast, the award of a non-exclusive licence for harbour towage services would mean that the potential applicants for a non-exclusive licence (who may be potential new entrants) will need to factor into their businesses cases the risk that they may not be able to supply harbour towage services to all the users of the Port of Gladstone.⁴⁹

The risk that they may not be able to supply harbour towage services to all the users of the Port, combined with the 'lumpy' investments which characterise towage operations (due to the fact that minimum tug fleets are needed to offer appropriate service levels) and economies of scale mean that more towage operators are likely to tender for an exclusive licence (which provides greater certainty and less risk) than tender for a non-exclusive licence or compete in an open regime.

As outlined in PricewaterhouseCoopers' report,⁵⁰ the certainty associated with an exclusive licence is particularly important where it is unclear whether the

⁴⁵ Australian Competition and Consumer Commission, *Decision in respect of a notification lodged by Gladstone Ports Corporation Limited regarding towage services at the Port of Gladstone* (1 May 2009), p. 13.

⁴⁶ Australian Competition and Consumer Commission, *Decision in respect of a notification lodged by Gladstone Ports Corporation Limited regarding towage services at the Port of Gladstone* (1 May 2009), p. 13.

⁴⁷ Australian Competition and Consumer Commission, *Statement of Reasons in respect of the ACCC's review of a notification lodged by Gladstone Ports Corporation* (27 June 2012), pp. 18 and 24.

⁴⁸ Australian Competition and Consumer Commission, *Statement of Reasons in respect of notifications N99117 and N99118 lodged by Port of Townsville Limited & Far North Queensland Ports Corporation Limited regarding harbour towage services at the ports of Townsville, Cairns, Mourilyan and Lucinda* (9 December 2016), p. 7.

⁴⁹ PricewaterhouseCoopers, *Future towage arrangements at the Port of Gladstone* (March 2018), pp. 47-51.

⁵⁰ PricewaterhouseCoopers, *Future towage arrangements at the Port of Gladstone* (March 2018), p. 58.

particular market can sustain two operators, because the risk of entering or remaining in the market is much higher.

Further, the inducement provided by an exclusive licence to be awarded as a result of a competitive tender process can overcome the advantages of incumbency. This is because it puts the incumbent and the potential entrants in a similar position when competing for the new exclusive licence.⁵¹

An exclusive licence also removes or reduces a disincentive for new entrants because the security of tenure that will be granted exclusively to the successful tenderer allows them to avoid or reduce their sunk costs of entry. That is, the exclusive licence gives new entrants a defined period of time to recover their fixed costs of entry (reducing their exposure to unrecoverable sunk costs) and reduces information asymmetries that may otherwise exist between incumbents and potential new entrants.

The greater interest of potential entrants in exclusive licences suggests that incumbency advantages can be significant and that awarding exclusive licences through competitive tendering processes can negate some of the advantage enjoyed by incumbents.

Consequently, and importantly, an exclusive licence tends to reduce the height of barriers to entry when compared to a non-exclusive licence.

This conclusion is consistent with the Commission's 2012 decision not to revoke notification N93770 that:⁵²

'...the guarantee of demand provided by an exclusive licence in ports that are unable to efficiently sustain more than one operator (that is, where there are natural monopoly characteristics) is likely to lead to economies of scale being assumed into any price tendered by a towage company. Therefore given the greater certainty and the more attractive 'prize' on offer with an exclusive licence, the ACCC considers that, competition for the market is likely to be stronger for an exclusive licence and potentially deliver lower prices for users of harbour towage services compared to a non-exclusive one.'

It is also consistent with the Productivity Commission's observation that:⁵³

"Evidence from tenders conducted at Australian ports indicates that new-entrant towage companies are much more in favour of exclusive licences. For example, based on its experiences with calling for tenders for the provision of towage services, FPA noted:

... that the interest from non-incumbent suppliers was primarily for exclusive licences - this no doubt is a reflection of the high sunk capital costs of market entry and highlights the fact that high capital costs are a barrier to market entry where there is a threat of competition with the possibility of price wars. (sub. 1, p. 2)"

⁵¹ PricewaterhouseCoopers, *Future towage arrangements at the Port of Gladstone* (March 2018), p. 51.

⁵² Australian Competition and Consumer Commission, *Statement of Reasons in respect of the ACCC's review of a notification lodged by Gladstone Ports Corporation* (27 June 2012), p. 16.

⁵³ Productivity Commission, *Economic Regulation of Harbour Towage and Related Services: Inquiry Report*, Report No. 24 (20 August 2002), p. 157.

C. Evidence of increased competition for the market

GPC's submission that an exclusive licence arrangement will result in benefits through increased competition for the market is supported by the actual outcomes from GPC's past competitive tender processes.

In particular, GPC's last competitive tender process resulted in the award of the exclusive licence to SMIT Marine, rather than the incumbent, Svitzer, and allowed SMIT Marine to enter the Australian market.

GPC's last competitive tender process provides compelling evidence that competitive tender processes for an exclusive harbour towage licence promote competition for the market and encourages new entry to the market.

12.2 Public benefits from increased competitive pressure

A competitive tender process for an exclusive licence should lead to lower costs and increased efficiencies than a tender for a non-exclusive licence.

The lower costs and increased efficiencies are benefits that will arise from the exclusive licence.

Such benefits would not accrue if GPC's licence with the holder were to be non-exclusive.

A. The Commission's previous determinations

In 2009, the Commission found that, based on a counterfactual where the Port of Gladstone operated with a single towage provider without an exclusive licence, GPC's proposed competitive tender process was likely to subject prospective providers to a higher degree of competitive pressure (prior to the licence commencing) than if GPC undertook bilateral negotiations with one or more providers, or if GPC were to allow a non-exclusive arrangement where a single provider would be constrained largely by the threat of competitive entry.⁵⁴

The Commission considered this competitive pressure was likely to lead to lower costs for Port users and increased efficiencies in the Port.

This finding was confirmed in the Commission's 2012 decision, when the Commission was satisfied that GPC conducted an open tender process designed to achieve an outcome that promoted the interests of end-users in terms of price and quality of service.⁵⁵ PricewaterhouseCoopers' report demonstrates that these benefits have continued to be realised throughout the SMIT Marine's current licence.⁵⁶

In 2016, the Commission found exclusive licences at the Ports of Townsville, Cairns, Mourilyan and Lucinda were likely to provide towage service operators with greater certainty as to the volume of work they would receive if their bid were to be successful, and consequently, would result in cost savings passed through as lower prices for consumers.⁵⁷

⁵⁴ Australian Competition and Consumer Commission, *Decision in respect of a notification lodged by Gladstone Ports Corporation Limited regarding towage services at the Port of Gladstone* (1 May 2009), p. 13.

⁵⁵ Australian Competition and Consumer Commission, *Statement of Reasons in respect of the ACCC's review of a notification lodged by Gladstone Ports Corporation* (27 June 2012), p. 17.

⁵⁶ PricewaterhouseCoopers, *Future towage arrangements at the Port of Gladstone* (March 2018), pp. 8-10.

⁵⁷ Australian Competition and Consumer Commission, *Statement of Reasons in respect of notifications N99117 and N99118 lodged by Port of Townsville Limited & Far North Queensland*

B. Competitive tender process for exclusive licences will continue to deliver greater competitive pressure

GPC submits that the Commission's findings in 2009 and 2012 will also apply to GPC's competitive tender process for the award of a new exclusive licence for harbour towage services at the Port of Gladstone.

The Productivity Commission observed in 2002 that competition 'for' the market involved the issuing of exclusive or non-exclusive licences. However, the Productivity Commission also found that, in certain circumstances, exclusive licences for the provision of towage services have the potential to generate greater benefits for towage users than non-exclusive licences.⁵⁸

A competitive tender process for an exclusive licence is likely to subject prospective towage service providers to a higher degree of competitive pressure than a tender for a non-exclusive licence because:

- (a) the higher certainty provided by an exclusive licence means that more towage operators are likely to submit responses to the request for tender. Hence, a tender process for an exclusive licence encourages new entry and increases the number of competitors in the tender process;
- (b) in a competitive tender process, tenderers will consider the risk that they will not be able to achieve the number of towage jobs required to recoup their investment in tug boats. Tenderers are likely to include a risk premium in their pricing to reflect this. However, this risk is lower in a tender for an exclusive licence because an exclusive licence guarantees that the successful tender will supply harbour towage services to all users of the Port of Gladstone, while a non-exclusive licence does not. Therefore, a tender for an exclusive licence will allow tenderers to factor a lower risk premium into their pricing proposals than a tender for a non-exclusive licence. This means that a competitive tender for an exclusive licence should lead to lower costs for Port users and increased efficiencies when compared to a tender for a non-exclusive licence; and
- (c) the increased certainty provided by an exclusive licence provides a greater incentive for tenderers to agree to invest in tug boats, as they would have greater certainty of recouping the costs of their investment.

This view is supported by PricewaterhouseCoopers' report.⁵⁹

12.3 Public benefits from decreased prices

Competitive tendering for an exclusive licence can lead to price reductions when compared to competitive tendering for a non-exclusive licence because of the increased competitive pressure involved, the higher number of participants likely to be interested and the decrease in the risk premium associated with an exclusive licence compared to a non-exclusive licence.

A. The Productivity Commission's report

In 2002, the Productivity Commission found that tenders for towage services at three ports – Bunbury and Gladstone (exclusive licences), and Fremantle (non-

Ports Corporation Limited regarding harbour towage services at the ports of Townsville, Cairns, Mourilyan and Lucinda (9 December 2016), p. 7.

⁵⁸ Productivity Commission, *Economic Regulation of Harbour Towage and Related Services: Inquiry Report*, Report No. 24 (20 August 2002), p. 158.

⁵⁹ PricewaterhouseCoopers, *Future towage arrangements at the Port of Gladstone* (March 2018), pp. 49-51.

exclusive licence) – resulted in price reductions of between 5% and 15% (without any reported reduction in service).⁶⁰

The Productivity Commission recognised that some care must be taken in making such comparisons as, for example, actual prices charged by the incumbent may have been lower than published prices, the incumbent's prices may have fallen in the future anyway or, indeed, the successful bidder's prices may have erred on the low side.

In a situation where it is difficult to determine the price the incumbent would have charged absent the competitive tender, the prices that were charged by the incumbent before the competitive tender can represent a reasonable proxy for the price the incumbent would have charged absent the competitive tender.

While the price reductions which occurred as a result of the tenders for towage at the three ports listed by the Productivity Commission as having experienced price reductions following competitive tenders may not be entirely attributable to the competitive tender processes, it is highly likely that at least some of the price reductions would have been attributable to the competitive tender process.

For example, in 2000, the Fremantle Port Authority requested tenders for exclusive and non-exclusive licences to provide towage at the inner harbour and/or outer harbour. The Productivity Commission found that a non-exclusive licence was awarded to each of the incumbent operators (which were the only applicants for non-exclusive licences that offered a comprehensive towage service) and prices were reduced on average by 15%.

Importantly, the Productivity Commission also found that the Fremantle Port Authority 'indicated that even greater price reductions were available if an exclusive licence had been issued and that these further potential reductions were significant'.⁶¹

Therefore, the same competitive tender process for non-exclusive licences and an exclusive licence resulted in greater price reductions in bids for exclusive licences than in bids for a non-exclusive licence. This suggests that competitive tendering for an exclusive licence can lead to significant price reductions when compared to competitive tendering for a non-exclusive licence.

B. Decreased pricing following GPC's most recent competitive tender process

In 2009, the Commission found that GPC's open tender process for the award of an exclusive licence to SMIT Marine would likely subject potential providers to a higher degree of competitive pressure compared to GPC allowing a non-exclusive arrangement, and that it is likely to lead to lower costs for port users.⁶² The Commission confirmed this finding in its 2012 decision.⁶³

Further, PricewaterhouseCoopers' report demonstrates that GPC's previous competitive tender for an exclusive licence resulted in towage charges falling by

⁶⁰ Productivity Commission, *Economic Regulation of Harbour Towage and Related Services: Inquiry Report*, Report No. 24 (20 August 2002), p. xxxi.

⁶¹ Productivity Commission, *Economic Regulation of Harbour Towage and Related Services: Inquiry Report*, Report No. 24 (20 August 2002), p. 109.

⁶² Australian Competition and Consumer Commission, *Decision in respect of a notification lodged by Gladstone Ports Corporation Limited regarding towage services at the Port of Gladstone* (1 May 2009), p. 13.

⁶³ Australian Competition and Consumer Commission, *Statement of Reasons in respect of the ACCC's review of a notification lodged by Gladstone Ports Corporation* (27 June 2012), p. 17.

approximately 3% with the commencement of the exclusive licence with SMIT Marine.⁶⁴

In GPC's view, consistent with the findings described above, a competitive tender process for a new exclusive licence, together with the pricing mechanisms (as outlined in section 7 above), will provide the necessary competitive pressures to result in lower costs for users of harbour towage services at the Port of Gladstone. This view is supported by PricewaterhouseCoopers' analysis of the likely effects of the proposed tender.⁶⁵

12.4 Public benefits from avoidance of costs

The notified conduct will generate public benefits by providing certainty that:

- (a) there would be a single towage operator at the Port of Gladstone; and
- (b) various costs associated with having more than one towage operator will be avoided.

Even if the counterfactual were to be one where there is likely to be a single towage operator at the Port of Gladstone beyond the short term under a non-exclusive licence, there would continue to be a risk that, in the short term, there would be more than one towage operator at the Port.

Having more than one towage operator at the Port of Gladstone would result in a number of costs and reduced efficiencies, including:

- (a) increased administration and double handling costs for GPC and the Harbour Master, the latter of which would have to co-ordinate with multiple tug boat operators. As outlined by PricewaterhouseCoopers in its report,⁶⁶ the time and costs associated with this co-ordination could be material and would require the development of priority systems and other processes. These costs will be avoided by an exclusive licence;
- (b) the costs of constructing and maintaining duplicate berthing facilities, including the costs of an additional lease and its administration. These costs will be avoided by an exclusive licence;⁶⁷
- (c) the resource costs associated with any price war, consistent with the findings of the Productivity Commission in 2002.⁶⁸ These costs will be avoided by an exclusive licence; and
- (d) increased costs and inefficiencies for Port users, as demonstrated by PricewaterhouseCoopers.⁶⁹ These costs and inefficiencies will be avoided by an exclusive licence.

⁶⁴ PricewaterhouseCoopers, *Future towage arrangements at the Port of Gladstone* (March 2018), pp. 47-51.

⁶⁵ PricewaterhouseCoopers, *Future towage arrangements at the Port of Gladstone* (March 2018), pp. 47-54.

⁶⁶ PricewaterhouseCoopers, *Future towage arrangements at the Port of Gladstone* (March 2018), p. 51.

⁶⁷ PricewaterhouseCoopers, *Future towage arrangements at the Port of Gladstone* (March 2018), p. 51.

⁶⁸ Productivity Commission, *Economic Regulation of Harbour Towage and Related Services: Inquiry Report*, Report No. 24 (20 August 2002), p. 157.

⁶⁹ PricewaterhouseCoopers, *Future towage arrangements at the Port of Gladstone* (March 2018), p. 52.

Further, the indivisibility of capital means that when the towage market is separated into being serviced by more than one towage operator, more tugs will generally be required to service the same level of demand.

This means that it is highly likely that spare capacity would be introduced with the addition of a second tug fleet, at least for a period of time, resulting in additional costs for the towage service providers:

- (a) a high proportion of costs (for example, financing, capital, amortisation and labour availability costs) are fixed costs that must be incurred even if tugs are not fully utilised. There is a higher chance that these additional fixed costs will be avoided with an exclusive licence; and
- (b) the addition of a second towage operator involves the replication of fixed operating costs, including berth leasing and administration costs, wages (due to the fact that a set number of crews are required to man each tug – with limited opportunity to disperse crew costs across a larger fleet). There is a higher chance that these additional fixed costs will be avoided with an exclusive licence.

PricewaterhouseCoopers demonstrates that, on a full economic-cost basis, in the modelled scenario, the separation of towage service providers imposes a cost efficiency penalty on Port users in the order of 32% on an average cost per vessel basis.⁷⁰

Consequently, a second provider of towage services would likely result in additional (underutilised) tugs being introduced to the Port, increasing the aggregate cost of providing towage services in the Port.

There is greater likelihood that these costs will be avoided with an exclusive licence.

The avoidance of these costs is a public benefit that will be directly generated by the conduct described in GPC's notification.

13 Public detriments

GPC submits that:

- (a) the notified conduct would not have the purpose nor be likely to have the effect of substantially lessening competition within the meaning of section 47; and
- (b) any potential for public detriments from the notified conduct will be by far outweighed by the likely public benefits from the notified conduct.

13.2 Uncompetitive prices are not likely

The Commission found in its 2012 decision that GPC conducted a competitive tender process for the award of the exclusive harbour towage licence to SMIT Marine in 2009 that was designed to achieve an outcome which promoted the interests of end-users, in terms of both price and quality of service.⁷¹

⁷⁰ PricewaterhouseCoopers, *Future towage arrangements at the Port of Gladstone* (March 2018), p. 66.

⁷¹ Australian Competition and Consumer Commission, *Statement of Reasons in respect of the ACCC's review of a notification lodged by Gladstone Ports Corporation* (27 June 2012), p. 17.

PricewaterhouseCoopers' report demonstrates that this outcome has been achieved to date under the SMIT Marine licence.⁷²

In its 2016 decision concerning the Ports of Townsville, Cairns, Mourilyan and Lucinda, the Commission recognised that an exclusive licence can remove competitive pressure for towage service providers to innovate or pass through the benefits from cost reductions during the period of the licence. However, the Commission found that the likelihood and scope of this occurring is reduced in circumstances where new entry into the port is unlikely.⁷³

PricewaterhouseCoopers' analysis demonstrates that the entry of a second provider at the Port of Gladstone is unlikely and, even if it occurred, would be unsustainable past the short term.⁷⁴ Consequently, based on the Commission's findings in 2012, there is a low likelihood that the new exclusive licence will remove competitive pressures for the successful tenderer to innovate or pass through reductions in its costs over the term of the proposed exclusive licence.

The outcomes from GPC's competitive tender process for the award of the exclusive harbour towage licence to SMIT Marine in 2009 indicate that competitive prices were tendered (and were lower than prices being charged by Svitzer at the expiry of its licence).

As with the exclusive licence between GPC and SMIT Marine,⁷⁵ the specific licence agreement between GPC and the new licence-holder will provide for prices to be set annually based on costs (see section 7, and refer to section 6 of PricewaterhouseCoopers' report, for an outline of the proposed pricing framework). Consequently, the provider of harbour towage services will be required to pass through any cost reductions.

Therefore, the notified conduct will not give rise to public detriment in the form of uncompetitive towage charges. Rather, the notified conduct will promote the interest of end-users in terms of price and quality of service.

13.3 Term of licence is reasonable

The Commission has previously found that even though the duration of GPC's current licence with SMIT Marine had the potential to result in public detriment by excluding competition from other towage providers during a period when the Port was likely to grow significantly, a term of eight years was not an unreasonable time for the licence holder to seek to recover their investment in entering the Port.⁷⁶

Consequently, in 2016, the Commission allowed a notification relating to exclusive licences for towage services at the Ports of Townsville, Cairns,

⁷² PricewaterhouseCoopers, *Future towage arrangements at the Port of Gladstone* (March 2018), pp. 8-10.

⁷³ Australian Competition and Consumer Commission, *Statement of Reasons in respect of notifications N99117 and N99118 lodged by Port of Townsville Limited & Far North Queensland Ports Corporation Limited regarding towage services at the ports of Townsville, Cairns, Mourilyan and Lucinda* (9 December 2016), p. 8.

⁷⁴ PricewaterhouseCoopers, *Future towage arrangements at the Port of Gladstone* (March 2018), pp. ii-iii, 28-46.

⁷⁵ Australian Competition and Consumer Commission, *Statement of Reasons in respect of the ACCC's review of a notification lodged by Gladstone Ports Corporation* (27 June 2012), p. 17.

⁷⁶ Australian Competition and Consumer Commission, *Decision in respect of a notification lodged by Gladstone Ports Corporation Limited regarding towage services at the Port of Gladstone* (1 May 2009), p. 17; Australian Competition and Consumer Commission, *Statement of Reasons in respect of the ACCC's review of a notification lodged by Gladstone Ports Corporation* (27 June 2012), p. 24.

Mourilyan and Lucinda for a period of up to seven years (commencing 1 July 2017).

The potential public detriments associated with excluding competition during the term of an exclusive licence can be significantly mitigated by requiring tenderers to compete on price and quality and requiring key aspects of the tenders to be agreed upfront for the duration of the licence. This was acknowledged by Justices Burchett and Hely of the Federal Court of Australia in *Stirling Harbour Services Pty Ltd v Bunbury Port Authority* [2000] FCA 1381 at paragraph 25, where they found:

“An exclusive licensee will be insulated from competitive pressures for the period of the licence, subject to any pressures associated with the extension or renewal of the terms of the licence. There will be a shift from a natural monopoly to a legally enforced and controlled monopoly, but the market behaviour of the successful tenderer will be regulated by the terms of the agreement which results from the competition for the market brought about by the tender process...”

Consistent with their Honours’ findings, PricewaterhouseCoopers’ report demonstrates that the competitive pressures which operated during GPC’s 2009 tender process have been enjoyed for the duration of SMIT’s current licence to date.⁷⁷

As with GPC’s 2009 tender process, during the competitive tender process for the new exclusive licence, tenderers will be required to compete on both price and quality and key aspects of the tenders will be agreed upfront for the duration of the licence. That is, the licensee will be bound to its tendered rate of return/gross margin and price increases if they are approved by GPC in accordance with a defined framework. This will allow competitive pressures which operate during the tender process to be enjoyed for the eight year duration of the licence.

Further, the proposed eight year term will allow the successful tenderer a sufficient recovery horizon for significant one-off and sunk costs, without adversely affecting towage charges at the Port.⁷⁸

13.4 Uncompetitive service levels not likely

In its 2012 decision, the Commission recognised that exclusive licences resulting from vigorous competition in the tender process can lead to competitive tension and minimise public detriment regarding pricing and service quality. PricewaterhouseCoopers’ report demonstrates that SMIT Marine’s licence has not resulted in any reduced levels of services during the term of the licence.⁷⁹

Tenderers will be required to compete on quality as well as on price.

Further, the tender specifications for the new exclusive licence (including the tug specifications) will reflect the statutory obligations on GPC to maintain a safe and secure operating environment in the Port of Gladstone and deliver against service levels (i.e. key performance indicators). Consequently, the notified conduct will not result in any detriment in the form of uncompetitive service levels.

⁷⁷ PricewaterhouseCoopers, *Future towage arrangements at the Port of Gladstone* (March 2018), pp. 8-10.

⁷⁸ PricewaterhouseCoopers, *Future towage arrangements at the Port of Gladstone* (March 2018), pp. 8-10.

⁷⁹ PricewaterhouseCoopers, *Future towage arrangements at the Port of Gladstone* (March 2018), pp. 8-10.

13.5 No detriment to employment

As with SMIT Marine's current exclusive licence, GPC will specify the crewing requirements, including minimum personnel to crew each tug under the new exclusive licence, which will require approval from the Queensland Government.

The crewing requirements will require the new exclusive licence holder to comply with, at a minimum:

- (a) the National Standard for Commercial Vessels (NSCV – Part B, Part E);
- (b) the *Australian Maritime Safety Authority Act 1990* (Cth);
- (c) MSQ's requirements, specifically the *Transports Operations (Maritime Safety) Act 1994* (Qld) and the Port of Gladstone Ports Procedures Manual⁸⁰ (as revised from time to time);
- (d) Gladstone Ports Corporation Port Rules, as set out through the Port Notices in accordance with the *Transport Infrastructure Act 1994* (Qld), section 282.⁸¹

Given that the Queensland Government would not approve any specifications that compromise its policy of promoting employment in regional Queensland or which would lead to non-compliance with any applicable laws (e.g. employment laws), the notified conduct will not result in any adverse effects on employment in regional Queensland.

14 Net benefits are likely to outweigh public detriments

Based on a counterfactual where the Port of Gladstone operates with a single towage provider without an exclusive licence, the likely public benefits from the notified conduct (as set out above) will outweigh any likely public detriments from the notified conduct (as set out above) and the Commission should allow GPC's notification to stand.

15 Net public benefit under alternative counterfactual

If the counterfactual is found to be one where the Port of Gladstone would operate with more than one towage provider without an exclusive licence, the notified conduct would be likely to generate the following public benefits:

- (a) avoidance of certain costs and reduced efficiencies associated with having more than one towage operator at the Port of Gladstone. If the counterfactual is found to be one where the Port of Gladstone would operate with more than one towage provider, all of the costs outlined in section 12.4 above would be incurred. These costs will not be incurred if the exclusive licence continues, as there would be only one towage operator at the Port of Gladstone. Therefore, the notified conduct results in costs savings and increased efficiencies, or the avoidance of costs and inefficiencies;

⁸⁰ See Maritime Safety Queensland, *Port Procedures and Information for Shipping – Gladstone* (last updated January 2018): <https://www.msq.qld.gov.au/Shipping/Port-procedures/Port-procedures-gladstone>

⁸¹ See Gladstone Ports Corporation, *Port Notices and Rules* (accessed 13 February 2018): <http://www.gpcl.com.au/operations/port-notices-and-rules>

- (b) an incentive for competitors of the incumbent to tender for the exclusive licence where they may not have been prepared to compete in the market or tender for a non-exclusive licence; and
- (c) lower costs for users of the Port of Gladstone and increased efficiency arising from the higher degree of competitive pressure involved in GPC's competitive tender process due to the increased certainty the exclusive licence will give to the successful tenderer. The exclusive licence tender process will mean that more towage operators are likely to tender for an exclusive licence where they may not have been prepared to compete *in* the market or tender for a non-exclusive licence and reduce the risk premium. Consequently, an exclusive licence will lead to a higher degree of competitive pressure *for* the market than any competition *in* the market allowed by other towage arrangements.

16 Conclusion

In conclusion:

- (a) The demand for towage services at the Port of Gladstone is not forecast to increase sufficiently to be able to support a second efficient and successful towage operator for the duration of the notified conduct (i.e. between 1 January 2020 and 31 December 2027 at the latest).
- (b) The most likely counterfactual is that the Port of Gladstone would operate with a single towage provider without an exclusive licence in place.
- (c) As assessed against this counterfactual:
 - (i) the notified conduct is unlikely to result in any substantial lessening of competition or any other public detriments, including uncompetitive pricing or uncompetitive service levels;
 - (ii) the likely public benefits arising from the exclusive licensing of towage services at the Port of Gladstone will outweigh the likely public detriments from the conduct. The benefits to the public include lower costs and increased efficiencies, avoided costs and inefficiencies and increased competition for the market.
- (d) Even if the Commission finds that the most likely counterfactual is that the Port of Gladstone would operate with more than one towage operator, the likely public benefits arising from the exclusive licensing of towage services at the Port of Gladstone still outweigh the likely public detriments from the conduct.

Therefore, the Commission should allow the notification to stand.

Future towage arrangements at the Port of Gladstone

*Gladstone Ports
Corporation*

*Future towage
arrangements at the
Port of Gladstone*

13 March 2018

Final report

Public version

Executive summary

In most sea ports, ocean-going shipping vessels require assistance to safely manoeuvre within channels and berth areas. Harbour towage is the service performed by tugs that supports the safe handling of vessels within ports. Tugs are used to assist vessels on arrival to, and departure from, a port. Tugs also protect port facilities and other vessels from damage while a vessel is manoeuvring within navigation channels and berth areas.

Under the *Transport Infrastructure Act 1994* (Qld) (the TIA)¹, Gladstone Ports Corporation Limited (GPC) is responsible for establishing, managing and operating efficient and effective port facilities and services within its ports, and providing or arranging for the provision of ancillary services or works necessary or convenient for the effective and efficient operation of its ports. Under the TIA, GPC, in its role as a port authority, has the power to issue licences for harbour towage services within the Port of Gladstone (the Port).

Harbour towage services at the Port are currently provided under an exclusive licence arrangement between Smit Marine Australia Pty Ltd (Smit) and GPC established in 2010. The Gladstone Harbour Towage Licence (the Licence), provides that all vessels requiring harbour towage services at the Port use a single supplier. This was considered ‘third line forcing’, which was prohibited, regardless of its effects on competition, by the *Trade Practices Act 1974* (Cth) (now superseded by the *Competition and Consumer Act 2010* (Cth)) unless the conduct was immunised by the Australian Competition and Consumer Commission (ACCC). GPC was therefore required to notify the ACCC of this proposed conduct in order to obtain legal immunity, which it did in 2009. The ACCC determined not to disallow GPC’s proposed conduct.² The Licence commenced on 1 January 2011 for an initial five year term. Following the optional extension being exercised by GPC in 2015, the Licence will expire on 31 December 2018.

GPC is currently considering arrangements for the provision of harbour towage services at the end of the current Licence term.

As at 16 November 2017, amendments to the *Competition and Consumer Act* (Cth) took effect such that ‘third line forcing’ is no longer prohibited *per se*. Rather, it is only prohibited under the Act if the proposed conduct has the purpose of, or will likely have the effect of a substantial lessening of competition in a market.

GPC engaged PricewaterhouseCoopers Consulting (Australia) Pty Limited (PwC) to:

- assess future towage servicing options as defined by GPC, including by undertaking economic modelling of the cost of towage provision under certain future scenarios,
- identify the towage service option that promotes greatest operational and economic efficiency within the Port, while ensuring GPC meets its statutory obligations under the TIA, and
- consider the best mechanism to deliver towages services at the Port to ensure operational and economic efficiency for the period following the expiry of the current Licence, including assessing the likely public benefits and detriments of that approach.

¹ Section 275 of the Transport and Infrastructure Act, available at: <https://www.legislation.qld.gov.au/view/pdf/inforce/2017-10-01/act-1994-008>

² Australian Competition and Consumer Commission (2012) *Statement of Reasons*, available at: <http://registers.accc.gov.au/content/index.html/itemId/860220/fromItemId/859018/display/acccDecision>

Future towage market at Gladstone

Towage services are capital intensive, with a cost structure dominated by fixed costs. A high proportion of towage costs are invariant to the level of utilisation of tug vessels. These fixed costs give rise to economies of scale. Economies of scale occur when the average cost of production decreases as the volume of output increases.

At a certain market size, economies of scale for a towage provider will diminish. However, at or beyond this level of demand, it does not necessarily follow that having multiple towage providers is a more efficient industry structure. Demand needs to have grown sufficiently such that each individual provider can achieve the scale necessary to realise average costs achievable by a single towage provider. Practically, this means that it is not efficient to have multiple towage providers except for very large ports and where there is a high intensity of use of tug vessels. This is evidenced both by experience at other comparable ports to Gladstone, and our modelling of the costs of towage provision at the Port.

Our modelling indicates that the scale of demand for towage services at the Port for the period to FY2027 has not yet reached a point where it would be efficient to have multiple towage providers: a single provider remains the least cost option. To impose a market structure of multiple towage providers in an environment such as the Port where significant economies of scale have not fully been exhausted will cause towage costs, and prices, to be higher than otherwise.

Key Findings

The evidence considered in this report is largely consistent with previous analysis by the ACCC³ and our previous work.⁴

Key finding 1: The most cost efficient towage option for the Port continues to be a single provider.

Our analysis shows that a single provider of towage services at the Port is the least cost option, based on forecast demand for towage to FY2027 and a continuation of the current operational and the current shipping dynamics. Analysis of the current tug utilisation rates and the likely minimum number of tug vessels required to provide towage services at the Port show that a single towage operator could provide services across the entire Port at a lower economic cost than two or more towage operators.

Although forecast demand for the period FY2019 to FY2027 for tug jobs is expected to be higher than the threshold identified by the Productivity Commission as the point at which economies of scale for a single towage provider may be exhausted⁵, the Port's unique characteristics and our analysis suggests that this scale threshold is higher at the Port.

The trade and vessel mix at Gladstone require a higher average number of tug jobs per vessel call than other ports, such that the towage provider needs access to more tugs (and therefore more fixed capital) for a given number of vessel calls and tug jobs.

Operational modelling undertaken by GPC and Aurecon indicates that a single operator requires fewer tugs than two operators to achieve the current service levels. Conversely, the Port could not maintain the current number of tugs with two towage operators without slowing down shipping movements and reducing the efficiency of the Port.

³ Australian Competition and Consumer Commission (2009) *Gladstone Ports Corporation Limited – Notification N93770 – ACCC Decisions, D09+42839*, available at: <http://registers.accc.gov.au/content/index.phtml/itemId/860220/fromItemId/859018/display/acccDecision>

⁴ PricewaterhouseCoopers (2009) *Gladstone Ports Corporation – Summary of Towage Market Analysis*, available at: <http://registers.accc.gov.au/content/index.phtml/itemId/860220/fromItemId/859018/display/submission>

⁵ Productivity Commission (2002), *Economic Regulation of Harbour Towage and Related Services, Inquiry Report*, August 2002, page xxvi, available at <https://www.pc.gov.au/inquiries/completed/harbour-towage/report/harbourtowage.pdf>

Our analysis shows that multiple towage providers in the Port would result in a cost penalty for customers due to the duplication of costs to achieve the same level of service. Increasing the number of tugs operational at the Port would cause a direct cost penalty to Port users, including because additional tug berth infrastructure would be required to house the additional tugs. The cost penalty of having additional tugs at the Port is significant since a large percentage of towage costs are proportionate to the number of tug vessels. Our modelling indicates an average cost penalty of between 32 per cent and 84 per cent across all Port users.

There are also administrative benefits for both GPC and the Harbour Master in having a single towage provider in the Port, including in the coordination of towage services between the Harbour Master and a single operator. Multiple towage providers would require the development of priority systems and other processes.

Key finding 2: Competition between multiple towage providers is unlikely to be sustainable, nor in the best interests of Port users.

In markets where demand is insufficient to support multiple providers operating at an efficient scale, as is the case at the Port for towage services, enduring competition between providers is unlikely to be sustainable. Direct competition between multiple towage providers in the Port is unlikely to be feasible or sustainable, as it requires either:

- individual towage providers to each hold sufficient tugs to cater for demand from vessels, which suggests that between the two (or more) providers there would be redundant investment in tug capacity, or
- co-operative and/or cross-hiring arrangements to be established between the two (or more) providers, suggesting a structure more like a joint venture than a contestable market.

Even if competition for towage services were to occur for a period of time in the Port, the market likely would revert to a single-provider model, but with diminished incentives for efficiency in pricing or service delivery by the remaining provider. In addition, the transition to a single provider could result in disruption to towage services for Port customers.

Key finding 3: The factors considered by the ACCC in its previous assessment of the Gladstone towage market still hold.

Although competition *in* the towage market in the Port would be restricted during the term of an exclusive licence, this would be outweighed by the benefits associated with competitive pressure *for* the market. Competition for the market addresses barriers to entry and is likely to be more effective than short term competition in an open market, particularly in the case of an exclusive licence.

The ACCC⁶ previously noted the tender process for the current exclusive licence generated sufficient competition for the market, addressed the public detriments and introduced international operators to enter the Australian market (increasing competition in the national towage market). The same conclusions would hold for a future tender process, as envisaged by GPC.

⁶ Australian Competition and Consumer Commission (2012) *Statement of Reasons*, available at: <http://registers.accc.gov.au/content/index.phtml/itemId/860220/fromItemId/859018/display/acccDecision>

Key finding 4: Subject to a rigorous competitive tender process, an exclusive licence for towage services is the most effective means of achieving competition at the Port.

If the tender process for towage services is designed appropriately, exclusivity should allow for keener price competition during the tender process (due to the certainty it provides prospective towage providers) and also avoids certain costs and inefficiencies as might be incurred during the term of the licence.

There needs to be more than one party eligible to submit a tender in order to provide incentive for tenderers to submit competitive offers. Ideally, there should be at least three tenderers. To facilitate this, a future tender process for towage services in the Port must be rigorous and comprise the following elements:

- Clearly defined **technical, safety and other service requirements**, whilst retaining flexibility for tenderers to consider and propose innovative service delivery models.
- A **framework for tenderers to propose commercial terms** which appropriately balances the need for the towage provider to recover its efficient costs, including a return on capital invested, whilst using the discipline of competition to provide an incentive to deliver services at least cost.
- Defined **governance arrangements**, including details on reporting on financial and non-financial performance, and rules and processes for decision-making during the Licence term, including a framework for risk sharing for unanticipated or uncertain future events based on an efficient allocation of risk between Port customers and the towage provider.
- Details on **supporting Port assets and services** that would be made available to the successful tenderer, including the terms on which access would be provided to the Port's existing tug berthing facility and any other supporting systems and processes.

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1 Background

1.1 Background

In most sea ports, ocean-going shipping vessels require assistance to safely manoeuvre within channels and berth areas. Harbour towage is the service performed by tugs that supports the safe handling of vessels within ports. Tugs are used to assist vessels on arrival to, and departure from, a port. Tugs also protect port facilities and other vessels from damage while a vessel is manoeuvring within navigation channels and the berth areas.

Under the TIA,⁷ GPC is responsible for establishing, managing and operating efficient and effective port facilities and services within its ports, and to provide or arrange for the provision of ancillary services or works necessary or convenient for the effective and efficient operation of its ports. Under the TIA, GPC, in its role as a port authority, has the power to issue licences for harbour towage services within the Port.

Harbour towage services at the Port are currently provided under an exclusive licence arrangement between Smit and GPC. The Licence provides that all vessels requiring harbour towage services at the Port use a single supplier. This was considered ‘third line forcing’ which was prohibited, regardless of its effect on competition, by the *Trade Practices Act 1974* (Cth) (now superseded by the *Competition and Consumer Act 2010* (Cth)), unless the conduct is immunised by the ACCC. GPC was therefore required to notify the ACCC of this proposed conduct in order to obtain legal immunity, which it did in 2009. The ACCC determined not to disallow GPC’s proposed conduct. The Licence commenced on 1 January 2011 for an initial five year term. Following the optional extension being exercised by GPC, the Licence will expire on 31 December 2018.

GPC is currently considering arrangements for the provision of harbour towage services at the end of the current Licence term.

As at 16 November 2017, amendments to the *Competition and Consumer Act* (Cth) took effect such that ‘third line forcing’ is no longer prohibited *per se*. Rather it is only prohibited under the Act if the proposed conduct has the purpose of, or will likely have the effect of, substantial lessening of competition in a market.

⁷ Clause 275 of the Transport and Infrastructure Act, available at: <https://www.legislation.qld.gov.au/view/pdf/inforce/2017-10-01/act-1994-008>

1.2 Scope and methodology

Gladstone Ports Corporation engaged PricewaterhouseCoopers Consulting (Australia) Pty Limited (PwC) to:

- assess future towage servicing options as defined by GPC, including by undertaking economic modelling of the cost of towage provision under certain future scenarios,
- identify the towage service option that promotes greatest operational and economic efficiency within the Port, while ensuring GPC meets its statutory obligations under the TIA, and
- consider the best mechanism to deliver towages services at the Port to ensure operational and economic efficiency for the period following the expiry of the current Licence, including assessing the likely public benefits and detriments of that approach.

To the extent that the preferred towage services option requires consideration by the ACCC, this advice is expected to inform any associated submission to the ACCC by GPC, and also support GPC's consultation with its customers.

Although some of the arguments advanced in this report may be relevant to arrangements at other ports, our conclusions are based on information that is specific to the towage market at the Port. This report should not be used to draw conclusions on the appropriateness of specific arrangements at other ports.

1.3 Structure of this report

This report is structured as follows:

- Section 2 provides an overview of the Port and outlines the towage arrangements currently in place.
- Section 3 describes the size of the future towage market at the Port to FY2027 in the context of economies of scale for towage services.
- Section 4 describes the future towage service options defined by GPC and reasons for arriving at these options.
- Section 5 describes the options assessment framework and methodology applied to compare the cost of the future towage service options defined GPC. It also summarises the results of the cost assessment and identifies the least cost solution for towage services at the Port.
- Section 6 details the mechanisms available to operationalise the least cost option beyond the term of the current Licence.

The appendices contain additional data, analysis and reports that have been prepared as part of evaluating the optimal future towage arrangements at the Port.

1.4 Disclaimer

This Report has been prepared by PricewaterhouseCoopers (Consulting) Australia Pty Limited (PwC) in our capacity as advisors to GPC in accordance with our engagement letter dated 6 July 2017.

The information, statements, statistics and commentary (together the 'Information') contained in this Report have been prepared by PwC from publicly available material, discussions with industry experts, and from material provided by GPC. PwC has relied upon the accuracy, currency and completeness of that Information. The Information contained in this Report has not been subject to an Audit. PwC may in its absolute discretion, but without being under any obligation to do so, update, amend or supplement this Report.

The modelling of future towage provision options is based on technical modelling undertaken by Aurecon, technical advisors to GPC, publicly available data and discussions with industry experts and stakeholders. Our modelling is reliant on the assumptions and forecasts as described in this Report. These assumptions and forecasts are uncertain and the results are intended to be indicative only, and future outcomes may be different.

PwC has provided this advice to GPC, and disclaims all liability and responsibility to any other parties for any loss, damage, cost or expense incurred or arising out of any person using or relying upon the Information.

While we consent to a copy of this report being provided to the ACCC, we do not accept any responsibility or liability (whether in contract, tort (including negligence) or otherwise) to the ACCC or any other person for the consequences of any reliance on this Report.

Liability limited by a scheme approved under Professional Standards legislation.

2 Towage arrangements at the Port of Gladstone

2.1 Port of Gladstone

Located 525 kilometres north of Brisbane, the Port is Queensland's largest multi-commodity port, housing the world's fourth largest coal export terminal (RG Tanna Coal Terminal). Other products exported from the Port include LNG, alumina and aluminium and imports including bauxite.

The Port is managed by GPC, a corporatised government-owned entity with shares held by the Deputy Premier, Treasurer and Minister for Aboriginal and Torres Strait Islander and the Minister for Transport and Main Roads on behalf of the Queensland Government. GPC also owns and operates a number of cargo handling facilities in the Port.

Demand for towage services is distributed across Port users and various wharf centres. Operational wharves are set out in Table 1.

Table 1: Current wharf centres and corresponding users

| Wharf Centre | Wharves | User |
|-------------------------------------|--|--|
| Boyne Smelter Wharf | Boyne Wharf | Boyne Smelters Limited (BSL) |
| South Trees Wharf | <ul style="list-style-type: none"> South Trees East South Trees West | Queensland Alumina Limited (QAL) |
| Barney Point Terminal | Barney Point | Multi-user facility |
| Auckland Point Wharf | <ul style="list-style-type: none"> Auckland Point 1 Auckland Point 2 Auckland Point 3 Auckland Point 4 | <ul style="list-style-type: none"> Multi-user GrainCorp Multi-user Multi-user |
| RG Tanna Coal Terminal (RGT) | Clinton Wharf | Multi-user facility |
| Fishermans Landing | <ul style="list-style-type: none"> Fishermans Landing 2 Fishermans Landing 4 Fishermans Landing 5 | <ul style="list-style-type: none"> Rio Tinto Yarwun Alumina Refinery/multi-user Multi-user Multi-user |
| Wiggins Island Coal Terminal (WICT) | WICT | Multi-user facility |
| Curtis Island | <ul style="list-style-type: none"> Qld Curtis LNG Santos GLNG Australia Pacific LNG | Liquid Natural Gas (LNG) users |

Source: GPC (2017) *Operations*, available at: <http://www.gpcl.com.au/operations/port-of-gladstone>

2.2 Towage fleet

Towage requirements for vessels entering and leaving the Port, including berthing and unberthing manoeuvres, are dependent on parameters assigned by Maritime Safety Queensland (MSQ) and documented in the Gladstone Port Procedures Manual Section 9.⁸ Towage allocation is assigned mostly by vessel physical attributes (length overall (LOA) and beam) for safe navigation through Port channel areas. Vessel towage requirements range from a single tug for small Handy size vessels, to up to four tugs for an LNG vessel movement. LNG vessels have tug specification requirements over and above other vessels, predominantly using 80 tonne bollard pull tugs while at the Port.

There are currently ten tugs (plus one spare tug, operationalised as required) providing towage services at the Port. The fleet is divided into an LNG and Standard Harbour fleet as described in Table 2. The LNG fleet primarily services the LNG users while the Standard Harbour fleet primarily services all other Port users, though some inter-operability does occur.

Table 2: Current towage fleet⁹

| Tug name | Fleet | Tug specification | Bollard Pull |
|-------------------|--------------------------------------|-------------------|------------------------|
| Smit Koongo | Standard Harbour fleet ¹⁰ | Uzmar ASD 30-70E | 70T Ahead / 65T Astern |
| Smit Yallarm | Standard Harbour fleet | Uzmar ASD 30-70E | 70T Ahead / 65T Astern |
| Smit Awoonga | Standard Harbour fleet | Uzmar ASD 30-70E | 70T Ahead / 65T Astern |
| Smit Tondoon | Standard Harbour fleet | Uzmar ASD 30-70E | 70T Ahead / 65T Astern |
| Smit Kullaroo | Standard Harbour fleet | Uzmar ASD 30-70E | 70T Ahead / 65T Astern |
| SL Curtis Island | LNG industry fleet ¹¹ | RAstar 3400 ASD | 86T Ahead / 80T Astern |
| SL Quoin Island | LNG industry fleet | RAstar 3400 ASD | 86T Ahead / 80T Astern |
| SL Boyne Island | LNG industry fleet | RAstar 3400 ASD | 86T Ahead / 80T Astern |
| SL Heron Island | LNG industry fleet | RAstar 3400 ASD | 86T Ahead / 80T Astern |
| SL Wiggins Island | LNG industry fleet | RAstar 3400 ASD | 86T Ahead / 80T Astern |

Source: GPC (2014) *Annual Report 2013/14*, available at: http://www.gpcl.com.au/SiteAssets/Annual%20Reports/GPC_Annual_Report_2014-15.pdf and other various GPC sources

⁸ Maritime Safety Queensland, *Port of Gladstone Port Procedures Manual June 2017*, Section 3.10, available at <https://www.msq.qld.gov.au/Shipping/Port-procedures/Port-procedures-gladstone>

⁹ An additional tug – the Smit Targinie – is held in reserve for towing outside of Gladstone, salvage operations and to replace unserviceable tugs, however this vessel is not included in the Licence. https://www.msq.qld.gov.au/-/media/MSQInternet/MSQFiles/Home/shipping/ppm/Gladstone-PPM/0617/Gladstone_ppm_June-2017.pdf?la=en.

¹⁰ A Standard Harbour tug or a Standard tug is a 70 tonne bollard pull tug used to perform non-LNG tug jobs.

¹¹ A LNG tug is an 80 tonne bollard pull tug with specialist LNG specifications, used to perform LNG tug jobs.

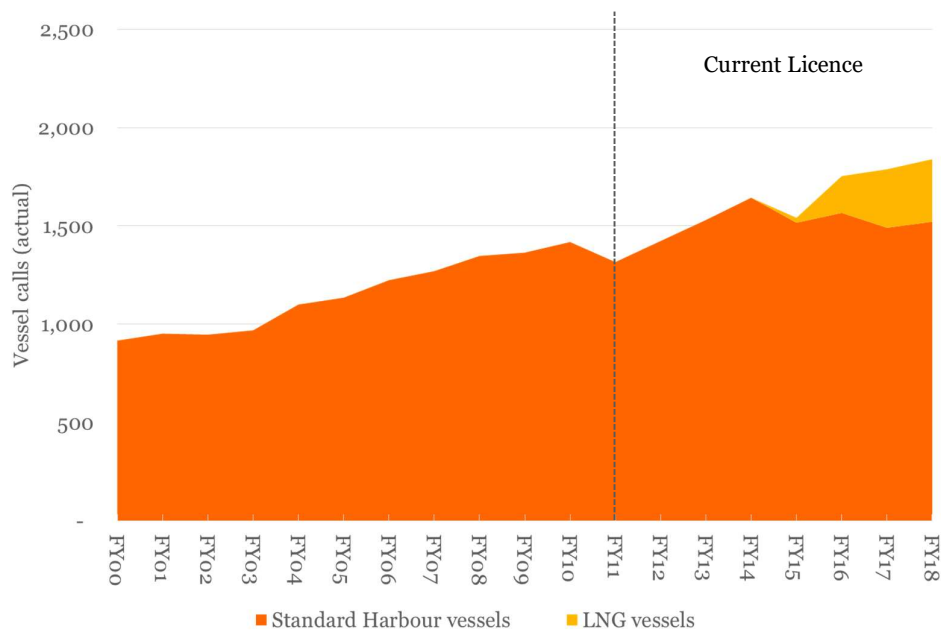
2.3 Towage demand

In FY2017 there were 1,788 vessel calls¹² to the Port resulting in 8,670 tug jobs¹³, or an average ratio of 4.5 tug jobs per vessel call.¹⁴

Since FY2000 (financial year ending 30 June 2000), the number of vessel calls and the associated number of tug jobs at the Port has steadily increased.

Figure 1 shows that the Port experienced year-on-year growth in the number of vessel calls with the exception of FY2011 and FY2015. In FY2011 the decrease in vessels calls was largely due to the January 2011 Queensland floods which caused temporary closure of coal mines and the rail systems that serve the Port. The FY2015 reduction in demand for towage at the Port was the result of a contraction in the mining industry.

Figure 1: Vessel calls at the Port – FY2000 to FY2017



Source: PwC analysis, GPC (2017) *Trade Statistics*, available at: <http://www.gpcl.com.au/Pages/Trade-Statistics.aspx>

Figure 1 shows that during the term of the current Licence since 2011, the number of non-LNG vessel calls at the Port has increased only slightly (average annual growth over the period between 2011 and 2018 was two per cent). The increase in total vessel calls during the Licence period has largely been due to the commencement of LNG exports from FY2015.

Figure 2 shows the number of tug jobs at the Port during the term of the current Licence. The number of tug jobs has increased during the current Licence period to a forecast of 8,928 in FY2018 which again has been largely driven by the commencement of LNG exports at the Port. LNG vessels require more tugs to perform a vessel movement than vessels requiring Standard Harbour tugs, meaning that growth in the number of LNG vessel calls has

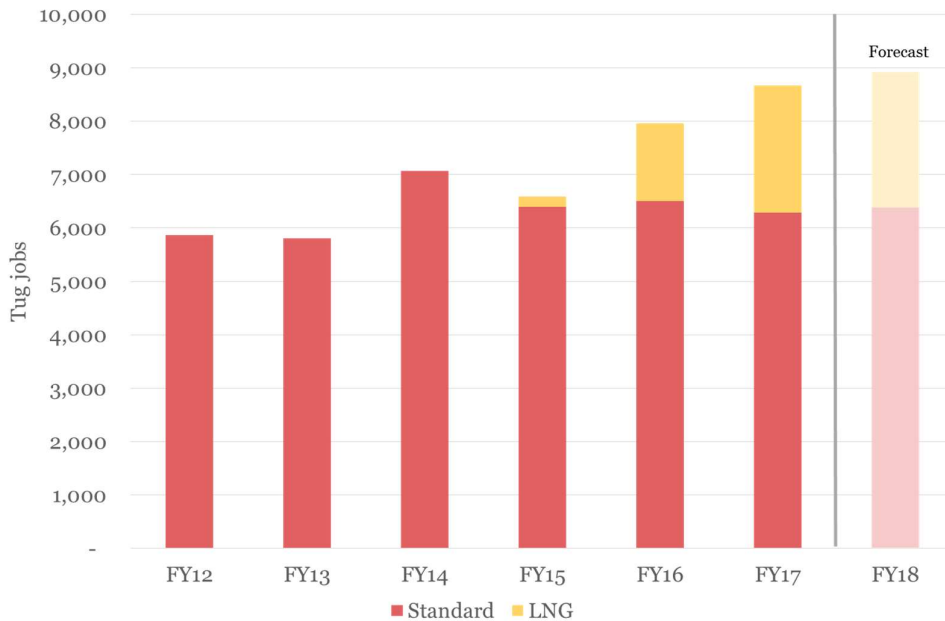
¹² A vessel call is a single vessel entering and departing the Port

¹³ A tug job is a commitment for a tug hull and crew commencing depart from tug base incorporating all escort and vessel manoeuvring support up to return to tug base. If a vessel requires two tugs to berth and two tugs to depart the port, this is classified as four tug jobs

¹⁴ Based on a proxy assumption of typical number of tug jobs for each vessel by gross registered tonnage (GRT) class

contributed to a disproportionately higher share of growth in the number of tug jobs relative to other trades at the Port.

Figure 2: Total tug jobs at the Port – FY2012-FY2018



Source: PwC analysis (based on a proxy assumption of typical number of tug jobs for each vessel), unpublished GPC data.

2.4 Licencing arrangements at the Port

Harbour towage services at the Port are currently provided by Smit as a single supplier under an exclusive licence arrangement. Variants of this arrangement have been in place for some time. Prior to the current Licence, towage services were provided by Svitzer Australia Pty Ltd (Svitzer) under an exclusive licence, granted following a competitive tender process in 2000. Svitzer’s licence expired on 30 June 2010.

In 2009, GPC sought to renew the exclusive licence for harbour towage services at the Port. GPC proposed to establish an exclusive licence on the basis that a single provider was the towage service configuration that would maximise the public benefits at the Port. Consistent with the requirements under the *Trade Practices Act 1974* (Cth) (now superseded by the *Competition and Consumer Act 2010* (Cth)), GPC notified the ACCC of this proposed conduct. The ACCC did not revoke GPC’s notification for the proposed conduct.⁴

As a result of a competitive tender process, Smit was awarded an exclusive licence to provide harbour towage services at the Port. The Licence commenced on 1 January 2011 for an initial five year term, with an optional three year extension.

In 2011, Svitzer requested the ACCC review GPC’s notification for the exclusive licence arrangements at the Port, on the grounds that GPC did not intend to run a competitive tender for the provision of towage services for ships carrying LNG at the Port. The ACCC did not revoke GPC’s notification for the conduct.¹⁵

¹⁵ Australian Competition and Consumer Commission (2012) *Statement of Reasons*, available at: <http://registers.accc.gov.au/content/index.phtml/itemId/860220/fromItemId/859018/display/acccDecision>

In December 2014, LNG exports commenced at the Port and LNG vessels were initially supported by harbour tugs. In accordance with the Licence and the requests of the LNG industry, Smit procured five LNG tugs to support the LNG trade. The specifications for the LNG tugs were determined through consultation with the LNG industry and having regard to the minimum standards set by MSQ.

In 2015, GPC exercised the optional three year extension to Smit's Licence, in part to allow Smit further time to recoup part of the investment it had made in procuring and mobilising the new LNG tug fleet, noting the otherwise very short time period over which Smit would be able to amortise these once-off and sunk costs. The current Licence between Smit and GPC is in place until 31 December 2018.

The case study below sets out our analysis of the public benefits obtained through the exclusive licence with Smit.

Case study of the public benefits that have arisen from the current licencing arrangements at the Port of Gladstone

In its 2009 Notification to the ACCC, GPC submitted a number of public benefit claims to support its intention to issue an exclusive licence for harbour towage services. This section outlines the public benefit claims submitted by GPC and assesses how these benefits have been realised over the term of the current Licence.

Forecast demand at the Port was not sufficient to efficiently support more than one towage provider over the Licence term.

Forecast tug job demand at the Port was below the 8,000 tug job per year threshold identified by the Productivity Commission as the point at which economies of scale for a single provider may be exhausted, for the first two years of the proposed licence term.¹⁶ GPC submitted that enduring competition at the majority of Australian ports was unlikely to occur due to lumpy investments and economies of scale. Port customers stood to benefit from having a sole provider operational at the Port since competition between providers was unlikely to be sustainable or feasible.

Forecast tug job demand at the Port was below the 8,000 tug job per year threshold identified by the Productivity Commission for the first two years of the Licence period. However, aggregate actual demand for tug jobs over the term of the Licence was far lower than originally anticipated. Over the Licence term, actual demand fell short of the original forecast by approximately 15,000 tug jobs.

The Licence incorporated a pricing adjustment mechanism that enabled any under- or over-recovery of revenue by Smit in a given year due to variations in cost or volume to be reflected in towage charges in the following year. This pricing adjustment mechanism operates to either *increase* towage charges (where revenues were lower than expected, by more than a preset margin) or *decrease* towage charges (where revenues were higher than expected, above the same margin). These provisions were incorporated into the Licence to reflect the particularly pronounced volume risk at the Port in 2009, including uncertainties surrounding the timing and scope of any LNG towage requirement as well as risks in demand for Standard Harbour towage services reflecting the WICT project, which was under construction at that time. These provisions sought to reduce the volume risk exposure of an operator to entering the market.

¹⁶ Productivity Commission (2002), *Economic Regulation of Harbour Towage and Related Services, Inquiry Report*, August 2002, page xxvi, available at <https://www.pc.gov.au/inquiries/completed/harbour-towage/report/harbourtowage.pdf>

This Standard Harbour towage pricing adjustment mechanism has only been enacted once over the term of the current Licence when an extreme weather event caused a significant reduction in volume at the Port, reducing Smit's revenue. Thus, there has been no public detriment arising from volumes being lower than originally anticipated during the tender for the current Licence.

Licencing can be used to generate more competitive pressure for a market and promote more competitive outcomes for Port users.

GPC submitted that contracting and licencing can be used to exert competitive pressure for the market, since competitive tenders for an exclusive right to operate at a port for a fixed period would likely promote more competitive outcomes for port customers.

The competitive tender process conducted by GPC resulted in significant interest amongst prospective towage providers, resulting in public benefits to port customers. GPC has advised that 20 companies requested tender documents, with 16 stating their intention to tender. Complying tenders were ultimately received from four parties – three companies and one joint venture. The previous tender increased competition in the Australian national towage market, as it led to entry into the Australian market by a new party, when Smit was awarded the Licence.

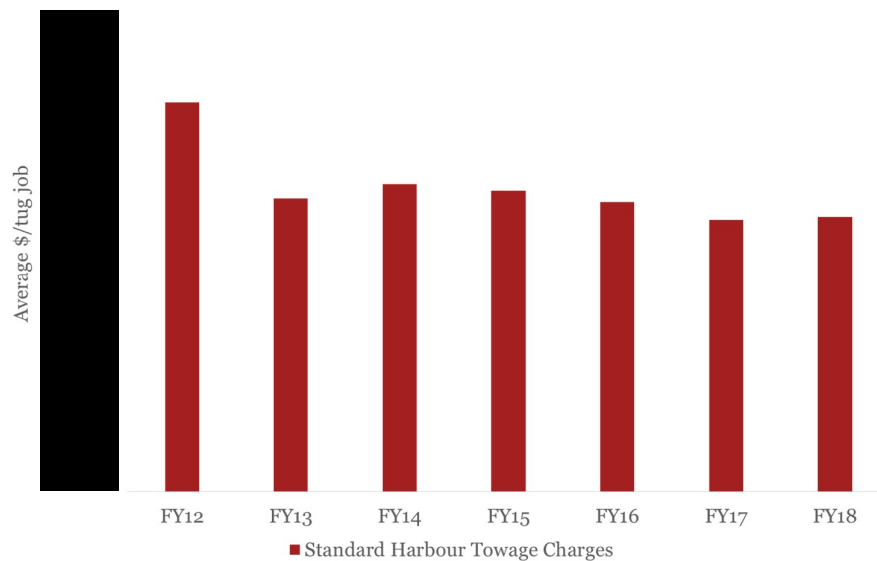
Competitive tendering allows for the least cost provider to be awarded a licence at the Port.

GPC further submitted that competitive tendering can help port customers find a towage service provider that provides appropriate quality for the least cost.

The tender evaluation process was based on clear evaluation criteria including criteria related to the least-cost provision of services to port users. The tender process resulted in further public benefits by way of an overall reduction in average towage charges of approximately three per cent at the Port (when comparing closing charges at 31 December 2010 and opening charges at 1 January 2011).

The competitive tender process further drove a reduction in towage charges in real terms over the term of the existing Licence. Smit submitted a schedule of harbour towage rates as part of the tender process. Annual price movements are governed largely by indexation of tendered costs (with an adjustment for variances in demand in a given pricing year). This has allowed for growth and scale benefits to be captured in charges over the current Licence term, with average Standard Harbour towage charges reducing by approximately 14.6 per cent in real terms.

Figure 3: Standard Harbour average towage charges, FY2012-FY2018 (real, as at FY2012)



Source: GPC unpublished data

The Licence incorporated operational and safety measures to ensure the continuous delivery of the optimal level of towage services. During the term of the Licence there have been no substantial disruptions to commercial shipping, trade or adverse impact on utilisation of the Port due to towage. There have also been no significant safety incidents impacting commercial vessels while engaged in towage services.

GPC also incorporated provisions into the current Licence, through an Amending Deed, to address certain additional costs incurred by Smit that were unknown at the time of the tender. These amendments provide that:

- where risks were known, or ought to have been known, at the time of the tender, these costs will not be incorporated into pricing. To do so would undermine the neutrality of the competitive tender process.
- where circumstances affecting the cost of providing towage services at the Port have changed, and this change could not have been reasonably anticipated at the time of the tender, GPC will consider whether there is sufficient argument to incorporate these costs into pricing.
- all additional costs that are approved by GPC are subject to audit.

These provisions have contributed to Port customers benefitting from lower charges in real terms over the term of the current Licence. This reflects that customers have been insulated against unreasonable price increases over the current Licence term.

The proposed term enables a sufficient recovery horizon for significant once-off and sunk costs, without adversely impacting towage charges.

GPC submitted that a five year licence with an optional extension period of three years would generate greater interest for the provision of towage services at the Port as it allowed for a longer financial recovery horizon.

The optional extension of the existing Licence has also yielded benefits to Port customers through lower charges and improved efficiency. One of the key reasons GPC exercised the optional three year extension to Smit's Licence was to allow Smit further time to recoup part

of the investment it had made in procuring and mobilising the new LNG tug fleet, noting the otherwise very short time period, with limited vessel movements, over which Smit would be able to amortise these once-off and sunk costs.

Separating towage service providers imposes a direct cost penalty on Port customers, as it necessarily involves a duplication of fixed operating costs.

Based on analysis undertaken by PwC in 2009, GPC submitted that the separation of towage service providers between multiple towage providers would impose a cost efficiency penalty on all port users, on a direct cost basis. This cost penalty is partly driven by the fact that operating costs are closely related to tug numbers, meaning that the addition of a second fleet necessarily involves a duplication of fixed operating costs that are recovered through charges.

GPC awarded an exclusive licence for harbour towage services at the Port of Gladstone and its customers have benefited from reduced charges both initially when the Licence was awarded, and over the term of the existing Licence. Therefore, there has been no cost efficiency penalty on all port users on a direct cost basis as a result of having an exclusive licencing arrangement at the Port.

Overview of Harbour Towage at the Port of Gladstone

2000

Svitzer provides harbour towage services at the Port under an exclusive licence.

Dec 2010

Smit commences towage operations at the Port under an exclusive licence.

May 2012

LNG proponents issue signed agreements to GPC for the procurement of two 80t tugs to service LNG industry.

Oct 2013

LNG proponents issue signed agreements to GPC for the procurement of three additional 80t tugs to service the LNG industry at the Port.

Dec 2014

LNG exports begin at the Port of Gladstone and are serviced by Standard Harbour tugs.

2015

GPC exercises the option on Smit's Licence to extend the term of the Licence to the end of calendar year 2018.

2009

GPC notifies ACCC of its intention to engage in exclusive dealing. Rio contests notification during ACCC consultation. GPC runs a competitive tender process at the Port of Gladstone and awards Smit the licence for harbour towage services.

Nov 2011

Svitzer challenges GPC's conduct with the ACCC, claiming that a single provider was no longer in the public's economic best interest. Rio makes submission in support of Svitzer's challenge. The ACCC commences a review of GPC's notification.

June 2012

The ACCC decides not to revoke GPC's immunity for third-line forcing, noting that the exclusive licence at the Port resulted in net public benefits.

Oct 2014

Amended Deed to Smit's Licence executed to include the provision of LNG towage services.

2015

LNG tugs arrive throughout 2015 and are commissioned to service Gladstone's LNG Port users.

Dec 2018

Smit's licence is due to expire 30 December 2018.

2.5 Current towage pricing frameworks

The current Licence provides that towage services are provided by a single operator (Smit), though with costs recovered through two separate pricing mechanisms: one for the Standard Harbour tug fleet and another for the LNG tug fleet. While the pricing framework for Standard Harbour towage services was clearly defined in the request for tender (RFT) during the competitive tender process run by GPC in 2009, the LNG industry towage requirements had not been determined at that time. Consequently, only core principles for determining LNG towage pricing were incorporated in the RFT.

Towage requirements for LNG vessels using the Port were determined collectively by the LNG industry, the Harbour Master and GPC over the period 2009 to 2012. In 2012, and with agreement from the LNG customers, GPC instructed Smit to purchase an initial two LNG tugs necessary to service the LNG industry, as required by the Licence. In 2013, at the request of the LNG customers and as a result of further operational risk assessment, GPC instructed Smit to purchase three additional LNG tugs, consistent with the licence. The towage requirements for the LNG industry, as described in Section 9 of the Port Procedures Manual and agreed under the LNG Protocols, require higher specification tugs than for other Port customers.

Once the towage requirements for the LNG industry were known, the LNG towage pricing principles in the Licence were developed further and incorporated into a more detailed LNG pricing framework and an amended Licence. These reflected the core principles initially established – that LNG users should pay for all additional towage costs necessary to support the provision of LNG towage services – and were also informed by commercial frameworks in place for other port services, both in Gladstone and in other Australian ports. Table 3 describes the pricing frameworks for the each of the Standard Harbour and LNG tug fleets.

Table 3: Towage pricing frameworks at the Port

| Standard Harbour Pricing Framework | LNG Towage Pricing Framework |
|--|--|
| <p>Smit tendered a schedule of Standard Harbour towage rates where the rate per tug job increased with vessel size (as represented by Gross Registered Tonnage (GRT)). Standard Harbour towage rates are otherwise uniform in that they do not differ by wharf centre, steaming time or other service characteristics.</p> <p>The Licence describes how tendered rates are adjusted each year. In summary, tendered rates are converted to an Annual Revenue Requirement (ARR), with certain underlying cost categories then escalated using defined indexes, and re-converted back to a rate per tug job, based on forecast demand for the coming year.</p> <p>The Licence allows Smit to recover the ARR¹⁷ from Standard Harbour users.</p> | <p>LNG Towage pricing is a return on cost model, based on prudent and efficient incremental costs related to the provision of LNG towage services. The Licence allows Smit to recover its LNG towage costs (defined in the Licence as the LNG ARR), including a prescribed return on the value of its LNG tug fleet, from LNG users.</p> <p>Fuel costs are recovered on a cost pass-through basis, and Smit invoices each LNG Customer for actual fuel costs incurred and as attributable to each LNG Escort Tug separately.</p> |
| <p>Port users pay a single rate per tug job (where each individual harbour tug attending to either a berthing or departing vessel represents one tug job).</p> | <p>LNG users pay two key LNG Towage charges; LNG Escort Tug Services¹⁸ charge and LNG Standby Services charge¹⁹. Both of these charges contribute to the recovery of the LNG ARR.</p> |
| <p>Towage charges are scaled on the basis of vessel size, with differential charges per tug according to the GRT of the vessel to be serviced.</p> | <p>LNG Towage charges are differentiated by LNG user due to LNG vessel arrivals at the Port during FY2015 and FY2016 being slower than initially anticipated by industry. Differentiated pricing was introduced to address differing levels of cost recovery by each LNG customer and to ensure individual LNG customers were not financially disaffected by the delay in vessel arrivals from other LNG customers.</p> |
| <p>Charges are adjusted annually using a contractually prescribed approach that allows for a pass-through of index-based increases in operating expenditure and maintains Smit's gross margin implied by the originally tendered charges, in real terms.</p> | <p>Charges are adjusted annually to reflect the forecast cost and vessel profiles over the incoming pricing year.</p> |
| <p>The Licence includes an adjustment mechanism for any under- or over-recovery by Smit in the following years' rates to the extent that revenues differ by more than +/- 10 per cent from forecast.</p> | <p>The Licence includes a mechanism to adjust for any under- or over-recovery of revenue through adjusting the following years' rates to the extent actual revenue and costs differed from forecast.</p> |

Source: Gladstone Harbour Towage Licence

¹⁷ The Annual Revenue Requirement (ARR) represents the annual revenue amount required by Smit to recover its expenses and a fair rate of return. It is the sum of the annual costs incurred to provide a safe and reliable service to Port users. Smit recovers its ARR each year through towage charges

¹⁸ The services provided by an LNG Tug to escort LNG vessels arriving or departing from the Port or transiting between LNG berths at the Port.

¹⁹ The services provided by an LNG Tug to stand by and assist in the event of an emergency while LNG vessels are loading/unloading at berths in the Port.

Inter-operability between the LNG and Standard Harbour tug fleets

To support and promote the ongoing operational efficiency at the Port, GPC and Smit agreed operating and pricing principles to allow inter-operability between the LNG and Standard Harbour fleets to most efficiently meet demand for all towage services at the Port. These principles define the commercial arrangements where Smit utilises one or more of its Standard Harbour tugs to provide LNG towage services for a LNG vessel movement (or vice versa).

Analysis by GPC of the last three years of vessel movements indicates the following:

- 1 There are insufficient LNG Tugs alone to provide the current level of service to the LNG industry. Due to the LNG industry's higher towage requirements, including Standby services and the use of four tugs per LNG vessel movement, the LNG industry requires periodic regular access to the Standard Harbour Towage fleet to maintain current levels of service.
- 2 Although non-LNG trades require access to five Standard Harbour tugs to meet current levels of service, there is some spare capacity in the Standard Harbour tug fleet which can be accessed by the LNG sector without materially impacting the provision of towage services to non-LNG trades. However, at certain times, there may be operational advantages for non-LNG vessels to access towage services utilising LNG tugs.

Based on actual vessel arrival data, Port customers (excluding LNG) would have been able to be serviced exclusively by the Standard Harbour tug fleet, in the absence of the LNG industry demand and LNG tugs, without any significant impacts on the level of service provided. In fact there is some latent capacity in the Standard Harbour tug fleet.

However, were the Standard Harbour tug fleet not available to support the LNG tugs, there would be a significant impact on the level of service, particularly the ability to move two LNG vessels simultaneously. Appendix A explains this analysis in more detail.

Acknowledging that towage charges are determined through the different frameworks, and that Standard Harbour charges are significantly lower than LNG towage charges, this inter-operability had the potential to create distributional impacts for LNG customers, depending on which tugs (Standard Harbour tug or LNG tug) were tasked with supporting a particular LNG vessel movement.

To address this, a 'Reference LNG Towage Service' concept was introduced and incorporated into the price setting methodology for both pricing frameworks. The Reference LNG Towage Service is a deemed composition of LNG Tugs and/or Standard Harbour tugs used operationally by Smit to perform LNG towage services. In effect, the Reference Towage Service is based on an assumption that, on average over the relevant pricing period, each LNG vessel would be supported by [x] LNG tugs and [y] Standard Harbour tugs, with this ratio used as the basis for determining the towage charges paid by each LNG Customer (irrespective of the actual mix of tugs used for any LNG vessel).

The effect of this arrangement is that LNG users benefit in being able to access additional tug capacity from the Standard Harbour tug fleet, with this benefit effectively shared amongst all LNG users, irrespective of which tugs are used for any LNG vessel. Remaining Port users benefit in that the (fixed) costs of Standard Harbour tugs are recovered against a higher-than-otherwise forecast of demand (inclusive of the estimated demand from LNG vessels). In effect, the pricing principles ensure that, whilst certain costs are shared between Standard Harbour and LNG users, there is no cross subsidy between the market segments.

Where Smit uses an LNG tug to perform a Standard Harbour vessel movement, non-LNG trades are invoiced the Standard Harbour charges only (i.e. non-LNG trades do not contribute towards the LNG towage pricing mechanism). This reflects the fact that the

Standard Harbour fleet is sufficient to service the demand for towage services from non-LNG trades and could service demand if the LNG trade was not present at the Port.

2.6 Changes in towage charges over the Licence term

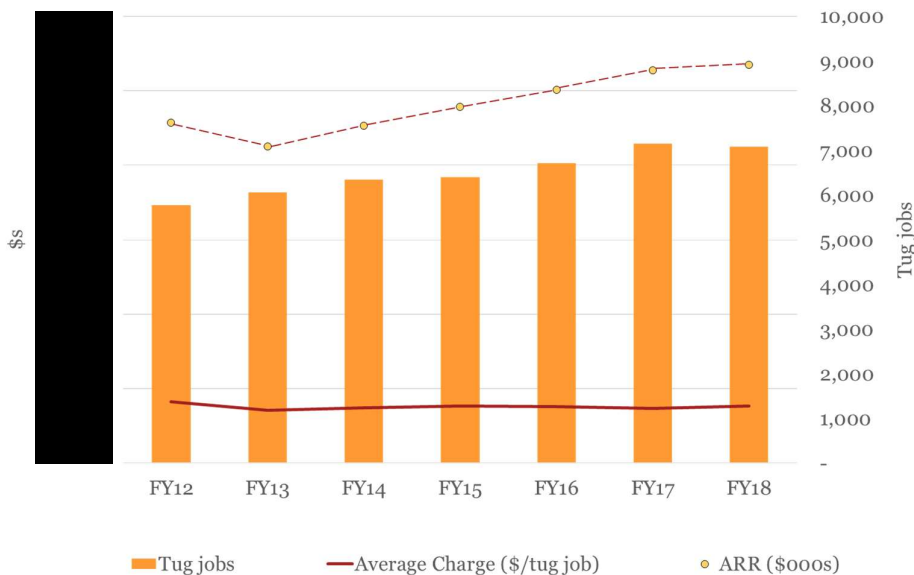
Standard Harbour towage charges

Standard Harbour towage charges have decreased significantly over the term of the current Licence in real terms. FY2018 prices are approximately 14.6 per cent lower than in FY2012, in real terms.

As described in Table 3, the cost base that forms the ARR for Standard Harbour towage services is calculated from the towage charges originally tendered by Smit, escalated forward by applying the forecast number of tug jobs and contractually-prescribed indexation.

Figure 4 illustrates that during the term of the current Licence the ARR (in nominal terms) has tracked the number of tug jobs. Although certain costs are fixed, others do increase with demand and some, such as fuel costs, are affected by external market drivers. Overall, the framework has resulted in relatively stable pricing in terms of the average charge per tug job, in nominal terms, corresponding to a significant real reduction in average charges.

Figure 4: Standard Harbour ARR, tug jobs and average charge (nominal), FY2012 to FY2018

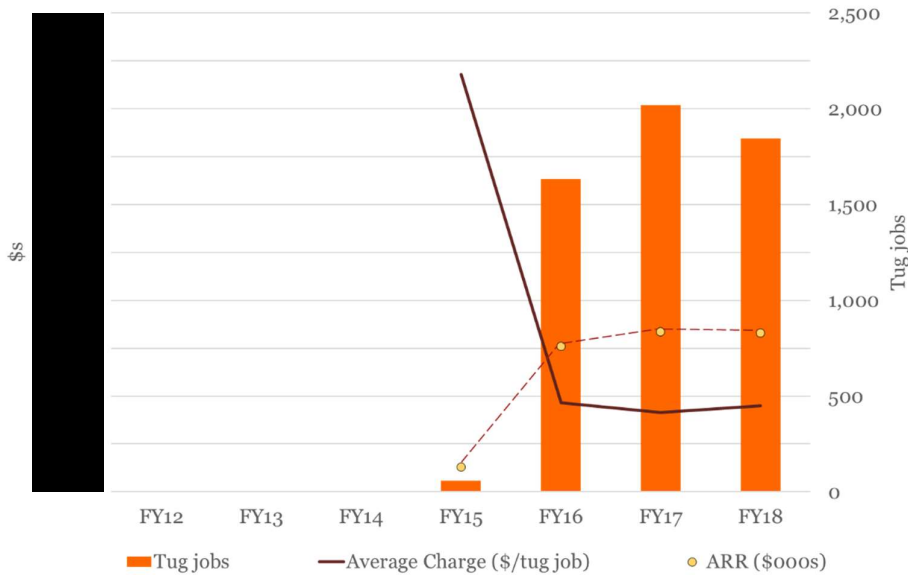


Source: PwC analysis, unpublished GPC data

LNG towage charges

As described in Table 3, the LNG ARR is based on the prudent and efficient incremental capital and operating costs (over and above existing Standard Harbour towage costs) related to the provision of LNG towage services. Figure 5 shows the effect of high initial costs as the LNG tugs were commissioned at the Port, yet demand was relatively low due to the timing at which the respective LNG projects commenced operations, resulting in a high average charge in FY2015. However, over time as the number of LNG tug jobs has increased the average charge per LNG tug job has reduced.

Figure 5: LNG ARR, tug jobs and average charge per tug job, FY2015 to FY2018



Source: PwC analysis, unpublished GPC data

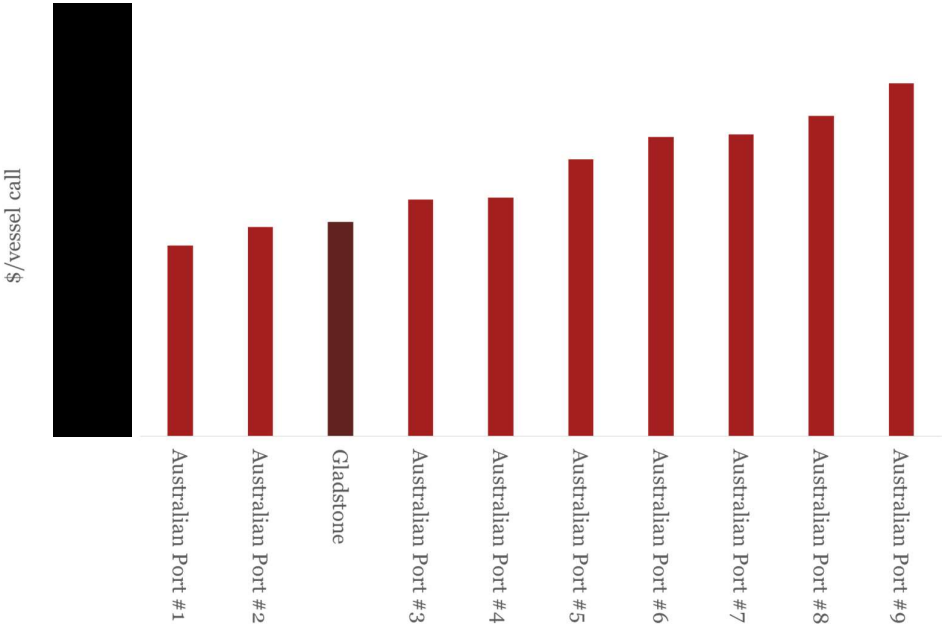
Comparison to towage charges at other Australian ports

Towage costs for users at the Port, when compared on a normalised basis to other ports, are towards the lower end of the cost range. For instance, the total cost per vessel call for a Cape sized vessel at the Port is approximately 61 per cent less than at the Australian Port #9, which has the highest cost per port call of all ports assessed.

Figure 6 compares the cost per vessel call for Cape sized vessels for ten Australian ports. This analysis is based on a normalised towage cost²⁰ for Cape sized vessels as published by the towage provider, as at October 2017. The number of tugs used to perform a port call at each port has been calculated using information published in forms of Harbour Master Directions, Port Procedure Manuals, Port Information Guides and Ship Handling Safety guidelines as published by the port authority or relevant statutory body.

²⁰ For the purposes of this comparison, a two hour tug commitment time was assumed to avoid additional costs which are incurred at some ports. Fuel costs are included in the analysis, as these costs are embedded into the published rates per tug and at the Port of Gladstone

Figure 6: Cost per vessel call, Cape sized vessels, as at October 2017



Source: PwC analysis, various sources

3 *Future towage market at the Port*

Towage services are highly capital intensive, with a cost structure dominated by fixed costs. A high proportion of towage costs are invariant to the level of utilisation of tug vessels. These fixed costs give rise to economies of scale; that is, average costs decline as demand increases. The economics of providing towage services are largely unchanged since the development of PwC's report submitted to the ACCC in 2012.²¹

3.1 *Cost structure of towage services at the Port*

The cost of towage services at the Port are separated and recovered through two separate pricing mechanisms, one for the Standard Harbour fleet and another for the LNG Tug fleet (see section 2.5).

Under both pricing mechanisms, and for towage services in general, a large proportion of the cost base is fixed. Operating costs include labour (mostly crewing costs, fixed, in the short run), fuel and oil, maintenance, berthing/leasing, and other costs. There is also a large capital component, with annual capital costs comprising depreciation costs and return on assets (tug vessels).

While we do not have access to Smit's actual cost base for the Standard Harbour fleet, the ARR determined for each pricing mechanism under the current Licence provides a guide as to the composition of costs. Figure 7 shows that the capital and crewing costs, which are largely fixed, represent a significant proportion of the total costs base

Figure 7: Composition of the ARR and LNG ARR under the current Licence



Source: [Redacted]

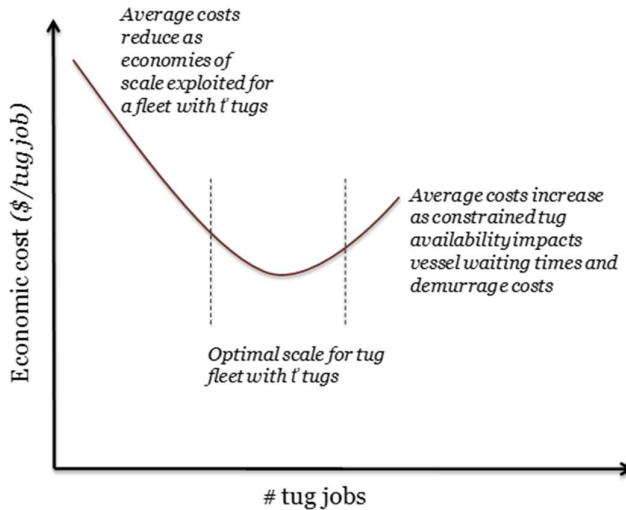
²¹ Australian Competition and Consumer Commission (2012) *Statement of Reasons in respect of the ACCC's review of a notification lodged by GPC*, available at: <http://registers.accc.gov.au/content/index.phtml/itemId/860220/fromItemId/859018/display/acccDecision>

3.2 Economies of scale for towage services

For a tug fleet of given size, average costs will initially decrease as the number of vessel movements increases, since fixed (capital and operating) costs are amortised over a larger number of tug jobs. Beyond a certain point average costs increase, reflecting semi-variable costs like crew overtime and as constrained tug availability impacts on vessel waiting times, raising demurrage costs. Eventually there will be an exponential increase in vessel waiting times as tug capacity becomes grossly insufficient to meet demand.

This relationship is represented in Figure 8 below.

Figure 8: Average cost curve (for a constant size tug fleet with t' tugs)

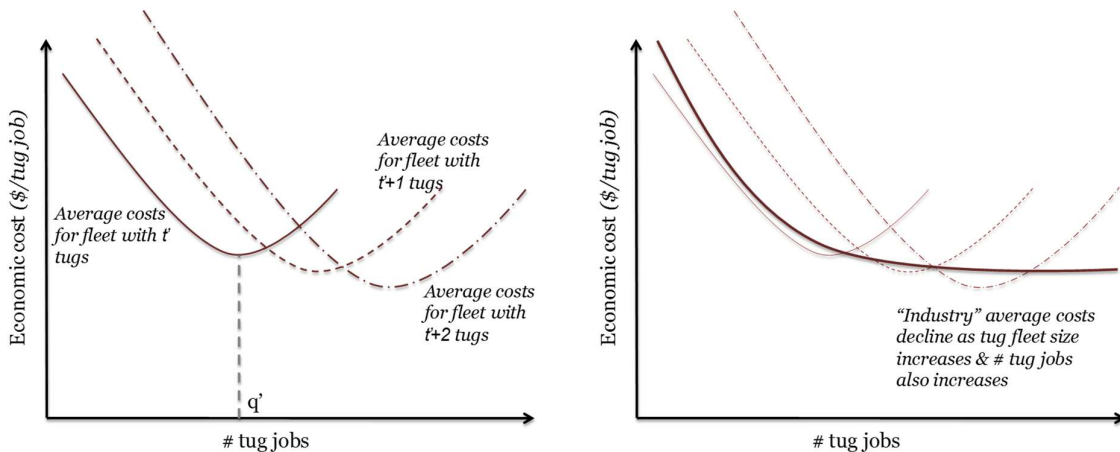


As the number of tug jobs increases at a point, it becomes economic to expand the tug fleet (see Figure 9). In theory, because average costs will increase immediately following the commissioning of a new tug vessel, it would be efficient to allow vessel waiting times/demurrage costs to increase somewhat, before bringing on each incremental tug. In reality, defining a clear point at which it is most efficient to bring on a new tug is a complex matter; complicated further by the inherent uncertainty in future vessel movements and towage requirements.

Figure 9 shows how, initially, for demand up to q' it is efficient to have a tug fleet comprising t' tug vessels. Even though average costs have begun to increase, at every point where demand is below q' it is more efficient to have t' tug vessels than $t'+1$ tug vessels. Beyond q' however, the additional tug reduces vessel waiting times to again bring down average costs, with the pattern repeated with each successive tug vessel.

There are some towage costs (for example management, operational and training systems costs) which do not vary at all with scale, meaning that, across a certain scale of tug jobs, the average cost continues to decline even as more tugs are brought into service. This is illustrated in the (second) figure below, which shows the 'industry' cost curve as both the demand for towage increases and the fleet expands to cater for the increased number of tug jobs.

Figure 9: Average cost curves (for various size tug fleets)



Beyond a certain point, economies of scale will diminish and the industry²² cost curve flattens out. Even where the limits of economies of scale are reached – where an incremental increase in demand for towage services does not reduce average costs further – it does not necessarily follow that multiple providers is a more efficient industry structure. Demand needs to have grown sufficiently such that each individual provider still has the scale necessary to realise average costs achievable by a single towage services provider.

Practically, this means that it is not efficient to have multiple towage providers except for very large ports, and where there is a high intensity of use of tug vessels. To impose a market structure of multiple towage providers in an environment where significant economies of scale have not fully been exhausted will cause towage costs, and prices, to be higher than otherwise. This is further pronounced where the types of trade and vessels at the port require a higher average number of tug jobs per vessel call, as the towage provider needs access to more tugs (and therefore more fixed capital) for a given number of vessel calls and tug jobs.

Whether economies of scale are likely to be exhausted in the future towage market at the Port from a cost perspective is considered in more detail in section 5 of the report.

The aggregate number of vessel movements/calls and tug jobs, and a comparison of the Port to other similar bulk ports are considered below.

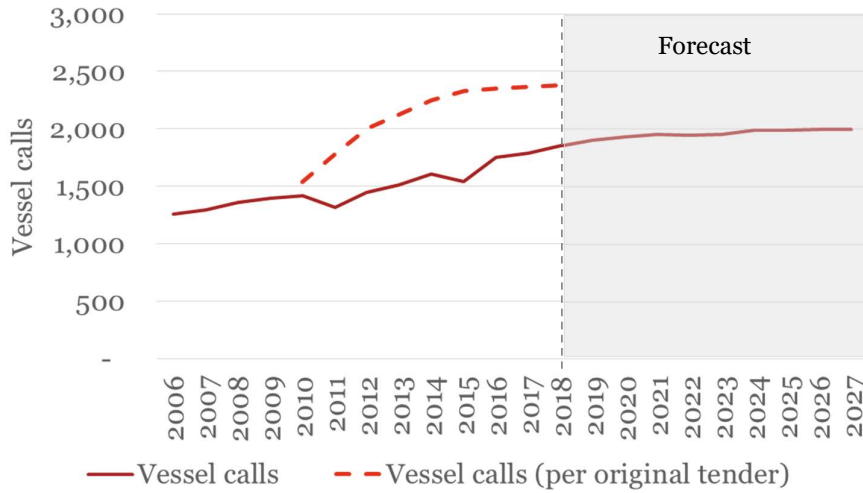
3.3 Forecast demand for towage at the Port

The number of vessel calls and tug jobs at the Port has grown significantly during the term of the current Licence, largely due to the commencement of LNG shipments (as discussed in section 2.3) that have a higher towage requirement than non-LNG vessels. However, although demand has increased, it did not match the increase expected at the time the last towage tender occurred.

For the period FY2018 to FY2027, growth in vessel calls (and by implication, demand for towage services) is expected to stabilise. In fact, demand for towage services in FY2027 is now expected to be less than the level of demand originally forecast for FY2018, as illustrated in Figure 10 and Figure 11. We note that the proposed licence term by GPC may extend to 31 December 2027, subject to the outcome of the tender.

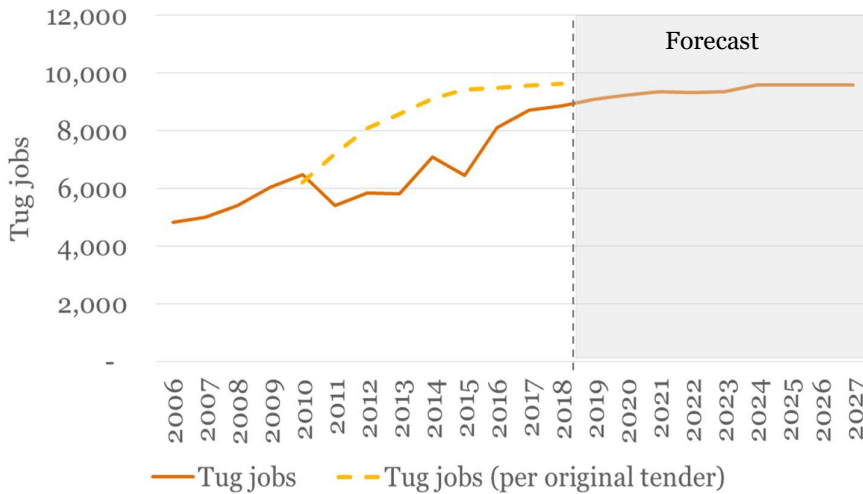
²² 'Industry' here refers to the provision of towage services within a given market, taken to be a single port.

Figure 10: Vessel calls at the Port – FY2006 to FY2027



Source: PwC analysis, GPC (2017) *Trade Statistics*, available at: <http://www.gpcl.com.au/Pages/Trade-Statistics.aspx>

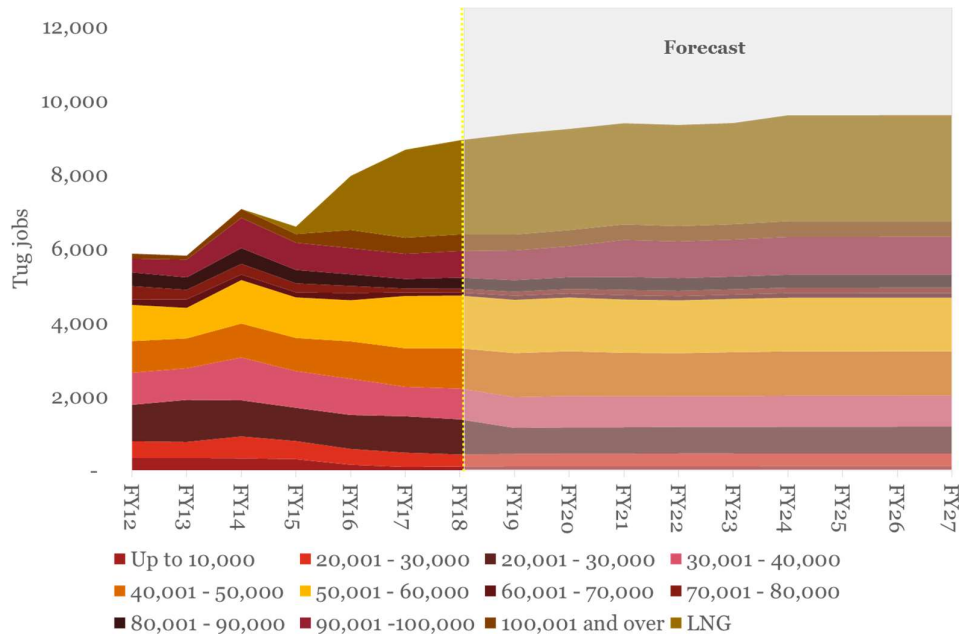
Figure 11: Tug jobs at the Port – FY2006 to FY2027



Source: PwC analysis, GPC (2017) *Trade Statistics*, available at: <http://www.gpcl.com.au/Pages/Trade-Statistics.aspx>

Figure 12 shows the number of tug jobs at the Port by vessel GRT during the term of the current Licence and as forecast to FY2027, based on a proxy assumption of typical number of tug jobs for each vessel by GRT class. It shows that the increase in demand for tug jobs to FY2018 is largely attributed to an increasing number of LNG vessels and vessels within the 50,001-60,000 GRT category. Note that the increase in tug jobs in FY2014 was driven by throughput at the RG Tanna wharf centre reaching a peak in that year. It also shows the forecast beyond the term of the current Licence anticipates only moderate growth, with the number of tug jobs increasing by approximately 5 per cent over the six year period between FY2019 and FY2025.

Figure 12: Total tug jobs by vessel GRT at the Port – FY2012 to FY2027



Source: PwC analysis, unpublished GPC data.

While it is impossible to determine a universal minimum threshold for competition for towage, there are a range of factors that can be drawn upon to form a view on whether economies of scale at the Port are likely to be exhausted in the future. For instance, the Productivity Commission considered economies of scale of towage operations in 2002 and stated: “There is some suggestion that economies of scale for a (minimum) tug fleet (and one operator) could be exhausted at around 8,000 tug jobs per year. This need not imply, however, that two operators would be efficient at this scale of operation – returns to scale may not decrease until much higher volumes are reached. The Port of Singapore, with 84 000 tug jobs per year, has issued six licences, equivalent to 14 000 tug jobs per licence.”²³

The Productivity Commission’s analysis identifies that there are a range of factors for consideration in determining the most appropriate arrangements for towage services, of which tug job volumes are one. Moreover, in a 2016 towage determination the ACCC noted the economic principles the underpinning Productivity Commission’s remain relevant.²⁴

At 9,000 to 9,560 tug jobs per year, the forecast to FY2027 is higher than the 8,000 tug jobs per year threshold identified by the Productivity Commission. However, this alone is not sufficient to determine whether a multi-provider model could function cost competitively. This is further considered in section 4.3.

3.4 Comparison with other ports

While comparisons with other ports can provide useful context, care needs to be taken in drawing conclusions based on comparative data alone. The requirements of towage services in individual ports depend on the physical characteristics of the port and the type and size of the ships handled. This section outlines a comparison between the Port of Gladstone and

²³ Productivity Commission (2002), *Economic Regulation of Harbour Towage and Related Services, Inquiry Report*, August 2002, page xxvi, available at <https://www.pc.gov.au/inquiries/completed/harbour-towage/report/harbourtowage.pdf>

²⁴ ACCC Australian Competition and Consumer Commission (2016) *Determination, Application for authorisation lodged by Port of Townsville Limited and Far North Queensland Ports Corporation Limited*, available at: <http://registers.accc.gov.au/content/index.phtml/itemId/1197007/fromItemId/278039/display/submission>

other key Australian bulk ports, as well as details the unique characteristics of the Port of Gladstone that impact on the towage requirements at the Port.

Cargo and vessel size

Differences in cargos and vessel sizes are some of the factors that can result in significant differences in the tug fleet required to meet demand at a port. For example, the tug fleet required to service liner cargo vessels is much smaller (in number) than the tug fleet required to service the same number of bulk cargo ships, particularly deep draft coal vessels. Vessels carrying coal are typically Panamax or Cape class vessels which require more tugs per vessel movement. As such, it is likely that more tugs are required to operate in the Gladstone market (and other ports with a large coal trade) as compared to container ports, with an otherwise comparable number of vessel calls. Therefore, we have focussed on Australian bulk ports for the purposes of this comparative analysis.

A comparison of the major types of cargo exported through key Australian bulk ports is provided at Table 4.

Table 4: Vessel numbers by major cargoes at key Australian bulk ports, FY2015²⁵

| Port | Dry Bulk Cargo | General Cargo | Gas & Bulk Liquids | Containers | Other | Total |
|-------------------|----------------|---------------|--------------------|------------|-------|-------|
| Abbott Point | 325 | 0 | 0 | 0 | 0 | 325 |
| Port Kembla | 411 | 45 | 42 | 4 | 355 | 857 |
| Port of Hay Point | 1,087 | 0 | 0 | 0 | 0 | 1,087 |
| Port of Gladstone | 1,222 | 88 | 165 | 40 | 44 | 1,559 |
| Port of Newcastle | 1,880 | 165 | 114 | 17 | 28 | 2,204 |

Source: Ports Australia (2014) *Trade Statistics*, available at: <http://www.portsaustralia.com.au/aus-ports-industry/trade-statistics>

For Gladstone, the breakdown of vessels across these cargoes in FY2015 reflects the predominance of coal, with 1,222 out of the total 1,559 vessel calls carrying coal and other dry bulk cargoes (including bauxite and alumina). Coal vessels can require up to six tugs per vessel all or three tugs on each berthing and departure. The residual vessels were comprised of 88 vessels carrying general cargo, 165 vessels carrying gas or bulk liquids, 40 vessels carrying containers, and 44 other cargo vessels.

In contrast, all of the vessels at the Port of Hay Point were coal vessels. Only Port Kembla and the Port of Newcastle have a broadly similar proportion of vessels that carry general cargo, gas and bulk liquids, containers or other cargo.

Towage at other ports

Table 5 describes towage arrangements at select Australian bulk commodity ports.²⁶ Many Australian ports, including several of those in Table 5, have a single towage provider, regardless of the licencing arrangement in place.

²⁵ Note: this data is not published for any year after FY2015

²⁶ Bulk ports have been assessed as these are the most comparable to the Port of Gladstone as, despite it being a multi-commodity port, the dominant trades at Gladstone are bulk commodities, including coal, LNG, alumina and bauxite.

Table 5: Number of Towage Service Providers at Selected Bulk Ports, FY2017

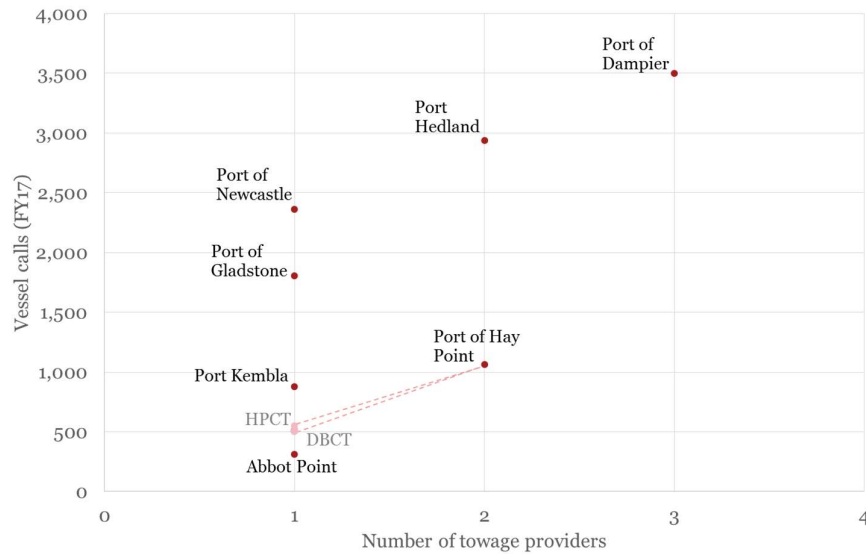
| Port | Number of towage service providers | Towage provider(s) | Number of vessels | Total port throughput (tonnes) |
|---|---|--|--------------------------|---------------------------------------|
| Abbott Point | 1 | Svitzer | 311 | 25,400,000 |
| Port Kembla | 1 | Svitzer | 879 | 26,358,778 |
| Port of Hay Point | 2 | Rivtow Marine (BMA, HPCT) Daltugs (DBCT) | 1,062 | 106,400,000 |
| Hay Point Coal Terminal (Port of Hay Point) | 1 | Rivtow Marine | 548 | 54,886,242 |
| Dalrymple Bay Coal Terminal (Port of Hay Point) | 1 | Daltugs (DBCT) | 514 | 51,513,758 |
| Port of Gladstone | 1 | Smit Marine | 1,805 | 120,407,823 |
| Port of Newcastle | 1 | Svitzer Smit Lamnalco | 2,364 | 163,363,785* |
| Port of Port Hedland | 2 | BHP Billiton Towage Services (contracted to Teekay Shipping and Rivtow Marine) | 2,937 | 500,900,000 |
| Port of Dampier | 3 | Riverwijs, Westug and Bhagwan Marine | 3,499 | 167,600,000 |

Sources: Various annual reports and trade reports as published by port authorities.

*total port throughput is not published by financial year for the Port of Newcastle. The throughput amount reflects the total throughput for calendar year 2016.

The relativities between the total number of vessel calls and total port throughput demonstrate that while vessel calls and throughput are positively related (i.e. a higher number of vessel calls is typically associated with more throughput at a port), the number of vessel calls cannot be relied on solely to determine whether a port can efficiently provide more than one towage provider. This is because the number of vessel calls does not relate to the size of vessels entering or exiting a port, which has an implication for the number and type of tugs required to service demand at that particular port.

Figure 13: Total commercial vessel calls and number of towage providers by selected ports, FY2017



Sources: Various annual reports and trade reports as published by port authorities.

The Port of Gladstone has geographical and marine characteristics that make direct comparisons with other ports in respect of harbour towage complex, as these characteristics significantly impact the requirements for and duration of tug commitments for each vessel.

Characteristics specific to the Port of Gladstone include the following:

- a harbour channel distance of approximately 23.2 nautical miles, with the longest towage task being from the tug base to pilot boarding ground ‘Lima’ to the APLNG wharf centre, a distance of approximately 45.98 nautical miles. In general, comparable trade ports have harbour channels that are shorter than at the Port of Gladstone
- variability in the duration of tug jobs (between 40 minutes and 9.25 hours) dependent on vessel type, transit, destination and tidal influence
- the dispersed spatial distribution of terminals in the Port area
- assurance of infrastructure during long transits
- waterway and tidal dynamics, with the Port experiencing an average daily tidal variation of two to three metres. The average daily tidal variation is influenced by the geographical nature of the Port of Gladstone which creates a tidal velocity range of 0.5 knots to four knots. These velocities impact the timing of certain vessel movements to ensure safe transits and manoeuvres
- under the World Association for Waterborne Transport Infrastructure (PIANC) guidelines, the main channel at the Port of Gladstone is classed as a one-way channel. The passing of vessels is typically limited to the Gatcombe bypass channel (see Figure 14)
- vessel interaction effects of deep draft shipping water force distribution, which impacts towage requirements around key wharf centres. In these instances, a tug is required to assist the vessel moored at a berth, even though it is not entering or leaving the Port
- spread of ship types calling at the Port - the range and type of vessels visiting the Port of Gladstone is, in general terms, more diverse and complex than other bulk ports

- in comparison to other ports, on average, the number of tug jobs per vessel are higher due to the number of tugs required to safely execute certain manoeuvres. For example, LNG vessel movements require four tugs per vessel movement and Panamax ebb tide arrival movements require three tugs per movement.

Figure 14: Passing area at the Port of Gladstone



Source: GPC

Collectively, these factors make the Port one of the more operationally complex for the provision of towage services.

Although forecast demand for the period FY2019 to FY2027 is expected to be higher than the threshold identified by the Productivity Commission as the point at which economies of scale for a single provider may be exhausted, the Port's unique characteristics suggest that this scale threshold is higher at the Port of Gladstone.

4 *Options for the future provision of towage services*

This section outlines future towage provider options identified by GPC.

4.1 *Future towage configuration options*

In defining future towage configurations, GPC considered current and future trade distribution, industry practice, and the minimum tug specification and safety standards determined by MSQ. Two key assumptions underpin the future towage configurations, developed by GPC:

- current operational and shipping dynamics are assumed to continue at the expiry of the current Licence term
- the Gladstone Port Procedures Manual is maintained at the expiry of the current Licence term, with no significant changes to the towage requirements as per section 9 of the manual.

GPC defined five potential options to assess the future towage configuration beyond the current Licence period and to test whether the size of the future towage market has reached the point where the economies of scale for a single towage provider are exhausted (as discussed in section 3.2). These options, set out in Figure 15, are characterised by a different number of towage operators – one, two or three.

The towage market is defined as all shippers currently engaged in import and exporting operations at the Port. This includes the coal, LNG, aluminium, petroleum and bauxite trades, as well as other smaller-volume commodities such as fuel and containers.

For options 2, 3 and 4, the market is assumed to be stratified such that each of the towage operators would service one particular segment of the market. There are no sharing or cross-hiring arrangements between towage providers in options with more than one provider. Each provider must have access to a sufficient number of tugs to service its market segment

The identification of a separate potential market for LNG and Party A reflects:

- for LNG - the differing technical requirements for LNG tugs, and the relatively large and growing share of vessel movements accounted for by the LNG export trade
- for Party A – another potential stand-alone market segment.

Figure 15: Future towage configuration options at the Port



Source: GPC

4.2 Number of tugs for efficient Port operation

Most ocean-going vessels require more than one tug when berthing or departing the Port. In Gladstone, generally a range of two to four tugs are required for each vessel movement for ships greater than 70,000 GRT. Based on the distribution of vessel calls at the Port during the current Licence period,²⁷ around 25 per cent of total tug jobs require three or more tugs per vessel movement (or six to eight tug jobs per vessel call). Generally, only vessels less than 18,000 GRT can berth and depart with one tug. This equates to around 8 per cent of the total vessel movements and only 3 per cent of the total tug jobs at the Port. The remaining tug jobs can be completed with two tugs.

Since only a very small number of tug jobs can be completed with one tug it is implausible that a one-tug fleet could operate in Gladstone; to assume otherwise would mean that the one-tug fleet would almost always work in conjunction (not in direct competition) with another operator to complete jobs with tugs from each fleet, or alternatively be wholly excluded from competing for the vast majority of tug jobs (around 94 per cent).

An operator with a two-tug fleet could in theory access a much higher number of tug jobs, with around 63 per cent of the total number of tug jobs between FY2014 and FY2017 being completed with less than three tugs. However, in reality the demand that could be met by a two-tug fleet would be much lower than this share. This is because a limited tug fleet restricts concurrent ship manoeuvres to those where the sum of tugs required is equal to or less than those available. This is further complicated by tug transit time between manoeuvres.

For example, if there were concurrent vessel movements each requiring two tugs, the two-tug fleet would be excluded from one of these vessel movements except in very limited circumstances. Likewise, during the time taken to complete a single tug job and associated transit time the operator will be excluded from any new tug jobs.

Given the geographical distribution of wharf centres, it would be difficult for an operator with a limited tug fleet to fully and efficiently meet the needs of a single or group of port users without imposing on them additional vessel waiting times. The Port's priority system²⁸ (based on time of first arrival) along with tidal and other conditions means that if a tug is not available at the time required then there may be significant waiting times for the next available berthing/departure 'slot'.

From a commercial perspective, a towage provider would be unlikely to secure a contract to provide services to a particular port user or wharf centre if it could not meet the entire requirements of that port user or wharf centre. Many users have varied towage requirements, including a different number of tug jobs per inbound vessel movement versus an outbound vessel movement. While there are a large proportion of vessel movements which in isolation require only two tugs, the number of ships requiring two tugs for berthing and two tugs for departure is much smaller since requirements differ between loaded and unloaded ships. Likewise, the number of vessels at specific wharf centres that require only one or two tugs is relatively small (for example, movements originating at Auckland Point, FL4 and FL5 on average require only one tug per vessel movement).

²⁷ GPC analysis, *MSQ Queensland Shipping Information Planning System* data

²⁸ Maritime Safety Queensland, *Port of Gladstone Port Procedures Manual June 2017*, Section 3.10, available at <https://www.msq.qld.gov.au/Shipping/Port-procedures/Port-procedures-gladstone>

At a minimum, across the port there needs to be enough tugs available at any given time to deploy tugs from the same fleet to each vessel movement at the Port without unacceptable delays. Thus, as noted by the Productivity Commission, the minimum economic investment requirement is not a single tug but the group of tugs required to service ships visiting particular ports.²⁹

Sample testing representative of a typical 24 hour period of the vessel movements suggests that it would be difficult for two towage operators with less than six tugs each to meet Port shipping requirements, except in very limited circumstances.³⁰

To illustrate, Figure 16 provides an extract from the shipping schedule for the Port (MSQ Port Shipping Schedule for 05-06 June 2017).

This demonstrates that one operator (with less than six tugs) could not service the movements following the *Eternal Bliss* due to the concurrent nature of the scheduled movements. Furthermore, one operator (again with less than six tugs) could not service the *Hermina*, *Kinko Maru* or the *Santa Phoenix*. Likewise the LNG movements of the *Seri Begawan* and *BW Pavilion Vanda* would not be serviced by a single operator with less than six tugs; in fact a single operator would require a minimum of nine tugs to service these two movements alone.

It would only be possible for two operators to complete this 24 hour period without cross-hiring if both operators had no less than seven to eight tugs each. If cross hiring arrangements were in place between two operators, the cumulative number of tugs would need to be greater than 11. Any other combination would cause disruptions to the schedule by way of delays to vessels as a result of tug unavailability.

²⁹ Productivity Commission (2002), *Economic Regulation of Harbour Towage and Related Services, Inquiry Report*, page 75, available at <https://www.pc.gov.au/inquiries/completed/harbour-towage/report>

³⁰ A limited sample of actual shipping schedules was provided by Gladstone Ports Corporation. Analysis on these shipping schedules was conducted using information on the location of vessel movements, the timing of tug jobs and the number of tugs required.

Figure 16: Port shipping schedule extract (actual schedule for 24 hour period, 5 June 2017 – 6 June 2017)*, with applied tug job start time/finish time**

| Vessel | Location | Number of tugs | Tug job start/finish time | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------|---|----------------|---------------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|-------------|-------------|-------------|-------------|-------------|-------------|
| | | | 1:00:00 AM | 1:30:00 AM | 2:00:00 AM | 2:30:00 AM | 3:00:00 AM | 3:30:00 AM | 4:00:00 AM | 4:30:00 AM | 5:00:00 AM | 5:30:00 AM | 6:00:00 AM | 6:30:00 AM | 7:00:00 AM | 7:30:00 AM | 8:00:00 AM | 8:30:00 AM | 9:00:00 AM | 9:30:00 AM | 10:00:00 AM | 10:30:00 AM | 11:00:00 AM | 11:30:00 AM | 12:00:00 AM | 12:30:00 AM |
| Eternal Bliss | Drift Gladstone to South Trees West | 2 | █ | █ | | | | | | | | | | | | | | | | | | | | | | |
| Kavo Yeraki | Clinton Coal 1 to SEA | 2 | | | █ | █ | | | | | | | | | | | | | | | | | | | | |
| Hermina | North Anchorage 12 to Clinton Coal 1 | 2 | | | █ | █ | | | | | | | | | | | | | | | | | | | | |
| Kinko Maru | North Anchorage 13 to Clinton Coal 3 | 3 | | | █ | █ | █ | | | | | | | | | | | | | | | | | | | |
| Santa Phoenix | East Anchorage 7 to Auckland Point 4 | 2 | | | █ | █ | | | | | | | | | | | | | | | | | | | | |
| Challenge Premier | Drift Gladstone to Auckland Point 3 | 2 | | | | | █ | █ | | | | | | | | | | | | | | | | | | |
| Seri Begawan | Drift Gladstone to Santos GLNG | 4 | | | | | | | █ | █ | █ | █ | | | | | | | | | | | | | | |
| RTM Dhambul | North Anchorage 7 to Fishermans Landing 2 | 2 | | | | | | | | █ | █ | | | | | | | | | | | | | | | |
| RTM Flinders | North Anchorage 3 to Fishermans Landing 1 | 2 | | | | | | | | | █ | █ | | | | | | | | | | | | | | |
| BW Pavilion Vanda | Australia Pacific LNG to SEA | 4 | | | | | | | | | | | █ | █ | █ | █ | | | | | | | | | | |
| Challenge Premier | Auckland Point 3 to SEA | 2 | | | | | | | | | | | | | | | | | | | | | | | | █ |
| Standby tug** | GLNG | 1 | | | | | | | | | | | | | | | | | | | | | | | | █ |

Source: Maritime Safety Queensland (2017) QShips data and Gladstone Ports Corporation analysis

*Tug job start and finish times include steam time to and from tug base.

**A standby tug with full fire-fighting capability will be on station while an LNG vessel is at berth for all loading operations. One shared standby tug is available for all three LNG customers. The standby tug will be located at the QGC materials offloading facility (MOF) at all times unless there is no ship at QGC or the QGC wharf is otherwise not available. In these instances, the standby tug may be located at either the ConocoPhillips (APLNG) wharf or the GLNG wharf.

4.3 Could towage providers compete in an open market?

Perfect competition, defined in a textbook sense, has conditions which rarely are observed in practice. It requires many buyers and sellers, ready market entry and exit, homogeneous products, perfect information and costless transactions.

Given the practical absence of these conditions, competition analysis generally accepts competition as applying where conditions for 'workably competitive' market are present. A workably competitive market is one where competitive pressure is created through sufficient (but not necessarily perfect) rivalry between firms to encourage productive and pricing efficiency.

Taking into account towage service requirements for efficient port operations, an open market structure (as described in Option 5), allowing for head-to-head competition of multiple towage providers in Gladstone is unlikely to be feasible, as it requires either:

- individual towage providers to each hold sufficient tugs to cater for demand from vessels, which suggests that between the two (or more) providers there would be redundant investment in tug capacity, or
- co-operative and/or cross-hiring arrangements to be established between the two (or more) providers, suggesting a structure more like a joint venture arrangement than a contestable market.

Many bulk commodity Australian ports have a single towage provider, with GPC and the Port of Townsville/Far North Queensland Ports Corporation electing to establish an exclusive licence (see section 3.4). The ACCC recently observed that in ‘in many Australian ports only one towage service provider operates, regardless of the arrangement imposed by the port operator, because the scale of operations at the port is insufficient to sustain more than a single operator’.³¹

Moreover, for some ports which operate with multiple towage service providers, over time this arrangement has reverted to a single towage service provider after the second operator exited the market.³² For example:

- Smit Lamnalco stopped providing services in Newcastle (after purchasing PB Towage in January 2015). Media reports suggest Smit struggled to be competitive with only four tugs (out of a total of 12 tugs) providing services in the Newcastle Port at the time.³³ As part of exiting the Newcastle market, we understand Svitzer Australia performed towage operations on behalf of Smit Lamnalco under a sub-contracted towage services agreement.
- In December 2017, Smit Lamnalco announced that from 14 February 2018 the Brisbane operations will also fall under an extension to that subcontracting agreement, expiring in 2020. Smit Lamnalco observed, “The Smit Lamnalco management team and our Brisbane crews have worked tirelessly in an attempt to maintain the viability of the Brisbane operation... this operational change means that at this stage we continue to operate in the harbour towage market, under a different operating model in order to offer our services in liner ports.”³⁴

Although some other ports have multiple towage providers, these ports (e.g., Port Hedland and the Port of Dampier) typically have much larger annual throughput volumes and significantly higher vessel calls (refer Table 5).

BHP is currently the only towage provider at Port Hedland in Western Australia. BHP currently owns the tugs and associated infrastructure at Port Hedland and subcontracts operations to RivTow. However, Fortescue Metals Group (FMG) secured an additional towage licence from the Pilbara Ports Authority in May 2016.³⁵ While six tugs have been ordered by FMG³⁶ and operations are planned to commence in 2019, it is not clear how the market will operate and whether a truly open market structure will eventuate given both BHP and FMG export from Port Hedland. It is possible that each company will provide towage services to its own vessels, effectively creating market segments serviced by each provider. An open market may service the remaining exporters at Port Hedland, but that is yet to be determined.

³¹ Australian Competition and Consumer Commission (2016) *Determination, Application for authorisation lodged by Port of Townsville Limited and Far North Queensland Ports Corporation Limited*, available at: <http://registers.accc.gov.au/content/index.phtml/itemId/1197007/fromItemId/278039/display/submission>

³² Australian Competition and Consumer Commission (2016) *Determination D16+165046, Application for authorisation lodged by Port of Townsville Limited and Far North Queensland Ports Corporation Limited, p4*, available at: <http://registers.accc.gov.au/content/index.phtml/itemId/1197007/fromItemId/278039/display/submission>

³³ Newcastle Herald (2015) *Trouble for the tugboats*, available at: <http://www.theherald.com.au/story/3230079/trouble-for-the-tugboats/>

³⁴ Daily Cargo News (2017) *Tug crew jobs on the line as Smit Lamnalco and Svitzer extend towage pact*, available at: <http://www.thedcn.com.au/tug-crew-jobs-on-the-line-as-smit-lamnalco-and-svitzer-extend-towage-pact/>

³⁵ Sydney Morning Herald (2016) *Fortescue vows to compete with BHP Billiton for tugboat work in Port Hedland*, available at: <http://www.smh.com.au/business/mining-and-resources/fortescue-vows-to-compete-with-bhp-billiton-for-tugboat-work-in-port-hedland-20160729-gqggsp.html>

³⁶ The West Australian (2017) *Fortescue to challenge BHP towage domination*, available at: <https://thewest.com.au/business/iron-ore/fortescue-to-challenge-bhp-towage-domination-ng-b88412009z>

Options for the future provision of towage services

In the case of Hay Point (refer Table 5 for current arrangements), the two towage providers are not in direct competition as each services a defined market (i.e., the separate coal export terminals at that port).

Generally, a fully contestable market for towage services at the Port of Gladstone is unlikely to be feasible, and if it were to be implemented, cross hiring arrangements would likely occur, effectively replicating one of the other towage configuration options (i.e. Options 2, 3 or 4). As a result, Option 5 is not considered in detail and has not formed part of the cost modelling exercise.

5 Options assessment framework and modelling results

This section details the assessment framework and modelling assumptions applied to assess the potential configuration options proposed by GPC. The key consideration in evaluating the impacts of the four options is how each performs in terms of cost, relative to other possible towage configurations at the Port.

5.1 Assessment framework

This analysis examines the average cost per tug job arising from the alternative towage configuration arrangements to assess and compare the proposed options.

Option 5 has not formed part of the cost modelling exercise. This is because a fully contestable market for towage services at the Port is unlikely to be feasible. If Option 5 were to be implemented, cross hiring arrangements would likely occur, which would effectively replicate one of the other towage configuration options (i.e. Options 2, 3 and 4).

The analysis assumes a static cost comparison, with each provider servicing a particular market segment (e.g., Party A vessels or LNG user vessels) independently. Therefore, the analysis does not consider any open market competition impacts between service providers, nor any dynamic efficiency benefit in the form of competition-induced improvements (i.e. in Option 5) in operating cost efficiency or similar.

Each of the options is defined in such a way that levels of service, risk and other performance attributes are comparable, such that these factors do not need to be normalised in the assessment. Only costs expected to differ between options are included and hence some costs which are unlikely to vary materially between options (such as fuel) have been omitted.

To support the analysis of each potential future configuration, PwC developed a model to calculate a proxy total cost base for the towage provider(s) operating at the Port under each future option. The model calculates a representative cost base for a hypothetical towage service provider(s) through a 'building block'-approach (operating costs, plus a return on and of capital). This reflects an assumption that towage charges at the Port ought to be set such that the towage provider(s) are able to recover all prudent and efficient costs associated with towage provision, including a commercial return on any capital assets.

5.1.1 Modelling assumptions

The model calculates a proxy total cost base for towage service provider(s) under each alternative future configuration option and determines average charges such that the proxy total cost base is recovered over a forecast of demand. Therefore, in addition to operational parameters such the number and type of tugs required to service Port users, there are two broad sets of inputs that form the basis of our analysis; cost parameters and demand parameters.

The key cost parameters considered in calculating the proxy total cost base for towage service provider(s) under each alternative option are:

- the capital value of tugs, based on the minimum number of tugs required in each tug fleet and the specification level of those tugs
- the towage service provider(s) rate of return on tug assets
- the economic life of the tug assets, used to determine a depreciation expense
- the crewing requirement for each tug job, and
- other operating costs.

For the purposes of this analysis, the assumed cost profile of a towage operator was based on cost data provided by GPC, and benchmarked against and supplemented with public and other data.

The cost categories included in our model (and, where relevant, the basis of any assumption) are set out in Figure 17, and in more detail in Appendix B.

Figure 17: Towage cost parameters included in the Operator options model



Source: PwC

The key demand parameter is the number of tug jobs forecast to occur during the period 1 July 2018 and 30 June 2027. This is based on forecast number of vessel calls to the Port, as provided by GPC. We note that the term of the proposed licence may extend to 31 December 2027. We have not assessed the cost implications for the six months between 30 June 2027 and 31 December 2027.

5.1.2 Number and type of tugs to service Port users

Towage operators at the Port must meet any minimum standards set out by Maritime Safety Queensland (MSQ) and the Australian Maritime Safety Authority (AMSA). These include physical tug specification requirements and testing procedures intended to ensure any tugs used within the Port are suitable for the safe provision of services.³⁷

Towage operators servicing LNG customers must adhere to additional requirements in terms of tug specifications and numbers. In order to escort an LNG vessel into the Port the towage provider must use (at least) two 80T tugs in conjunction with (no more than) two 70T tugs, with another 80T tug waiting on standby.³⁸

GPC engaged Aurecon to undertake modelling using the Port of Gladstone Shipping Capacity Simulation Model to understand the potential tug configuration, utilisation and distribution outcomes under various scenarios. The modelling used the inputs and configuration of the Port of Gladstone Shipping Capacity Simulation Model and shipping demand forecast for FY2019 to FY2024 (refer to Table 7). Given the stability of tug job demand, Aurecon advised that the number of tugs required to serve port users under each option would not change for the additional period from FY2024 to FY2027.

Aurecon's modelling, as summarised at Table 6, suggests that between 11 and 19 tugs would be required to meet demand for towage services at the Port, depending on the option configuration.

Table 6: Number and types of tugs required to serve port users in each option

| Option | Provider | Tug Fleet (minimum requirements) | Tug fleet (current) | Total Tugs in Option |
|----------|---------------|----------------------------------|-----------------------|----------------------|
| Option 1 | Whole of Port | 5x 80T 4x 70T 2x 50T | 5x 80T 5 (+1)x 70T | 11 |
| Option 2 | Rest of Port | 4x 70T 2x 50T | | 15 |
| | LNG | 5x 80T 4x 70T | | |
| Option 3 | Rest of Port | 4x 70T 2x 50T | | 19 |
| | LNG | 5x 80T 4x 70T | | |
| | Party A | 4x 50T | | |
| Option 4 | Rest of Port | 5x 80T 4x 70T 2x 50T | | 15 |
| | Party A | 4x 50T | | |

Source: GPC, supported by Aurecon

For the purpose of this comparative analysis, in multi-provider options, there is no interoperability between the different providers (i.e., each operator must have exclusive access to

³⁷ An example of this includes the requirement to show that the tug tow hook/winch quick release will operate under all towing conditions, via a load test. This test must be undertaken with an MSQ approver or Class surveyor and the results of this test provided to the RHM with the vessel's marine Execution Plan.

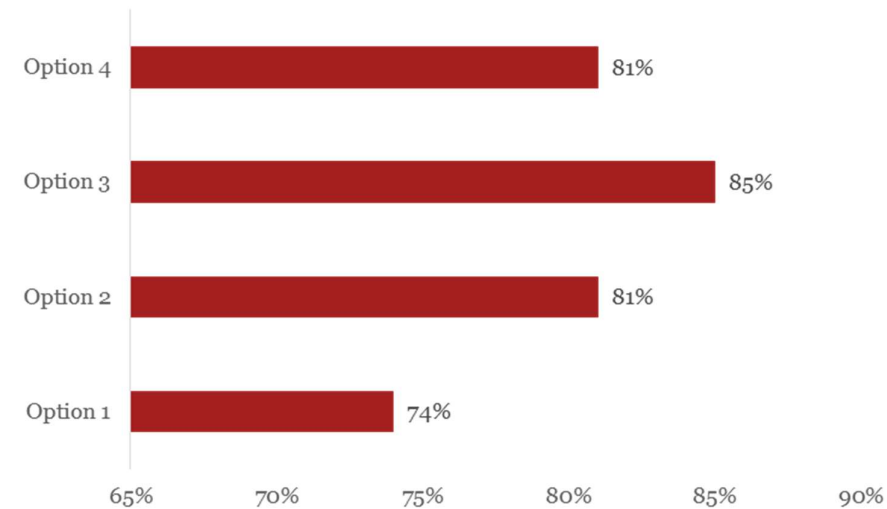
³⁸ To the extent that these parameters may change, we understand they can be reflected under future towage commercial arrangements. The current state is assumed for the purpose of this analysis.

sufficient tugs to services its proportion of vessels using the Port). This means it is assumed that there is both no competitive rivalry between the different providers as they each service their own market segment, nor cooperate in servicing peak towage demand.

The modelling undertaken by Aurecon assesses the percentage of calendar time that the indicated number of tugs were engaged in a task. The modelling does not consider factors such as transit time to/from the tug base as required for shift changes or for other operational factors such as refuelling, provisioning, maintenance or crew changes. In addition, the modelling undertaken by Aurecon only considers 80 tonne bollard pull and 70 tonne bollard pull tugs, while the options detailed in Table 6 above include 50 tonne bollard pull tugs across different fleet mixes. Due to the operational similarity between a 70 tonne bollard pull tug and a 50 tonne bollard pull tug, the impact on the utilisation of these tugs is expected to be immaterial.

Irrespective of the towage supply configuration at the Port, tugs will always have time where the assets are unproductive, due to shipping priorities, the schedule of other vessel movements at the Port and other factors such as tidal flows. The modelling by Aurecon indicates that the unproductive time within the overall fleet is the lowest for Option 1, at approximately 74 per cent, which is approximately 11 per cent lower than the unproductive time for Option 3 of 85 per cent, as detailed in Figure 18.

Figure 18: Unproductive time within overall tug fleet under each alternative towage configuration option



Source: Aurecon

5.1.3 Cost parameters

Cost parameters have been sourced from GPC or obtained from other publicly available references.

Since the analysis is only designed to assess the comparative efficiency of the potential options, not all costs relevant to towage operations have been included. For example, the cost of fuel would be incurred by any towage provider operating within the Port. However because the total number of tug jobs to be performed at the Port is the same for each of the options, we assume the total amount of fuel consumed will be largely unaffected, regardless of the number of towage providers therefore it has been omitted from the analysis.

Key cost parameters are detailed in Appendix B and include rate of return, tug capital costs, tug base expansion, labour, maintenance and overheads. The towage cost base for each future towage option is presented as part of the option modeling results in section 5.2.1 (refer Table 9).

5.1.4 Demand parameters

The demand parameters considered in the model are the forecast number of tug jobs required to service vessels entering the Port between 1 July 2018 and 30 June 2025. The towage demand profile was derived using the Trade and Shipping forecast consistent with GPC's *2017/18 Statement of Corporate Intent (SCI)* and applying the towage requirements as prescribed in the Port Procedures Manual.³⁹ The forecast demand for tug jobs used in the model over the period FY2019 to FY2027 is detailed in Table 7.

³⁹ Maritime Safety Queensland (2017) *Port of Gladstone Port Procedures Manual June 2017*, available at: <https://www.msq.qld.gov.au/Shipping/Port-procedures/Port-procedures-gladstone>

Table 7: Forecast tug job demand by wharf centre, FY2019-FY2027

| Wharf Centre | FY2019 | FY2020 | FY2021 | FY2022 | FY2023 | FY2024 | FY2025 | FY2026 | FY2027 |
|--------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Auckland Point 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Auckland Point 2 | 28 | 28 | 28 | 28 | 28 | 28 | 28 | 28 | 28 |
| Auckland Point 3 | 205 | 210 | 210 | 213 | 213 | 218 | 218 | 223 | 223 |
| Auckland Point 4 | 102 | 110 | 117 | 127 | 137 | 137 | 137 | 137 | 137 |
| Barney Point | 56 | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 76 |
| Boyne Wharf | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 | 127 |
| Fisherman's Landing 1 & 2 | 871 | 871 | 871 | 871 | 871 | 871 | 871 | 871 | 871 |
| Fisherman's Landing 4 | 162 | 162 | 162 | 162 | 162 | 162 | 162 | 162 | 162 |
| Fisherman's Landing 5 | 73 | 73 | 73 | 73 | 73 | 73 | 73 | 73 | 73 |
| RG Tanna | 3,171 | 3,215 | 2,924 | 2,866 | 2,866 | 2,963 | 2,963 | 2,963 | 2,963 |
| South Trees | 916 | 916 | 916 | 916 | 916 | 916 | 916 | 916 | 916 |
| WICET | 664 | 710 | 1,114 | 1,114 | 1,140 | 1,140 | 1,140 | 1,140 | 1,140 |
| LNG | 2,720 | 2,736 | 2,736 | 2,736 | 2,736 | 2,864 | 2,864 | 2,864 | 2,864 |
| Total tug jobs forecast | 9,099 | 9,237 | 9,357 | 9,312 | 9,347 | 9,577 | 9,577 | 9,582 | 9,582 |

Source: GPC (2017) 2017/18 Statement of Corporate Intent (internal forecasts)

Demand for towage services at the Port is driven by users at different wharf centres. In order to allocate demand to potential towage service providers under alternative option, we have apportioned the volume of trade at each wharf centre attributable to different user groups.

Under Option 1, where there is a single provider to service all Port users, the demand for towage services is assumed to be the total demand forecast for a given year. All tug jobs at the QGC, GLNG and APLNG wharf centres are attributable to LNG users.

The total tug jobs by user group in FY2019 under each option are detailed in Table 8.

Table 8: Total tug jobs by user and option, FY2019

| Option | Rest of Port | LNG | Party A |
|----------|--------------|-------|---------|
| Option 1 | 9,099 | n/a | n/a |
| Option 2 | 6,379 | 2,720 | n/a |
| Option 3 | 4,305 | 2,720 | 2,074 |
| Option 4 | 7,025 | n/a | 2,074 |

Source: GPC

5.2 Options modelling results

This analysis presents a *comparative* cost assessment of each option. Although results are presented showing the ‘average cost’ under each option, the analysis does not include all costs as it focuses on costs expected to vary between all of the options. For example, we have excluded the costs of fuel as the fuel costs incurred during a vessel movement are expected to be the same between options. Therefore, this ‘average cost’ amount should not be relied upon as an indicator of actual future cost outcomes. Also, the analysis does not extend to how costs would translate into actual towage charges, which could be differentiated based on characteristics such as vessel size, time and other factors.

5.2.1 Total cost base

Table 9 summarises the modelling results of the FY2019 total cost base under each towage provider option, applying the assumptions outlined above. The primary driver of total cost under each option is the number and type of tugs required to service various user groups. This is consistent with the commentary on the cost structure of towage services in section 3.1.

Where options require more than 11 total tugs to service all user groups at the Port, an additional fixed cost is incurred to expand the existing tug base to accommodate the tug fleet. Increasing the number of total tugs required to service the defined user groups also results in higher labour, maintenance and overheads costs.

Table 9: Summary of modelling results, total FY19 cost base (\$000s)

| Cost base item | Option 1 | Option 2 | Option 3 | Option 4 |
|----------------------------------|-----------------|-----------------|-----------------|-----------------|
| Total number of tugs at the Port | 11 | 15 | 19 | 15 |
| Tug capital component | \$20,160 | \$27,524 | \$34,216 | \$26,852 |
| Incremental tug base | n/a | \$1,200 | \$2,400 | \$1,200 |
| Labour | \$16,670 | \$27,747 | \$32,422 | \$20,446 |
| Maintenance | \$5,240 | \$7,140 | \$8,820 | \$6,920 |
| Overheads | \$1,680 | \$2,291 | \$2,902 | \$2,291 |
| Total | \$43,750 | \$65,902 | \$80,760 | \$57,709 |

Source: PwC analysis

Option 3, comprising three towage providers, is the highest cost option in FY2019, as it requires the largest tug fleet to service demand at the Port. Option 3 also has higher labour, maintenance and overhead costs relative to the other options; a function of the number of tugs required to service the three user groups.

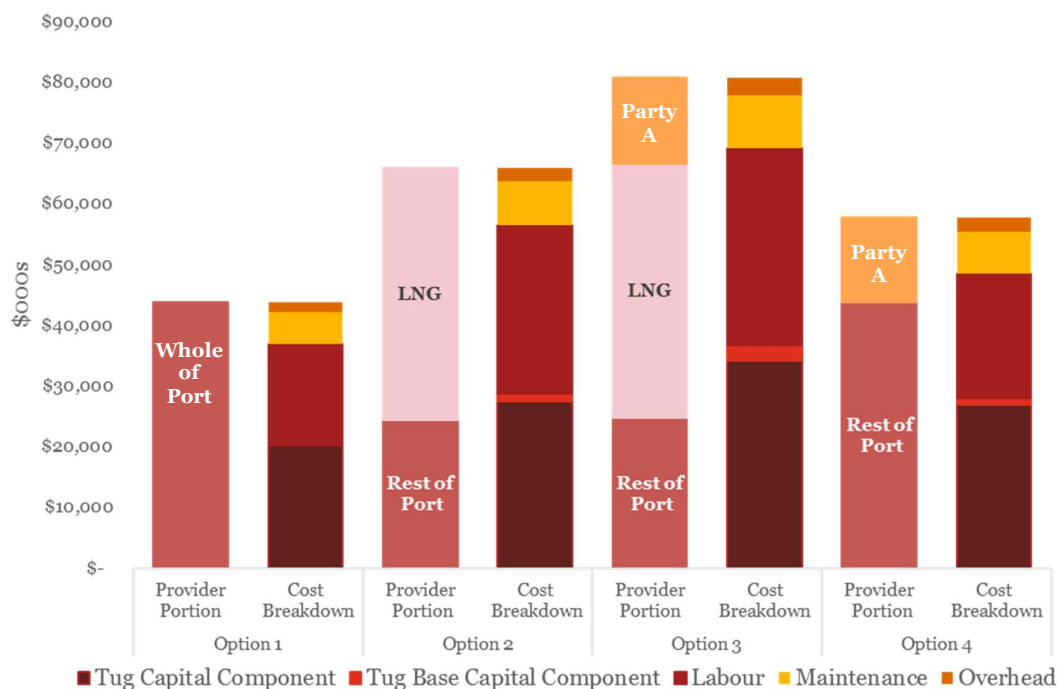
Table 10: Summary of modelling results, total FY2027 cost base (\$000s)

| Cost base item | Option 1 | Option 2 | Option 3 | Option 4 |
|----------------------------------|-----------------|-----------------|-----------------|-----------------|
| Total number of tugs at the Port | 11 | 15 | 19 | 15 |
| Tug capital component | \$15,552 | \$21,238 | \$26,395 | \$20,714 |
| Incremental tug base | n/a | \$720 | \$1,440 | \$720 |
| Labour | \$20,311 | \$33,807 | \$39,503 | \$24,911 |
| Maintenance | \$6,384 | \$8,699 | \$10,746 | \$8,431 |
| Overheads | \$2,047 | \$2,791 | \$3,536 | \$2,791 |
| Total | \$44,294 | \$67,251 | \$81,620 | \$57,568 |

Source: PwC analysis

Option 3 remains the highest cost option in FY2027. The tug capital component reduces over the proposed licence term (as the return on asset component reduces in line with asset depreciation), while operating costs are assumed to nominally increase over the same period.

Figure 19 outlines the total cost base under each option by cost component and the proportionate share of the total cost base attributable to each user group. The proportionate share of the total cost base attributable to each user group is driven by the number and type of tugs required to service that particular user group. It follows that options with more tugs will reflect a higher total cost base relative to other options. However, the allocation of the total cost base among different user groups will not be equal as it is largely driven by the volume of demand of that user group (since this volume underpins demand for tug jobs) (refer Table 11).

Figure 19: Provider portion and cost component break down of FY2019 total cost base under each alternative towage provider option

Source: PwC analysis

Table 11: Provider portion of FY2019 total cost base and demand forecast under each alternative towage provider option

| | Option 1 | Option 2 | Option 3 | Option 4 |
|--|---------------|----------|----------|----------|
| Total cost base (\$000) | \$43,750 | \$65,902 | \$80,760 | \$57,709 |
| Total FY2019 tug job forecast | 9,099 | 9,099 | 9,099 | 9,099 |
| User group share of FY2019 total cost base (\$000s) | Whole of Port | \$43,750 | | |
| | Rest of Port* | | \$24,406 | \$24,684 |
| | LNG | | \$41,496 | \$41,913 |
| | Party A | | | \$14,163 |
| User group share of FY2019 total tug jobs | Whole of Port | 9,099 | | |
| | Rest of Port* | | 6,379 | 4,305 |
| | LNG | | 2,720 | 2,720 |
| | Party A | | | 2,074 |

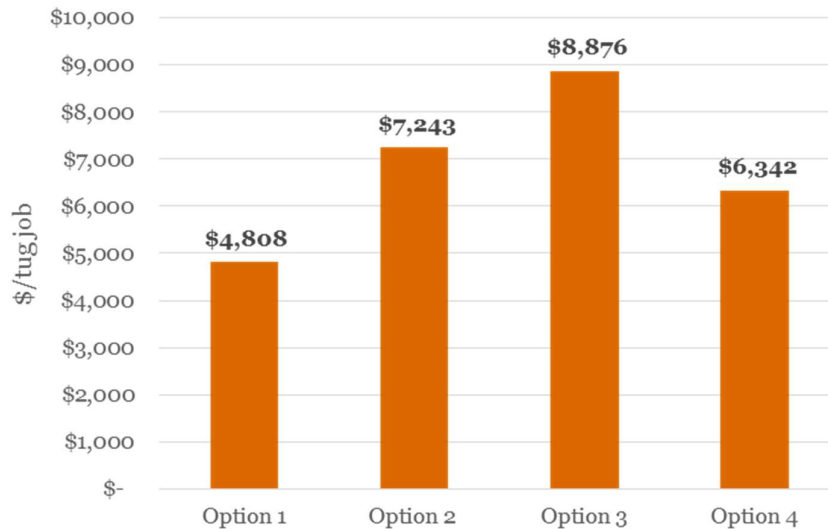
Source: PwC analysis

*Note: the 'Rest of Port' user group is a grouping which covers different user segments in each of Options 2, 3 and 4. The cost results, therefore, cannot be compared directly across the different options.

5.2.2 Average cost per tug job

Figure 20 details the FY2019 overall average cost per tug job under each alternative towage provider option, as modelled. This analysis *should not* be relied upon as an indicator of actual towage charges as it presents estimates of whole of Port towage costs relative to the forecast total number of tug jobs at the Port, and excludes some costs which are unlikely to vary significantly between the four options.

Figure 20: FY2019 average overall cost per tug job by option



Source: PwC analysis

Option 1 has the lowest overall average cost per tug job in FY2019 of all alternative options assessed. As Option 1 requires the least number of tugs to service towage demand, the capital and operating costs are lower relative to other alternative towage configurations.

Under Option 2, the overall average cost per tug job increases to \$7,243 (from \$4,808 in Option 1) due to the LNG industry requiring an additional four tugs to service its towage requirements, resulting in higher capital and operating costs than in Option 1. In addition, the total number of tugs available at the Port exceeds the capacity of the current tug base, resulting in the need to expand this facility.

Option 3 has the highest overall average cost per tug job, largely because it has the largest tug fleet to service all Port users, leading to higher capital and operating costs relative to all other alternative options. Similarly to Option 2, a tug base facility expansion is required under Option 3 which further increases cost. Under Option 4, the overall average cost decreases relative to Option 2 (noting options both are based on two operator) due to differing tugs specifications (with consequential capital and maintenance cost impacts) and crewing assumptions.

Under Option 1, all Port users are serviced by a single provider with a single fleet, meaning that the total cost base of the towage fleet is shared over the total demand for tug jobs at the Port. Options 2, 3 and 4 separate Port users into different market segments, each serviced by a dedicated towage fleet. This has two key implications for the average cost under each alternative option:

- 1 demand is segmented into certain markets, by dividing the total demand to reflect only that particular user group, and
- 2 the total cost base reflects the number and type of tugs required to service that particular user group.

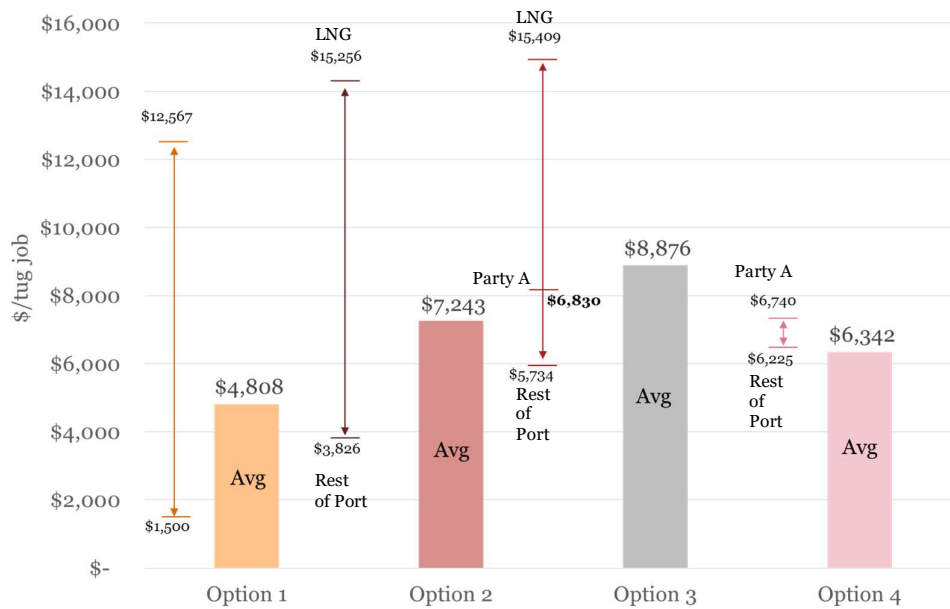
Given this, the Whole of Port average cost is not directly comparable to the average cost associated with the user groups defined in Options 2, 3 and 4.

For Options 2, 3 and 4, the ranges shown in Figure 21 represent the lowest and highest average cost per tug job across the different user-group segments for that market configuration. In Option 2, for instance, the average cost per tug job for LNG is \$15,256, whereas the average cost for Rest of Port is \$3,826/tug job (corresponding to an average for the whole port of \$7,243/tug job).

Under Option 1, all Port users are serviced by a single provider with a single fleet, meaning that the total cost base of the towage fleet is shared over the total demand for tug jobs at the Port. Because Option 1 has the lowest average cost of all options, costs allocated to each user groups at the port can be lower than in any other option – all users can be better off, and none worse off – whilst still recovering the total costs of the single provider.

To illustrate this, the analysis in the Figure 21 shows a scenario where non-LNG users are allocated a per-tug job cost of \$1,500 (roughly equal to the minimum towage charge currently applicable). In this illustration, the cost remaining to be covered by LNG users would be \$12,567 or around 20 per cent lower than the stand-alone cost of LNG towage under Option 2. To the extent that a higher proportion of costs are recovered from non-LNG users, the residual cost needing to be recovered from LNG users would reduce further.

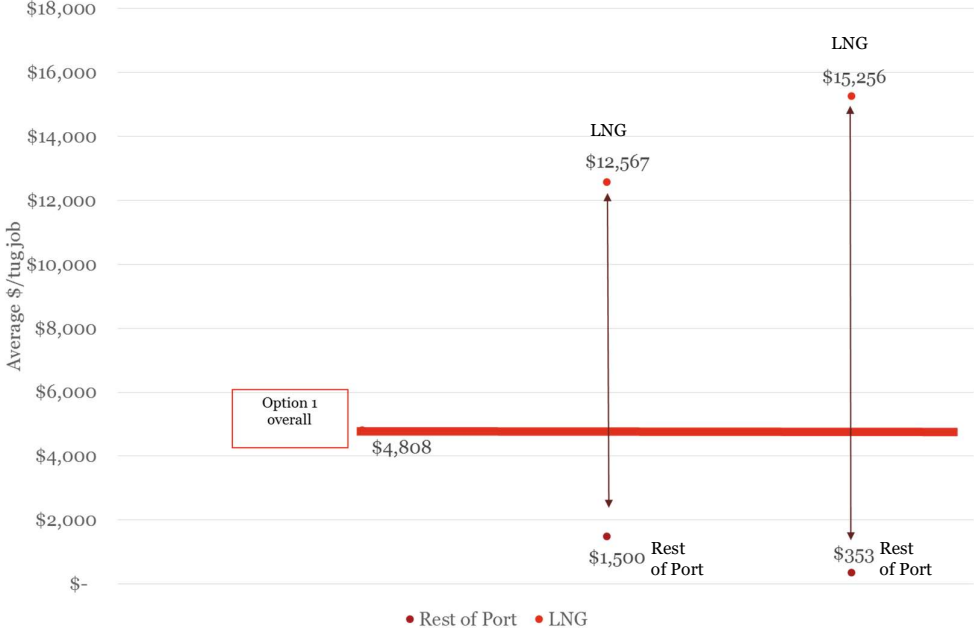
Figure 21: FY2019 average cost by user group and option



Source: PwC analysis

Figure 22 provides a sensitivity analysis wherein the average cost attributed to certain user groups (either LNG or Rest of Port) is matched to the equivalent average cost from Option 2, with the rate for the other market segment adjusted such that the total average cost for Option 1 (across all Port users) remains at \$4,808 per tug job.

Figure 22: Comparison of Option 2 market segment costs with Option 1, FY2019



Source: PwC analysis

This analysis shows that, for instance, if LNG users were allocated a per-tug job cost of \$15,256 – equal to that in Option 2 - then the cost that is allocated to Rest of Port would be only \$353, while still recovering the total cost of the single provider in option 1.

6 *Licencing arrangements*

This section explores the possible towage licencing arrangements at the Port, taking into account the conditions, from an operational and economic perspective, required for effective competition and the objective of ensuring the most efficient outcome in relation the provision of towage services.

6.1 *Options for ensuring workable competition in the towage market*

A single towage provider continues to provide the least cost towage option for the Port, based on the anticipated level of future demand, current operational and shipping dynamics and the current towage characteristics of Port customers. However, key to the operationalisation of this single towage provider model is establishing a market structure, supporting instruments that best promote competition.

Where a single towage operator is the most efficient technical solution (i.e., where it can provide an appropriate service at less cost than two or more providers) the market can be allocated using a range of mechanisms including:

- incumbency
- a limited period of head-to-head competition, or
- by a tender for an exclusive licence.⁴⁰

Each of these allocation mechanisms are discussed below.

6.1.1 *Incumbency and head-to-head competition*

Allocating the future towage market simply by incumbency is unlikely to result in the most cost efficient solution at the Port, as while it would ensure continuity of service, it does not guarantee future competition and efficient economic outcomes in the Port.

This is because allocating the future market simply by incumbency entrenches the advantage of the incumbent, and may create an environment where it can set prices above efficient levels until the threat of entry becomes credible. As a result, the incumbent is in a better position to compete more aggressively with the new entrant, and there is no guarantee of the benefits of competition from having multiple providers, or the potential for multiple providers, operational at a port.

While a period of head-to-head competition from a potential market entrant may constrain the incumbent from exercising monopoly power, this is only likely where the size and scope of the market is sufficient to sustain more than one minimum-sized fleets. The threat of entry is less credible in smaller ports where a single towage operator is more efficient, resulting in a significant risk for a prospective towage provider in regards to entering the market (particularly where entry involves significant upfront costs).

⁴⁰ Productivity Commission (2002) *Economic Regulation of Harbour Towage and Related Services, Inquiry Report*, available at: <https://www.pc.gov.au/inquiries/completed/harbour-towage/report>

In markets where it unclear whether demand is sufficient to enough to support multiple providers, enduring competition between towage providers is unlikely to be sustainable. In 2002 the Productivity Commission noted that even in large ports where entry is open, only one towage provider has been able to survive.⁴¹ More recently, where open competition has existed in other Australian ports – such as at the ports of Newcastle and Brisbane - only a single towage provider now remains (refer section 4.3).

A risk in this situation is that the exiting of one provider creates service reliability or other (temporary) disruptions while the remaining provider scales up to meet the demand of the whole market. This may ultimately lead to a single, unregulated provider with a high degree of market power and constrained only by the (very weak) threat of entry by some future competitor.

There also are fewer options available to GPC or its customers to remedy any service quality or operational issues. The avenue for Port customers to provide their own towage services is really only an option for a few very large customers and our modelling (refer to Section 5) suggests that this would attract a significant cost penalty. For the rest of the Port’s customers this option is implausible.

6.1.2 Competitive tender for an exclusive licence

Where the market is allocated via a competitive tender for an exclusive licence, competition for the right to operate in the market is generated by the tender process to select a licensee, along with an additional inducement provided by exclusivity.

A competitive tender process for an exclusive licence would stimulate competition for towage services at the Port and creates a mechanism to address the concerns evident in allocation of the market by either incumbency or head-to-head competition. Competition for an exclusive licence, appropriately structured and executed, can:

- result in towage charges being set at an efficient level, reflecting the cost of providing the necessary level of service; and
- provide stability and certainty for both the towage provider and the Port’s customers. Stability is valuable to a towage provider as it supports business planning, recruitment of resources, investment in systems, and allows a focus on efficiency initiatives.

One of the key reasons cited previously by the ACCC in its decisions to allow GPC’s prior exclusive licences to stand was that the tender process stimulated significant competition *for* the towage market at the Port. The tender process completed in 2009 generated significant interest amongst prospective towage providers, resulted in a change of towage provider at the Port, and a reduction in towage charges when the current Licence came into effect (refer section 2.6). This demonstrates that Port users experienced the benefits of competition *for* the market.

Consistent with this view, in allowing the proposed conduct to stand at the Port in 2012, the ACCC noted that, “ordinarily, competition in the market is likely to deliver the most efficient outcome and mechanisms that restrict competition will be likely to result in anti-competitive public detriment. However, a competitive market may not be sustainable under conditions of natural monopoly. In such circumstances, competition for the market, through a competitive tender for an exclusive licence, can provide an alternative to ongoing competition in the market”.⁴²

⁴¹ Productivity Commission (2002) *Economic Regulation of Harbour Towage and Related Services, Inquiry Report*, available at: <https://www.pc.gov.au/inquiries/completed/harbour-towage/report>

⁴² Australian Competition and Consumer Commission (2012) *Statement of Reasons*, available at: <http://registers.accc.gov.au/content/index.phtml/itemId/860220/fromItemId/859018/display/acccDecision>

6.2 Exclusive licence – summary of public detriments and benefits

In its 2009 and 2012 decisions to not revoke GPC's exclusive dealing notification, the ACCC assessed the likely public benefits and public detriments which might arise as a result of the 'conduct' – i.e. requiring vessels to use the services of the holder of the exclusive licensee for harbour services at the Port.

In assessing the 'counterfactual' (i.e. the ACCC's view of the likely future without the notifying conduct), the ACCC concluded that it was most likely that the Port would continue to operate with a single towage provider. In reaching this conclusion, the ACCC considered the Productivity Commission's *Inquiry Report* and a range of submission, including PwC's 2008 and 2012 reports comparing the cost-efficiency of a single towage provider versus two towage providers.

The evidence considered by the ACCC is largely unchanged because:

- the specific features of the Port, including the volume of bulk cargo trade, duration of tug jobs and tidal constraints have not changed over the term of the existing Licence. This means that the number of tugs required by a single operator to enter the market (i.e. the minimum number of tugs required to service the types of vessels in the Port) is unchanged. These features increase the minimum scale for entry for prospective towage providers which is likely to result in a cost penalty to Port customers, should multiple towage providers be contemplated at the Port at the expiry of the current term of the licence
- the cost structure of the harbour towage industry is still dominated by fixed costs that do not increase proportionately with increased utilisation of tug assets. This implies that the harbour towage market exhibits significant economies of scale
- economies of scale at the Port do not appear to have been exhausted over the current Licence term, despite the number of tug jobs exceeding the Productivity Commission's 8,000 tug job threshold. GPC anticipates total towage demand over the period to 2027 will increase from approximately 9,000 tug jobs to approximately 9,600 tug jobs, which is in fact still less than the forecast of tug jobs provided with the last competitive tender
- GPC intends to run a competitive tender process to award an exclusive licence at the Port at the expiry of the current licence term. Since the Port is one of Australia's largest bulk commodity ports it is likely that, similar to the last process, a competitive tender would generate significant interest from prospective towage providers, as well as the incumbent. The competitive tender process will provide strong incentives for prospective towage providers to compete *for* an exclusive licence where they may not otherwise be prepared to compete *in* the market, and
- GPC intends to implement the strategies that were contemplated by the ACCC to mitigate potentially detrimental higher towage prices; in particular competitive tendering which includes price competitiveness as a key evaluation criteria and a rigid framework for the escalation of tendered prices with a transparent audit process.

6.2.1 Public detriments

Competition in the market would be restricted over a period of time by virtue of GPC granting an exclusive licence for a period of five years with an option to extend by three years, exercisable only by GPC. During this period, whilst immunity exists, GPC has advised they will not seek to issue any further licences to operate towage services, therefore prospective towage operators would be excluded from the market during the term of the licence.

The length of the licence period was identified as a potential public detriment by the ACCC in its 2009 assessment of GPC's Notification. However, the ACCC concluded that the proposed

eight year licence term, comprised of an initial five year term with a three year optional extension, allowed a prospective provider sufficient timeframe to recover its initial up-front investment. The licence length, along with its exclusivity features, provided security to Smit who stated it would not have tendered at Gladstone if not for the exclusive licence.

The ACCC also considered the possibility of public detriment in the form of higher prices, however concluded on balance that this was unlikely due to the competitive tender process proposed by GPC. Indeed, outcomes from the competitive tender process held by GPC in 2009 indicate that competitive prices *were* tendered, with prices 3 per cent lower than those at the expiry of the previous licence).

Over the term of the current Licence, Port users have experienced decreases in charges in real terms, with FY2018 charges being approximately 15 per cent lower than FY2012 charges for Standard Harbour towage services. This is largely due to the design of the pricing framework in the current Licence.

6.2.2 Public benefits

The types of efficiency and cost saving benefits contemplated by the ACCC as a result of the notified conduct are unchanged.

As set out in Box 1, the public benefits found by the ACCC in its 2012 decision not to revoke the notification have been realised. The previous tender process in 2009 increased competition in the Australian national towage market, as it led to the entry of a new party when Smit was awarded the licence. The competitive tender process also led to a reduction in towage charges in real terms over the term of the existing licence.

Economies of scale within the market for towage services have not yet been exhausted in the Port. Our analysis detailed in section 5, along with current tug utilisation rates and the likely minimum number of tug vessels required to enter the Port suggests that a single towage operator could provide services across the entire Port at a lower cost than two towage operators.

Where two towage operators are not able to be sustained by the number and composition of vessel movements in a Port, a non-exclusive regime could have a number of outcomes:

- the incumbent could remain the single provider of towage services, with an incentive to charge above efficient prices (provided no other pricing controls were established) until such time as the threat of entry/competition becomes imminent. The threat of entry is lessened where it is most likely more efficient for one operator to provide services to the entire market,
- a second operator could enter the market to service only a specific segment of the market without directly competing with the incumbent on a broader basis (as per the scenario considered in our analysis detailed in section 4.3), reducing further the utilisation of the existing tug fleet and resulting in either higher towage charges or decreased below-sustainable financial returns, or
- a second operator could enter the market to compete *head-to-head* with the incumbent, most likely leading to the duplication of capital and operating costs (and thus higher prices or financial returns at below sustainable levels) until such time as the number and composition of vessel movements is sufficient to sustain two operators, or one of the competitor operators exits the market.

It follows that the public benefits generated by the proposed future exclusive licence for towage services in the Port are:

- **Competition for the market:** Robust competition for the market has previously led to a change in towage providers at the Port. The current licensee was sufficiently induced to compete for the market where it had previously not been prepared to compete in any other Australian port. The competitive tender process held by GPC included a number of attractive characteristics, including certainty provided by exclusivity and a clearly defined pricing framework to manage revenue volatility associated with the timing and scale of planned Port developments. It was also designed to sustain the results of the competitive process for the duration of the licence term, by binding the licensee to its tendered rate of return/gross margin and allowing price increases only where approved by GPC in accordance with a defined framework.
- **Avoided duplication of costs:** If exclusivity were to be removed *and* a second operator were to enter the market, the aggregate cost of providing towage services at the Port would increase compared to a single operator providing towage services, since it would require duplication of capital and other costs. That is, total demand would most likely not be met at least cost. The magnitude of this cost penalty is unclear for all circumstances, but where the market is segmented under the future towage configuration options defined by GPC, the whole of Port cost penalty is in the order of between 32 per cent and 85 per cent.
- **Administrative benefits:** There are financial and administrative benefits for both GPC and the Harbour Master which are enabled by having a single towage provider in the Port, including having single tug berthing facilities rather than duplicate berthing facilities which GPC would need to fund the construction of (and associated administration of leasing and other arrangements) and the coordination of towage services between the Harbour Master and a single operator rather than multiple coordination points – the time and cost associated with this coordination is material and would require the development of priority systems and other processes.

6.3 Designing the future tender process to maximise the public benefit

An important advantage of exclusivity is the certainty it creates for prospective tenderers. This certainty is particularly important where it is unclear whether the particular market can sustain two operators, since the risk of entering or remaining in the market is much higher. The inducement provided by an exclusive licence framework can overcome many of the advantages of incumbency, since it puts the incumbent and potential entrant in a similar position when tendering for the licence which is likely to result in more robust competition than if the market was awarded simply by incumbency. This can stimulate keener price competition during the tender process.

Provided there are sufficient controls included in the licence framework to regulate pricing, the disadvantages associated when excluding competition during an exclusive licence term can be significantly mitigated.

By requiring tenderers to compete on both price and quality, and requiring key aspects of tenders to be 'locked in' for the duration of the licence, the competitive pressure which operates during the tender process can be sustained for the duration of the licence term.

If the tender process is designed correctly, exclusivity should allow for keener price competition during the tender process (due to the certainty it provides prospective towage providers) and also avoids certain costs and inefficiencies as might be incurred during the term of the licence, such as the duplication of capital and labour costs that necessarily arise with multiple towage operators being operational at the Port.

There needs to be more than one party eligible to submit a tender in order to provide incentive for tenderers to submit competitive offers. Ideally, there should be at least three tenderers. To facilitate this, a future tender process must be rigorous and comprise the following:

- Clearly defined **technical, safety and other service requirements**, whilst retaining flexibility for tenderers to consider and propose innovative service delivery models.
 - Clarity is important to ensure that tender responses are consistent, allowing for ready comparison between them, and to ensure that Port users' towage requirements are met.
 - Sufficient certainty is required in relation to the licence term, and consideration given to a term duration that allows the towage provider sufficient time to recover significant once-off and sunk costs (i.e., tug mobilisation costs) without adversely impacting towage charges for Port customers.
 - Clarity into operating conditions is required to provide both the opportunity for tenderers to evaluate the potential risks and benefits of entering the market and provide an incentive for tenderers to invest in the market (noting that the level of certainty in relation to market share would be greater if the tender is for an exclusive licence).
 - A forecast of expected demand for tug jobs over the term of the proposed licence to allow respondents to understand the scale of the market opportunity at the Port.
 - A process should be established wherein any change in Port users' towage requirements (acceptable to MSQ and GPC) over the Licence term can be identified and addressed.
 - If the proposed licence is exclusive, the exclusive licensee must be contractually bound to be present at the Port and to provide a minimum level of service to all Port users, thus providing security and certainty of services in the Port.
- A **framework for tenderers to propose commercial terms** which appropriately balances the need for the towage provider to recover its efficient costs, including a return on capital invested, whilst using the discipline of competition to provide an incentive to deliver services at least cost.
 - The licence terms should formalise commercial terms that enable the towage provider to set towage charges such that expected revenue from the provision of towage services is at least sufficient to meet the efficient costs of providing towage services, plus a rate of return that appropriately reflects any commercial risks associated with towage provision at the Port.
 - The licence should formalise commercial terms that embed the benefit of inter-operability across the different Port facilities. At the time of the tender for the current Licence, there was significant uncertainty regarding the then future timing and scope of any LNG towage requirement. Now that the LNG trade is established at the Port, a competitive tender can be designed to accommodate the specific needs of the LNG industry, to encourage further cost savings which would mitigate any potential public detriments attributable to an exclusive licence arrangement.

This framework must be designed to ensure that the benefits of a single provider model are distributed in such a way that all Port users are better off than in any alternative (multi-provider) market arrangement. A framework is needed which defines what is permissible in terms of price differentiation, whilst ensuring there are no cross-subsidies between Port users.

- It should include a framework that defines or describes how charges would increase or decrease through time. It should incorporate mechanisms to protect Port users from unreasonable increases in charges, while reflecting the movement in underlying costs Port users should benefit from economies of scale in respect to increased demand for towage services at the Port), as well as deal with any potential new investment requirements or other service changes over time (see Box 1).
- If the proposed licence is exclusive, the exclusive licensee is contractually bound to continue to provide a minimum level of services over the life of the licence in accordance with the prices (and/or pricing framework) submitted/negotiated as part of the tender process.

Box 2 Lessons from the current Licence – Inter-operability arrangements

The defined inter-operability arrangements between the Standard Harbour and LNG tug fleets have resulted in cost savings for both customer groups. The inter-operability arrangements require LNG customers to make a contribution towards the Standard Harbour cost base that reflects a deemed number of Standard Harbour tugs used to perform an LNG vessel movement. Analysis by GPC demonstrated that in FY2017, approximately 92 per cent of all Standard Harbour vessel movements were serviced by up to six tugs. When the schedule was adjusted by +/- 55 minutes, 100 per cent of concurrent vessel movements could be serviced by five tugs. Conversely, in FY2017, only 72 per cent of LNG vessel movements could have been serviced by the LNG tugs alone. This analysis shows that the Standard Harbour tug fleet is sufficient to service the demands of Standard Harbour towage customers, however, concurrent LNG vessel movements would be significantly impacted if the inter-operability arrangements did not exist (refer Appendix A for more detail).

In addition to promoting operational efficiency within the Port, the defined inter-operability arrangements result in cost savings for:

- LNG customers – the contribution made towards the Standard Harbour cost base is lower than the cost of procuring an additional LNG tug to service demand, and
- Standard Harbour customers – Standard Harbour users have experienced cost savings through the inclusion of LNG vessels into the total demand base against which towage costs are recovered.

GPC has an opportunity as part of a future exclusive licence arrangement to formalise similar commercial terms that embed this benefit.

Box 3 Lessons from the current Licence – Pricing adjustment provisions

The current Licence contains pricing adjustment provisions for Standard Harbour users, to the extent that Smit under- or over recovers revenue compared to that originally forecast for that year, outside of a predetermined cap-and-collar. These provisions are an important feature of the current Licence as they: allow for the efficient allocation of risk between Smit and Port customers and provide revenue certainty for Smit by allowing for significant under- or over-recovery of revenue, outside of the cap-and-collar, to be passed through to Standard Harbour users. Given that the Licence determines Standard Harbour towage charges, the cause of any significant under- or over- recovery of revenue is demand being significantly lower or higher than expected. Where demand is higher than expected Smit repays economies of scale benefits, and where demand is significantly lower than expected Smit's revenue is protected.

The under- or over- recovery of revenue, outside of the cap-and-collar, is incorporated into the next pricing years' charges. The resulting benefit or penalty is then equitably distributed amongst Standard Harbour users.

The structure of any pricing adjustment provisions are an important feature for GPC to consider during the proposed competitive tender process.

- Defined **governance arrangements**, including details on reporting on financial and non-financial performance, and rules and processes for decision-making during the Licence term, including a framework for risk sharing for unanticipated or uncertain future events based on an efficient allocation of risk between Port customers and the towage provider.
 - Reporting on financial and non-financial performance should be clearly defined, to allow the Port to assess and ensure compliance with the Licence, and to allow Port users to be confident in the compliant delivery of towage services and in the sustained realisation of gains from the initial competitive tender process.
 - The governance framework should define a framework for risk sharing for unanticipated or uncertain future events based on efficient allocation of risk categories between customers and provider. This should include consideration to how the Licence framework might deal with unanticipated events, thresholds which would trigger consultation with Port users, and factors that would be considered in electing to apply any Licence term option.
 - It should incorporate provisions for audit by the licence issuer (GPC), with penalties and incentives as appropriate (see Box 4).

Box 4 Lessons from the current Licence – Audit provisions

The current Licence contains audit provisions that protect Port users against any unreasonable price increases. These provisions ensure that all additional cost items are subject to audit, and provide a mechanism to prevent any unforeseen and unreasonable costs being recovered by Smit in towage charges. This acts as a mechanism to prevent over-investment by Smit that would lead to increased charges. The audit provisions are an important benefit of the current Licence arrangements at the Port to ensure towage charges reflect all prudent and efficient costs.

In 2017, GPC enacted these provisions and conducted a sample audit of the capital cost of the LNG tugs. The audit provided certainty that the capital cost used to determine LNG Towage charges fell within 1 per cent of the actual cost associated with the procurement and mobilisation of Smit's tug assets.

GPC is currently undertaking an operating cost audit to ensure all operating costs currently recovered through the LNG Towage charges are associated with the provision of LNG towage services only. We understand GPC intends to adjust for any over- or under-recovery of operating expenditure by Smit in LNG Towage charges in the FY2019 pricing year.

This protection from unreasonable price increases must be considered as part of any future licencing arrangement. This would be addressed by GPC ensuring the design of the new exclusive licence contains audit provisions that culminate in adjustments to charges if any discrepancy is identified by GPC.

- Details on **supporting Port assets and services** that would be made available to the successful tenderer, including the terms on which access would be provided to the Port's existing tug base and any other supporting systems and processes.
 - GPC currently makes available a tug base, including marine and land-side facilities, which are used by the incumbent towage provider. The terms on which access to that facility would be provided to any future provider should be clearly defined in the proposed leasing documentation.

Appendices

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Appendix A Towage distribution analysis

To support ongoing operational efficiency at the Port of Gladstone, GPC, LNG industry and Smit agreed operating and pricing principles to allow inter-operability between the LNG and Standard Harbour fleets, such that the demand for all towage services at the Port is met efficiently. This means that there are instances where Standard Harbour tugs are used to perform LNG vessel movements and vice versa.

These defined commercial arrangements are embedded within the current Licence are founded on two key observations, being:

- 1 the Standard towage fleet has more capacity than is required to service the remaining Port customers, all of whom access standard services provided by Smit, and
- 2 there are not enough LNG Tugs alone to provide the current level of service to the LNG industry. Due to higher order towage requirements, including Standby services and the use of four tugs per LNG vessel movement, the LNG industry requires periodic access to the Standard Harbour Towage fleet to maintain the current level of service. This is specifically evident where more than one LNG ship is preparing or under movement entry or departure (i.e. concurrent movements).

GPC has prepared a historical analysis of all the actual shipping movements at the Port of Gladstone in FY17. This analysis shows whether there would be a material impact to the current level of service provided to Standard Harbour and LNG users if both operated separately and there was no cross-hiring or sharing of the fleets operationally.

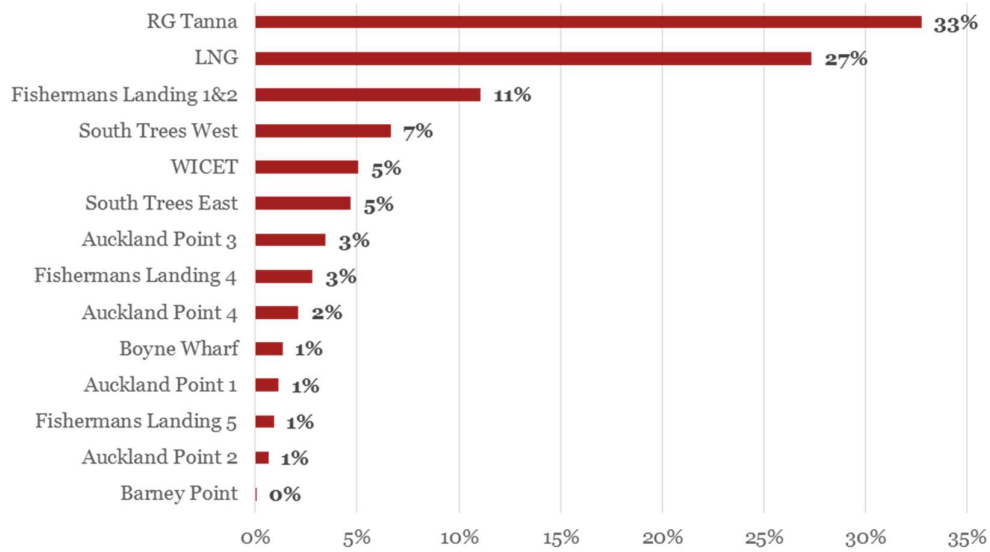
This analysis is based on actual shipping data sourced from the MSQ *Queensland Shipping Information Planning System*. This analysis is further underpinned by three core assumptions:

- the current operational and shipping parameters
- the towage requirements under Section 9 of the Gladstone Port Procedures Manual
- LNG concurrent shipping movements.

FY2017 tug utilisation at the Port of Gladstone

Demand for towage at the Port of Gladstone is triggered by different Port trades who operate at various wharf centres. Figure 23 details the percentage of tugs being utilised to execute vessel movements at each wharf centre in FY2017. This chart indicates that approximately 60 per cent of the FY2017 total tug jobs were executed at the RG Tanna Coal Terminal and the LNG terminals.

Figure 23: FY2017 proportion of total tug jobs by wharf centre

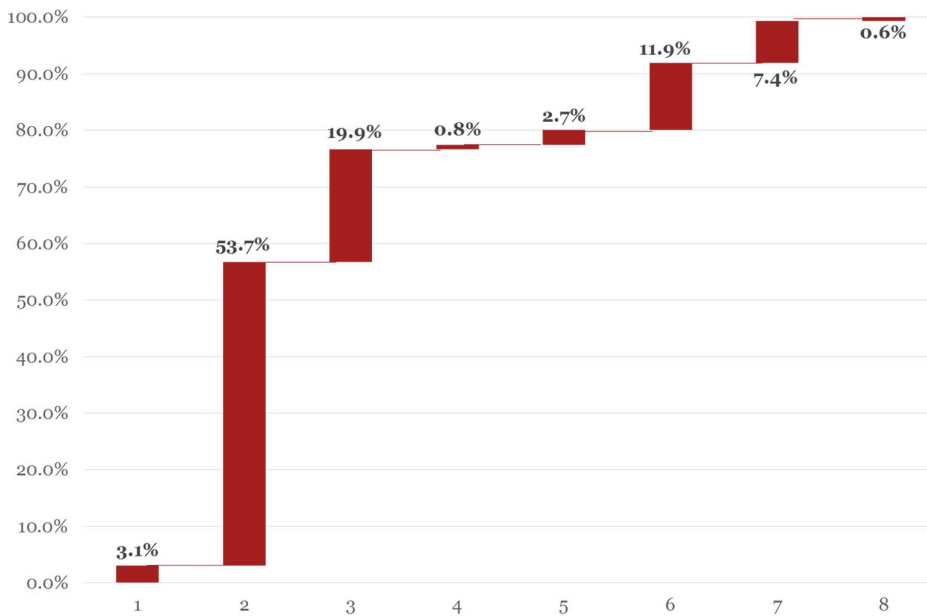


Source: GPC analysis, Maritime Safety Queensland (2017) *Queensland Shipping Information Planning System* data

Standard Harbour fleet

Figure 24 details the proportion of FY2017 concurrent Standard Harbour vessel movements by number of tugs deployed to perform the vessel movement based on the FY2017 actual Standard Harbour shipping schedule. The data presented in Figure 24 does not contemplate any LNG vessel trade. In FY2017, approximately 57 per cent of concurrent Standard Harbour vessel movements were serviced by one or two tugs deployed to perform the vessel movement. Overall, approximately 92 per cent of concurrent Standard Harbour vessel movements were serviced by up to six tugs.

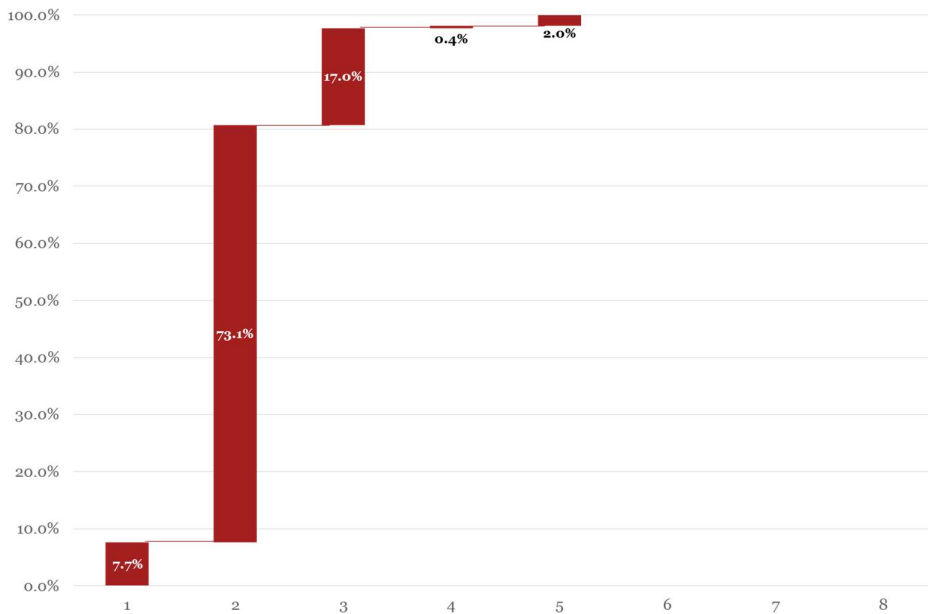
Figure 24: Proportion of FY2017 concurrent Standard Harbour vessel movements by number of tugs deployed to perform the movement



Source: GPC analysis, Maritime Safety Queensland (2017) *Queensland Shipping Information Planning System* data

However, when the actual FY2017 shipping schedule is adjusted +/- 55 minutes, 100 per cent of the FY2017 Standard Harbour concurrent vessel movements could be performed with the five tugs available at the Port, as demonstrated in Figure 25. This indicates that the current Standard towage fleet is capable of servicing the current Harbour towage demand exclusively, and does not require an additional uplift from LNG tugs to service current levels of demand.

Figure 25: Proportion of FY2017 concurrent Standard Harbour vessel movements by number of tugs deployed to perform the movement, adjusted for +/- 55 minutes

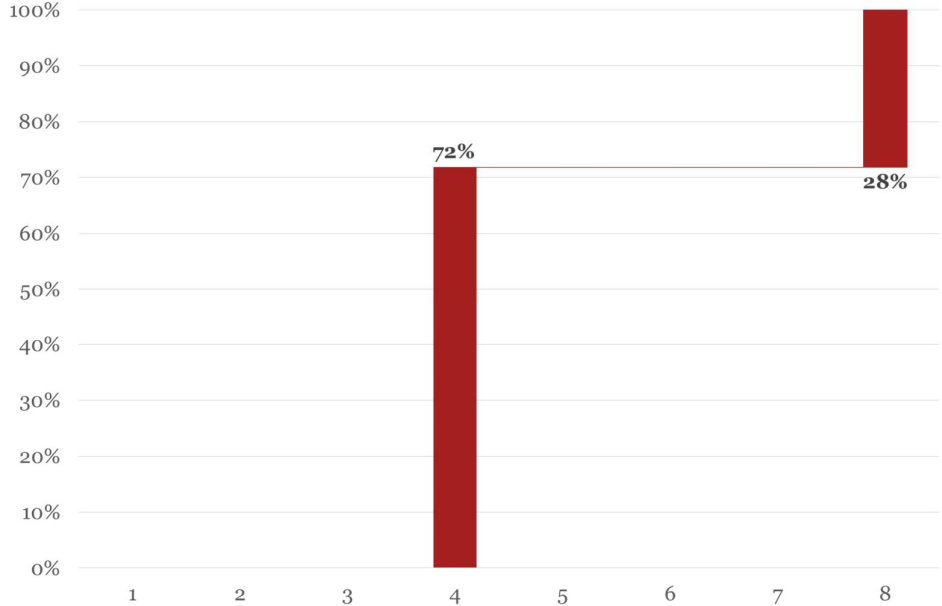


Source: GPC analysis, Maritime Safety Queensland (2017) *Queensland Shipping Information Planning System* data

LNG fleet

Figure 26 details the LNG vessel movements by number of tugs deployed to perform the vessel movement, excluding the Standby tug. Figure 26 shows that only approximately 72 per cent of LNG vessel movements could have been serviced by LNG tugs alone and that current service levels where concurrent movements occurred would be significantly impacted should the defined inter-operability arrangements not be defined in the current Licence.

Figure 26: Proportion of FY2017 concurrent LNG vessel movements by number of tugs deployed to perform the movement



Source: GPC analysis, Maritime Safety Queensland (2017) *Queensland Shipping Information Planning System* data

Appendix B Options assessment – detailed cost parameters

Rate of Return

The towage options model assumes a 10 per cent nominal pre-tax rate of return on capital assets. This rate of return reflects the annual return on assets that towage providers would be allowed to recover on their tug fleet and other capital investments. The rate of return adopted is constant for all options for the purpose of the comparative cost analysis.

Tug capital cost

The Port of Gladstone receive a range of different vessel types, each with different tug power and safety requirements. In order to construct hypothetical tug fleets which reflect the actual requirements of each market segment, we have allowed for three types of tugs with differing capital values. The tug capital cost data has been sourced based on our consultations with specialist GPC staff who have extensive experience working within, or as a consultant to, the Australian towage industry.

Table 12: Assumed tug capital values

| Cost Item | Capital Value | RUL | Salvage Value | Description |
|------------------------------|---------------|----------|---------------|--|
| 80T Bollard Pull LNG Tug | \$13,500,000 | 20 years | \$2,700,000 | The initial capital cost associated with purchasing and deploying the tug at the Port of Gladstone. |
| 70T Bollard Pull Harbour Tug | \$13,150,000 | 20 years | \$2,630,000 | A 20 year RUL assumption and 20% salvage value assumption has been adopted to reflect the current assumptions for LNG tugs in the current Licence. |
| 50T Bollard Pull Harbour Tug | \$11,950,000 | 20 years | \$2,390,000 | |

Source: GPC estimates, not based on the value of Smit's LNG tugs.

For simplicity, we have assumed a cost profile for new tugs for the purposes of the comparative cost analysis. Different or future service providers could elect to use second-hand vessels, provided the minimum specifications set by MSQ are met. This option is available to any future operator, whether in a single-operator market or otherwise.

Appendix C provides analysis of some scenarios in this regard.

Tug base expansion

The Port currently has tug base facilities sufficient to accommodate 11 tugs. Options 2, 3 and 4 all require more than 11 tug boats in total, meaning the current facilities at the Port would require expansion. GPC estimated the capital cost of expanding the Port's tug base facilities within each alternative option. Our analysis apportions the annual capital component of this expansion to the various providers, in proportion to the number of tugs in their fleet. If an expansion of the tug base was required, the commercial terms under which GPC (or a third party) would develop, fund and recover the cost of those works would be subject to commercial negotiation between the parties.

Table 13: Incremental costs of tug base expansions

| Option | Capital Cost | RUL | Comment |
|---------------|---------------------|------------|--|
| Option 1 | \$0 | N/A | No expansion required |
| Option 2 | \$6,000,000 | 10 years | Capital amounts are conservative estimate of incremental costs. The RUL is consistently applied. |
| Option 3 | \$12,000,000 | 10 years | |
| Option 4 | \$6,000,000 | 10 years | |

Source: GPC estimates

Labour

In order to operate a towage service, providers require masters, engineers and other staff to crew their fleet. Crewing allocations have been derived using Primary and Secondary hulls. Primary hulls are crewed to be available 24 hours a day, seven days a week, and Secondary hulls are available 12 hours in a 24 hour period, seven days a week. Average annual cost estimates (per FTE) have been derived from an analysis of Enterprise Agreements that cover up to 20 ports in Australia. The crewing cost estimate for each alternative towage configuration option includes an allowance for 15.5 per cent superannuation in accordance with the Enterprise Agreements, but excludes any additional allowances, such as travel and accommodation expenses or industrial and protective clothing allowances, or any consideration to overtime payment. These costs have been excluded due to the complexity involved in forecasting actual allowances. Notwithstanding, it is likely that these costs would be incurred by an actual towage provider operational within the Port.

Table 14: Estimated annual crewing cost for each type of tug considered in the Licence options model

| Option | Provider | # of primary & secondary crews | Number of FTEs | Estimated average cost per FTE | Estimated total cost |
|----------|--------------|--|----------------|--------------------------------|----------------------|
| Option 1 | Rest of Port | 4 Primary crews, 6 Secondary crews | 90 | \$185,220 | \$16,669,838 |
| Option 2 | Rest of Port | 3 Primary crews and 2 Secondary crews | 51 | \$187,444 | \$9,559,640 |
| | LNG | 1 Primary crew and 8 Secondary crews | 73 | \$249,142 | \$18,187,387 |
| Option 3 | Rest of Port | 3 Primary crews and 2 Secondary crews | 51 | \$187,444 | \$9,559,640 |
| | LNG | 1 Primary crew and 8 Secondary crews | 73 | \$249,142 | \$18,187,387 |
| | Party A | 4 Secondary crews | 25 | \$186,989 | \$4,674,729 |
| Option 4 | Rest of Port | 4 Primary crews and 5 Secondary crews | 84 | \$187,748 | \$15,770,870 |
| | Party A | 4 Secondary crews | 25 | \$186,989 | \$4,674,729 |

Source: PwC analysis, Smit Lamnalco (Australia) Pty Ltd (2016) *AMOU Gladstone Enterprise Agreement 2016*, available at:

https://www.fwc.gov.au/search/document/agreement?search_api_views_fulltext=Smit+Lamnalco+%28Australia%29+Pty+Ltd&display_switcher=%2Fsearch%2Fdocument%2Fagreement&created%5Bdate%5D=&created_1%5Bdate%5D=&matter_number=&field_fwc_doc_agreement_print_members=All&reference=&field_fwc_doc_agreement_AGR_AGMT_ID=&title=&old_pub_code=&state=All&industry=All&abn=&search_api_aggregation_1=&sort_bef_combine=search_api_relevance+DESC and Svitzer Australia Pty Ltd *National Towage Enterprise Agreement 2016*, available at:

https://www.fwc.gov.au/search/document/agreement?search_api_views_fulltext=Svitzer&display_switcher=%2Fsearch%2Fdocument%2Fagreement&created%5Bdate%5D=&created_1%5Bdate%5D=&matter_number=&field_fwc_doc_agreement_print_members=All&reference=&field_fwc_doc_agreement_AGR_AGMT_ID=&title=&old_pub_code=&state=All&industry=All&abn=&search_api_aggregation_1=&sort_bef_combine=search_api_relevance+DESC

Maintenance

Tugs require ongoing maintenance in order to stay in working condition. Maintenance costs associated with each tug fleet have been calculated based upon the estimated annual maintenance cost for each type of tug considered. These estimates include survey costs, which are assumed to be incurred every 2.5 years (cost annualised), and a range of operating maintenance costs including those associated with deck systems, hull structure, engine controls and winches, among others. The annual tug maintenance cost data has been sourced based on our consultations with specialist GPC staff who have extensive experience working within, or as a consultant to, the Australian towage industry.

Table 15: Annual maintenance costs for each type of tug considered in the Licence options model

| Tug Type | Annual Cost | Source | Comment |
|-----------------|-------------|---------------|---|
| 80T LNG | \$500,000 | GPC estimates | Annual maintenance cost estimates have been calculated based on conservative estimates relative to tug capital costs. |
| 70T Harbour Tug | \$475,000 | GPC estimates | |
| 50T Harbour Tug | \$420,000 | GPC estimates | |

Source: GPC estimates

Overheads

Towage providers incur a range of costs which are necessary for but often not directly related to the provision of towage services. The largest portion of these indirect costs are the labour costs of towage support staff including schedulers, payroll and administration personnel (among others). Overheads have been allocated to operators in each option based upon an initial estimate of the indirect labour costs required to operate the towage service in Option 1 (a single provider). The indirect labour costs associated with the provision of towage services were derived from a combination of engineering and supply chain/logistics salary guides as published by Hudson in 2017. These were then escalated by the forecast WPI for 2017/18 and 2018/19, as published by Queensland Treasury,⁴³ to ensure these costs were in \$2019. Following this, an uplift on the salaries was applied based on consultation with specialist GPC staff with extensive experience working within, or as a consultant to, the Australian towage industry.

This amount (\$1,680,000) has then been used to apportion overheads within the remaining scenarios based upon the number of tugs in each fleet. Note that non-salary overheads such as phone, electricity, insurance form only a small portion of a towage provider's total cost profile. In addition, a lease fee currently is levied by GPC for use of the tug base facility by a towage service provider. Non-salary overheads, such as the lease expense and insurance, are unlikely to effect the final results of this comparative analysis and have therefore been omitted. Indirect labour cost data has been sourced based on our consultations with specialist GPC staff who have extensive experience working within, or as a consultant to, the Australian towage industry.

⁴³ Queensland Treasury (2017) *Queensland Budget 2017-18, Budget Strategy and Outlook, Budget Paper No. 2*, available at: https://s3-ap-southeast-2.amazonaws.com/s3-media-budget/pdfs/budget+papers/bp2/2_Economic_performance_and_outlook.pdf <https://s3.budget.qld.gov.au/budget/papers/2/bp2-2017-18.pdf>

Table 16: Allocations of overhead costs within the potential towage options

| Option | Provider | Number of tugs in fleet | Allocated Overhead | Note |
|---------------|-----------------|--------------------------------|---------------------------|--|
| Option 1 | Whole of Port | 11 | \$1,680,000 | |
| Option 2 | Rest of Port | 6 | \$916,364 | Overhead costs within each option have been calculated based on salary guides published by Hudson and through PwC analysis based on consultations with GPC |
| | LNG | 9 | \$1,374,545 | |
| Option 3 | Rest of Port | 6 | \$916,364 | |
| | LNG | 9 | \$1,374,545 | |
| | Party A | 4 | \$610,909 | |
| Option 4 | Rest of Port | 11 | \$1,680,000 | |
| | Party A | 4 | \$610,909 | |

Source: Hudson (2017) *Hudson Salary Guides, Hudson Engineering*, available at: <http://au.hudson.com/salary-hub/salary-guides> , Hudson (2017) *Hudson Salary Guides, Supply Chain and Procurement*, available at: <http://au.hudson.com/salary-hub/salary-guides> , GPC estimates, PwC analysis

Appendix C Sensitivity analysis

The analysis presented in this report is based on a series of operating and capital cost assumptions. The comparative analysis assumes that towage providers at the Port of Gladstone would procure new tugs to service towage demand at the Port at the expiry of the current Licence term. This assumption results in a large capital component of the total cost base for each towage service provider under all Options assessed.

It is possible that towage service providers may use second hand tugs which would have a lower capital cost (though potentially higher maintenance costs) than that assumed in the current modelling.

The sensitivity analysis below explores the extent to which FY2019 cost structures under Options 2, 3 and 4 would need to decrease, whether as a benefit of competition, innovation or otherwise, to equal the cost structure of the hypothetical single towage provider in Option 1. In other words, the sensitivity analysis assesses the extent to which FY2019 total costs need to decrease in Options 2, 3 and 4 in order to achieve FY2019 average cost parity with Option 1.

Table 17 details the FY2019 total cost base, total demand forecast and overall average cost under each alternative towage configuration option presented in this report. Options 2, 3 and 4 have a higher total cost than Option 1 over the modelling term, and have an FY2019 average cost that is between 32 per cent and 84 per cent higher than Option 1.

Table 17: FY2019 total cost base, demand forecast and overall average cost under each alternative towage provider option

| | Option 1 | Option 2 | Option 3 | Option 4 |
|--------------------------------------|----------|----------|----------|----------|
| Total cost base (\$000) | \$43,750 | \$65,902 | \$80,760 | \$57,709 |
| Total FY2019 tug job forecast | 9,099 | 9,099 | 9,099 | 9,099 |
| Average cost (\$/tug job) | \$4,808 | \$7,243 | \$8,876 | \$6,342 |
| % increase over Option 1 | - | 51% | 85% | 32% |

Source: PwC analysis

Capital and operating cost sensitivity analysis

Tables 17, 18 and 19 outline the extent to which capital or operating costs would need to reduce in FY2019 under Options 2, 3 and 4 in order to achieve average cost parity with Option 1.

Table 18: Option 2, FY2019 capital and operating cost sensitivity analysis

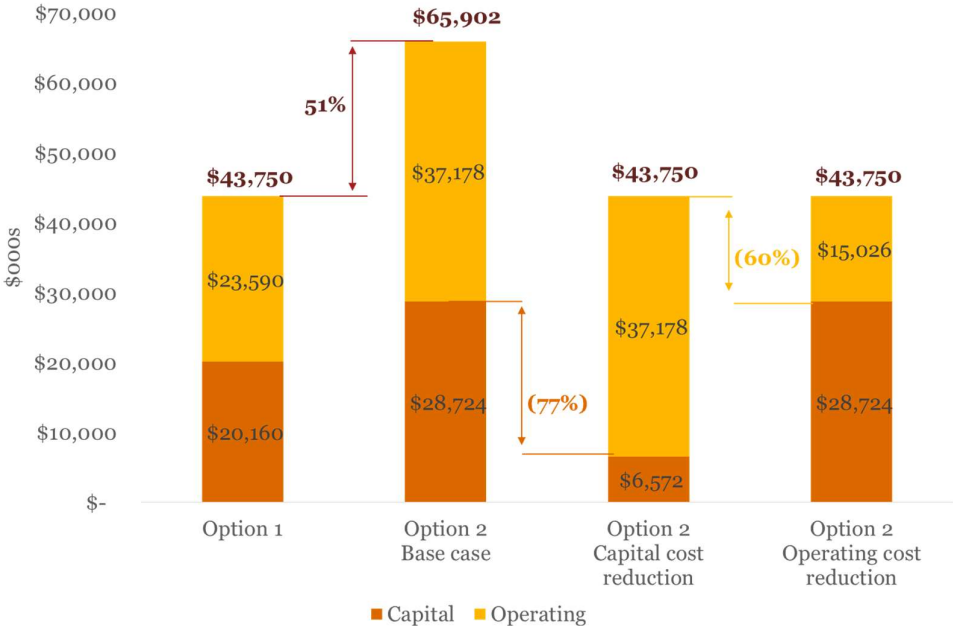
| | Base case | Capital costs | Operating costs |
|-------------------------|-----------|---------------|-----------------|
| Capital cost | \$28,724 | \$6,572 | \$28,724 |
| Operating cost | \$37,178 | \$37,178 | \$15,026 |
| Total cost | \$65,902 | \$43,750 | \$43,750 |
| Average cost | \$7,243 | \$4,808 | \$4,808 |
| % change in cost | | (77%) | (60%) |

Source: PwC analysis

Figure 27 details the total cost base comparison between Option 1 and Option 2, and the reductions in the FY2019 capital cost and operating cost components of the total cost base required to achieve the cost structure of the hypothetical towage provider in Option 1, implying average cost parity is achieved between the two options. The FY2019 total cost base under Option 2 is approximately 51 per cent higher than Option 1, primarily due to differences in the number and type of tugs required to service all user groups. More tugs at the Port to service all user groups implies higher operating costs, such as labour and maintenance, to ensure the safe and efficient provision of towage services.

To achieve average cost parity with Option 1 in FY2019, a 77 per cent reduction in the capital component of the total cost base would be required, holding all else constant. Conversely, an approximate 60 per cent reduction in the operating cost component would be required, holding all else constant.

Figure 27: Option 2, FY2019 capital cost and operating cost sensitivity analysis



Source: PwC analysis

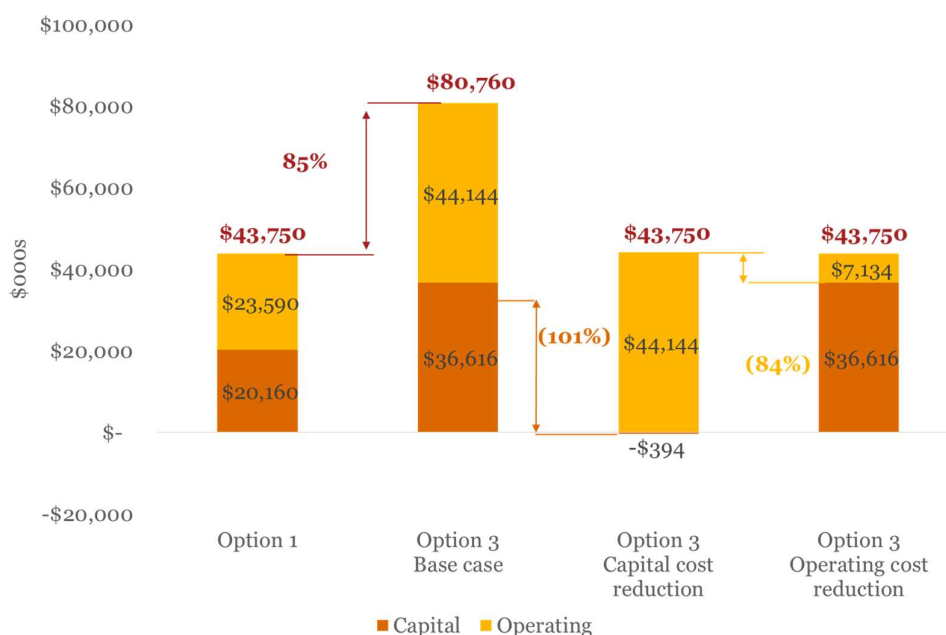
Table 19: Option 3, FY2019 capital and operating cost sensitivity analysis

| | Base case | Capital costs | Operating costs |
|----------------------------------|-----------|---------------|-----------------|
| Capital cost (\$000s) | \$36,616 | (\$394) | \$36,616 |
| Operating cost (\$000s) | \$44,144 | \$44,144 | \$7,134 |
| Total cost (\$000s) | \$80,760 | \$43,750 | \$43,750 |
| Average cost (\$/tug job) | \$8,876 | \$4,808 | \$4,808 |
| % change in cost | - | (101%) | (84%) |

Source: PwC analysis

Figure 28 details the FY2019 total cost base comparison between Option 1 and Option 3, and the reductions in the capital cost and operating cost components of the total cost base required to achieve the cost structure of the hypothetical towage provider in Option 1, which would result in FY2019 average cost parity being achieved between the two options. The FY2019 total cost base under Option 3 is approximately 85 per cent higher than Option 1, which is driven by Option 3 requiring eight additional tugs to service the Port, relative to Option 1. The increased number of tugs for Option 3 results in higher operating costs as well as an incremental tug base expansion to accommodate the tug fleet at the Port.

To achieve FY2019 average cost parity with Option 1, a 101 per cent reduction in the capital component of the total cost base would be required, holding all else constant. Conversely, an approximate 84 per cent reduction in the FY2019 operating cost component would be required, holding all else constant.

Figure 28: Option 3, FY2019 capital and operating cost sensitivity analysis

Source: PwC analysis

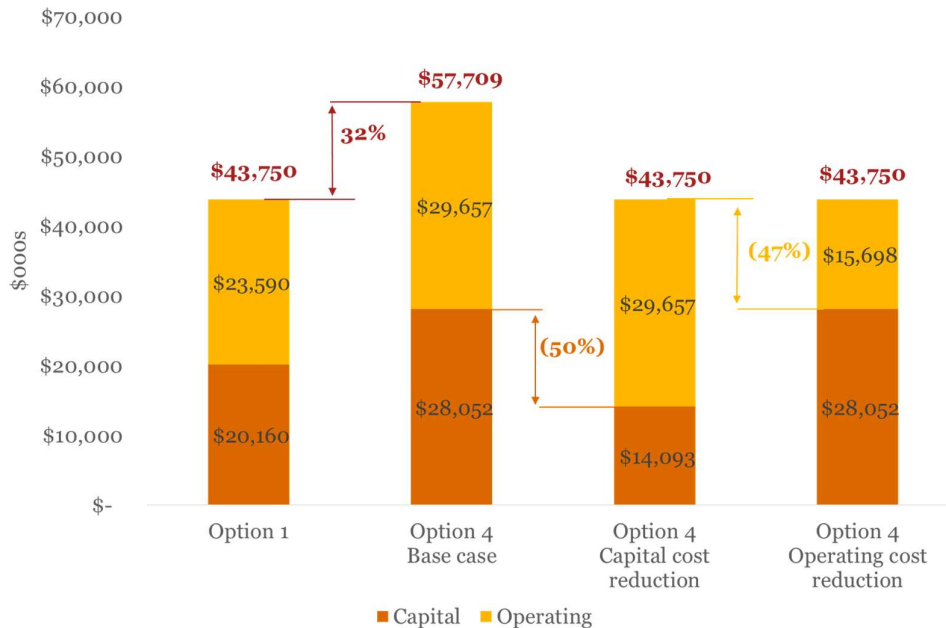
Table 20: Option 4, FY2019 capital and operating cost sensitivity analysis

| | Base case | Capital costs | Operating costs |
|----------------------------------|-----------|---------------|-----------------|
| Capital cost (\$000s) | \$28,085 | \$14,093 | \$28,052 |
| Operating cost (\$000s) | \$29,657 | \$29,657 | \$15,698 |
| Total cost (\$000s) | \$57,709 | \$43,750 | \$43,750 |
| Average cost (\$/tug job) | \$6,342 | \$4,808 | \$4,808 |
| % change in cost | - | (50%) | (47%) |

Source: PwC analysis

Figure 29 details the FY2019 total cost base comparison between Option 1 and Option 4, and the reductions in the capital cost and operating cost components of the total cost base required to achieve the cost structure of the hypothetical towage provider in Option 1, which would result in FY2019 average cost parity being achieved between the two options. The FY2019 total cost base under Option 4 is approximately 32 per cent higher than Option 1, which is driven by differences in the number and type of tugs required to service total demand for towage services at the Port. Similarly to Options 2 and 3, the increased tug requirement results in higher operating and capital cost components in Option 4, relative to Option 1.

To achieve FY2019 average cost parity with Option 1, a 50 per cent reduction in the capital component of the FY2019 total cost base would be required, holding all else constant. Conversely, an approximate 47 per cent reduction in the FY2019 operating cost component would be required, holding all else constant. Reductions of this magnitude are unlikely to be achieved in reality.

Figure 29: Option 4, FY2019 capital and operating cost sensitivity analysis

Source: PwC analysis

FY2019 operating cost component sensitivity analysis

Table 21, Table 22 and Table 23 outline the change in the components of the total FY2019 operating costs under Options 2, 3 and 4 required to achieve FY2019 average cost parity with Option 1. Labour costs would be required to reduce by approximately 80 per cent, 114 per cent and 68 per cent in Options 2, 3 and 4, respectively, holding everything else constant. Maintenance costs would need to reduce by approximately 310 per cent, 420 per cent and 202 per cent in Options 2, 3 and 4, respectively, holding all else constant, to reduce costs to the level of the single provider presented in Option 1. An approximate 967 per cent, 1275 per cent and 609 per cent reduction in overheads costs in Options 2, 3 and 4, respectively, would be required to reduce costs to the level of the single provider presented in Option 1, holding all else constant.

Table 21: Option 2, FY2019 operating cost sensitivity analysis

| | Base case | Labour | Maintenance | Overheads |
|-------------------------|-----------|--------------|---------------|---------------|
| Labour | \$27,747 | \$5,595 | \$27,747 | \$27,747 |
| Maintenance | \$7,140 | \$7,140 | (\$15,012) | \$7,140 |
| Overheads | \$2,291 | \$2,291 | \$2,291 | (\$19,861) |
| Total | \$37,178 | \$15,026 | \$15,026 | \$15,026 |
| % change in cost | | (80%) | (310%) | (967%) |

Source: PwC analysis

Table 22: Option 3, FY2019 operating cost sensitivity analysis

| | Base case | Labour | Maintenance | Overheads |
|-------------------------|-----------|---------------|---------------|----------------|
| Labour | \$32,422 | (\$4,588) | \$32,422 | \$32,422 |
| Maintenance | \$8,820 | \$8,820 | (\$28,190) | \$8,820 |
| Overheads | \$2,902 | \$2,902 | \$2,902 | (\$34,108) |
| Total | \$44,144 | \$7,134 | \$7,134 | \$7,134 |
| % change in cost | | (114%) | (420%) | (1275%) |

Source: PwC analysis

Table 23: Option 4, FY2019 operating cost sensitivity analysis

| | Base case | Labour | Maintenance | Overheads |
|-------------------------|-----------|--------------|---------------|---------------|
| Labour | \$20,446 | \$6,487 | \$20,446 | \$20,446 |
| Maintenance | \$6,920 | \$6,920 | (\$7,039) | \$6,920 |
| Overheads | \$2,291 | \$2,291 | \$2,291 | (\$11,668) |
| Total | \$29,657 | \$15,698 | \$15,698 | \$15,698 |
| % change in cost | | (68%) | (202%) | (609%) |

Source: PwC analysis

The FY2019 capital and operating cost reductions required for Options 2, 3 and 4 to achieve FY2019 average cost parity with Option 1 are significant and range between 48 per cent and 1310 per cent. It is unlikely that competition between providers, innovation or other factors would achieve efficiency benefits sufficient to offset the required costs reductions. This analysis suggests that Option 1, a sole towage provider, remains the least average cost towage configuration at the Port and should be considered at the expiry of the current Licence term.

Appendix D Aurecon future tug utilisation modelling

Memorandum

| | | | |
|---------|--|--------------------------------|---------------|
| To | [REDACTED] | From | [REDACTED] |
| Copy | [REDACTED] | Reference | 500442 |
| Date | 1 February 2018 | Pages (including this page) | 5 |
| Subject | Analysis of tug licencing options | | |

Aurecon has undertaken a comparative analysis of tug licencing options using the Port of Gladstone simulation model. The results provided below are preliminary and will be revised as additional simulation runs are completed for each scenario. However, key findings are not expected to change significantly with completion of additional scenario runs.

Tug Licencing Options

Four tug licencing options have been assessed as shown in Table 1. Tug allocations shown in the table indicate the number of tugs of each type allocated to each port user group for each licence.

Table 1 | Tug licencing options

| Tug Licencing Option | Port User Groups | Tug Allocation | | Licence |
|--|------------------|----------------|-----|----------------|
| | | 80t | 70t | |
| Option 1: Single exclusive licence | LNG | 5 | 6 | Single licence |
| | Other Users | | | |
| | Party A | | | |
| Option 2: Two exclusive licences LNG and Other Port Users | LNG | 5 | 4 | Licence 1 |
| | Other Users | | 6 | Licence 2 |
| | Party A | | | |
| Option 3: Three exclusive licences LNG, Party A and Other Port Users | LNG | 5 | 4 | Licence 1 |
| | Other Users | | 6 | Licence 2 |
| | Party A | | - | 4 |
| Option 4: Two exclusive licences Party A and Other Port Users | LNG | 5 | 6 | Licence 1 |
| | Other Users | | | |
| | Party A | | | 4 |



Ship Profile Assumptions

Each tug licencing options is evaluated with two different shipping profiles. Ship characteristics for each port user are based on recent historical shipping profiles from Jul 2014 to Jun 2017, increased consistent with FY24 forecast shipping numbers.

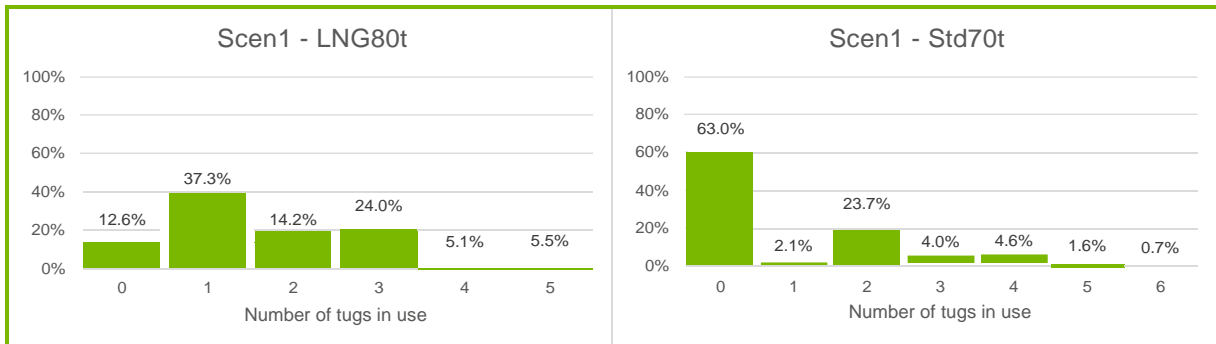


Figure 1 | FY24 shipping profile – Option 1 Results – Single exclusive licence

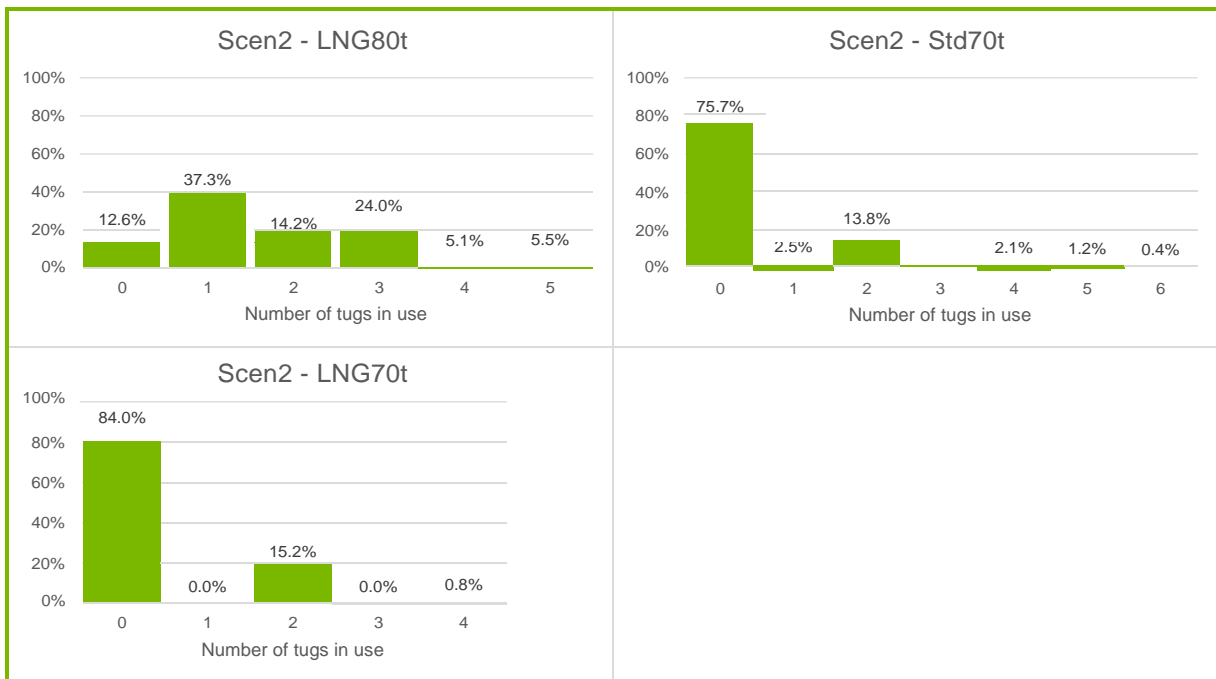


Figure 2 | FY24 shipping profile – Option 2 Results – Two exclusive licences: LNG and; other port users

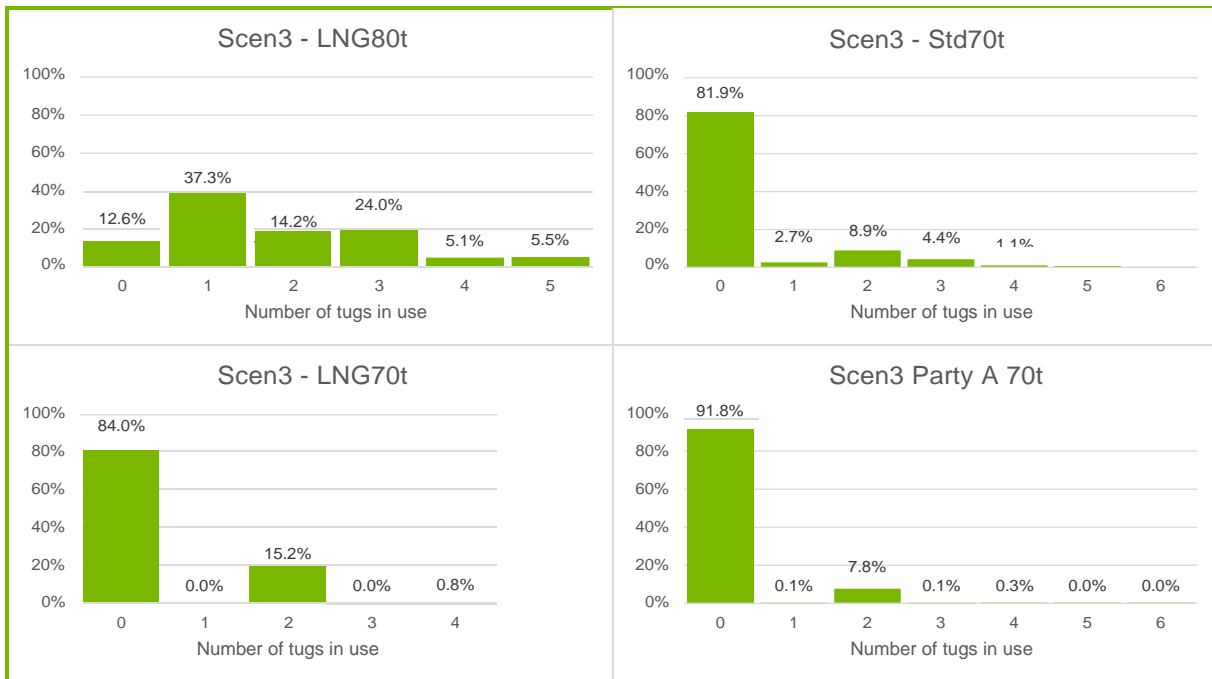


Figure 3 | FY24 shipping profile – Option 3 Results – Three exclusive licences: LNG Party A and; other port users

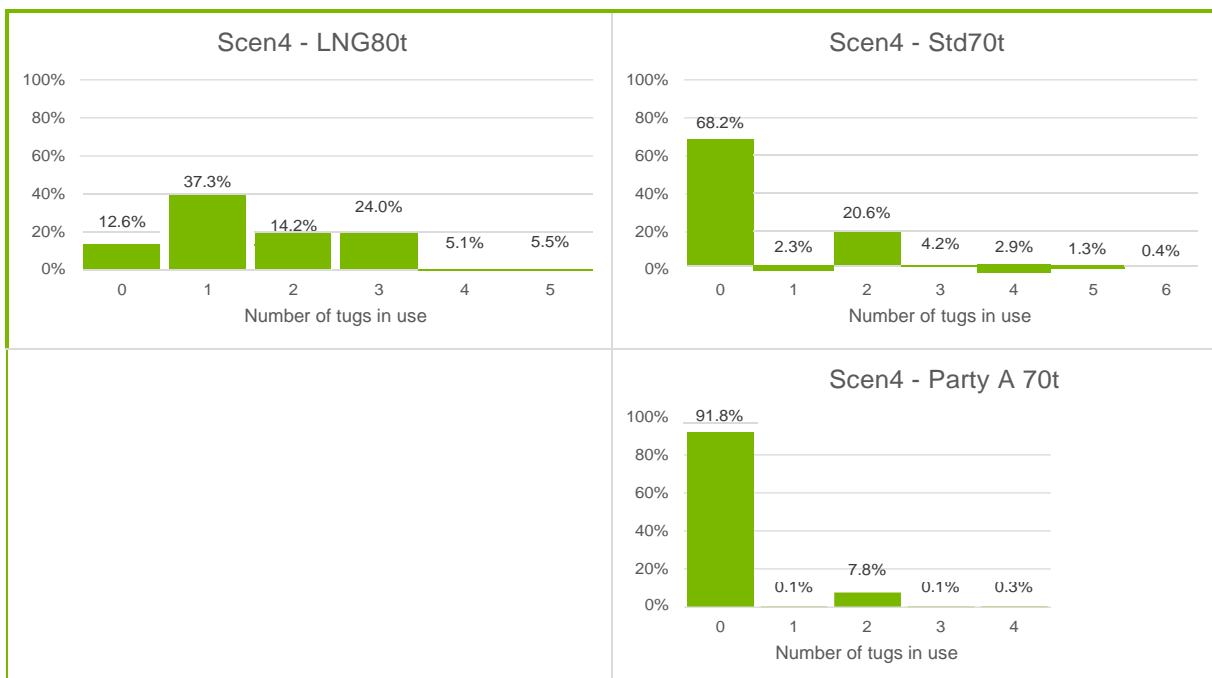


Figure 4 | FY24 shipping profile – Option 4 Results - Two exclusive licences: Party A and; Other Port Users

Average delays to ships waiting for towage for each tug licencing option, relative to delays for a tug fleet of an unrestricted size are shown in Table 3. Given that use of concurrent tug allocations for an unrestricted fleet size only occasionally exceed the number of tugs allocated for each licencing option, relative delays on a per-ship basis for restricted tug fleets are relatively small.

Table 3 | Average delay due to fleet size (total delay hours per year due to tug group)

| | | Licencing Option | | | |
|-----------|------------|------------------|--------|--------|--------|
| | | Scen 1 | Scen 2 | Scen 3 | Scen 4 |
| Tug Group | LNG80t | 6422 | 6422 | 6422 | 6422 |
| | LNG70t | - | 44 | 44 | - |
| | Party A70t | - | - | 56 | 56 |
| | Std70t | 1587 | 838 | 258 | 699 |

The total fleet productive time is calculated as the sum of time that each tug is used on a task in the simulation model. The total fleet productive time is dependent on the total number and type of shipping movements and is constant for a given shipping profile. The total time all tugs are not undertaking a task varies with the total number of tugs in service. The proportion of time all tugs are unproductive within each licencing option are shown in Table 4.

Table 4 | Total unproductive tug hours per day

| | | Licencing Option | | | |
|--------------------------------|--|------------------|--------|--------|--------|
| | | Scen 1 | Scen 2 | Scen 3 | Scen 4 |
| Total Fleet Size (#tugs) | | 11 | 15 | 19 | 15 |
| Total Fleet Time - tug.Hrs/day | | 264 | 360 | 456 | 360 |
| Productive - tug.Hrs/day | | 69 | 69 | 69 | 69 |
| Unproductive - tug.Hrs/day | | 195 | 291 | 387 | 291 |
| Unproductive - % | | 74% | 81% | 85% | 81% |

Appendix E Previous ACCC notifications by GPC

In 2009, GPC sought to renew the exclusive licence for harbour towage services at the Port. GPC proposed to establish an exclusive licence on the basis that a single provider was the most operationally and economically efficient configuration of towage service provision given the type and volume of vessel traffic at the Port. GPC was required to notify the ACCC of its intended third-line forcing conduct, which it did in 2009.

Following GPC's 2009 ACCC notification,⁴⁴ Rio Tinto (Rio) challenged GPC's proposed conduct. Rio⁴⁵ claimed that harbour towage charges, during the licence period between 2000 and 2010, were above reasonable market rates and that Rio had experienced unreasonable price increases during the exclusive licence term.

Rio further submitted that:

- the proposed length of the new exclusive licence was too long and prevented regular competitive tenders to ensure Port customers benefited from competitive rates, in particular, those rates charged by suppliers at other Australian ports, and
- there was insufficient engagement between GPC and Port customers in the awarding of the new licence, including whether GPC had considered issuing a non-exclusive licence to a single supplier and in respect of the tender design and review process.

In response to the submissions received by the ACCC, GPC engaged PwC to undertake scenario analysis to demonstrate the pricing outcomes under a single and two towage providers at the Port over the proposed licencing period. This analysis demonstrated that Port users would experience benefits in the form of lower costs and increased economic efficiency from a single towage provider.⁴⁶

GPC responded further by stating the proposed term of the licence was necessary to stimulate interest from prospective providers and to allow the providers sufficient time to recover their costs, and earn a legitimate return on their services at the Port. GPC submitted that the proposed five year licence term was likely to result in lower prices for the towage services than a shorter licence term.

In addition, and referring to analysis contained in the Productivity Commission's 2002 *Inquiry into Harbour Towage*, GPC submitted that the demand forecast over the incoming licencing period was insufficient to support more than one towage operator due to economies of scale and scope, and the implied barriers to entry within the towage market arising from indivisible or 'lumpy' investments required to provide minimum tug fleets.

⁴⁴ Australian Competition and Consumer Commission (2009) *Notification D09+12589*, available at: <http://registers.accc.gov.au/content/index.phtml/itemId/860220/fromItemId/859018/display/notification>

⁴⁵ Australian Competition and Consumer Commission (2009) *Submissions: Rio Tinto – 16.03.09*, available at: <http://registers.accc.gov.au/content/index.phtml/itemId/860220/fromItemId/859018/display/submission>

⁴⁶ Australian Competition and Consumer Commission (2009) *Notification D09+31784*, available at: <http://registers.accc.gov.au/content/index.phtml/itemId/860220/fromItemId/859018/display/submission>

In 2009, the ACCC considered the relative public benefits and detriments of the notified conduct. The ACCC determined that the likely counterfactual (i.e. the likely future *without* the proposed conduct) was that the Port would operate with a single towage provider without an exclusive licence. Against this counterfactual, the ACCC determined the conduct was likely to generate public benefits in the form of increased efficiency and cost savings which would outweigh any public detriments. In reaching this conclusion, the ACCC noted that:

- the conduct has the potential to increase competition by providing incentive for competitors to tender *for* the market
- the conduct is likely to limit the uncertainty that may restrict a competitor from seeking to operate at the Port
- GPC's proposed competitive tender process is likely to subject prospective providers to a higher degree of competitive pressure than if GPC undertook bilateral negotiations or if GPC were to allow a non-exclusive arrangement where a single provider would be constrained largely by the threat of entry
- it is unlikely that the conduct would result in higher towage charges, and
- the duration of the proposed licence (i.e. up to 8 years) is not an unreasonable time for the licence holder to seek to recover the investment involved in entering the Port.⁴⁷

In 2009, GPC ran a competitive tender process to award the Licence. GPC's Request for Tender (RFT) asked towage service providers to tender towage charges and total forecast costs against GPC's forecast of tug jobs. The RFT included the provision of towage services for ships carrying LNG at the Port, but defined only core principles for determining LNG towage rates. This was due to significant uncertainty at that time as to the timing and scope of the LNG towage requirements.

The tender was designed to be both specific and prescriptive, in order to eliminate suppliers that would not be capable of delivering the technical equipment or performance required and ensure that the operational requirements of Pilots and Harbour Master could be met. A prescriptive pricing framework was also developed to allow a consistent evaluation of financial proposals, to provide certainty in relation to the financial risk associated with entering the market and to ensure that competitive pressure generated by the tender could be 'locked in' for the duration of the licence. Pricing proposals submitted as part of the competitive tender process were evaluated by an independent consultant on a 'blind' basis (i.e. based on de-identified information). The primary objective of the price evaluation was to determine the proposal with the least-cost to port users under a range of scenarios.

⁴⁷ Australian Competition and Consumer Commission (2009) *Gladstone Ports Corporation Limited – Notification N93770 – ACCC Decisions, D09+42839*, available at: <http://registers.accc.gov.au/content/index.phtml/itemId/860220/fromItemId/859018/display/acccDecision>

As part of the tender process, all interested parties had access to sufficient information to assess the commercial risks and benefits of entering the Gladstone market under an exclusive licence arrangement. This information encompassed:

- pricing arrangements, including that tendered prices would be 'locked' for the period of the licence, subject to a defined adjustment framework (i.e. set cost escalation parameters and adjustments for revenue gains/losses due to volume volatility)
- the obligation to invest in new tugs at the direction of the Port
- the inclusion of future Liquefied Natural Gas (LNG) trade, including the opportunity to earn revenues from the LNG trade within the term of the licence and the obligation to invest in suitable tugs to service LNG vessels, and
- a range of other service, operational, safety and environmental requirements.

These various arrangements and requirements were clearly communicated during the tender process so as to allow parties to 'price' the relative risks and benefits into their tender submissions. As such, while the Economics Report correctly identifies that a guaranteed margin may indeed confer some commercial benefit on the towage provider, this was one of many benefits (and risks) for which parties competed on an equal basis and which generated strong interest amongst prospective towage providers.

GPC evaluated the responses based on a multi-criteria framework that considered various operational, economic and commercial factors, including the financial viability of tenderers, the tendered rates for harbour towage services, the tendered rate of return on future tug investments, and suitability of tugs tendered. Following this evaluation, GPC awarded the harbour towage licence to Smit. Smit proposed a schedule of differential rates based on vessel size (measured in GRT) for Standard Harbour towage services and a rate of return for any required expansion of the towage fleet to accommodate LNG vessels. The average charge for Standard Harbour towage services was \$3,211 per tug job, approximately 3 per cent lower than applied previously by Svitzer.

In 2011, Svitzer requested the ACCC review the exclusive licence arrangements at the Port, arguing that the Productivity Commission findings were outdated and no longer reflected market conditions in the Australian harbour towage sector.⁴⁸ Svitzer also requested a review on the grounds that GPC did not intend to run a competitive tender for the provision of towage services for ships carrying LNG at the Port.

In 2012, the ACCC again did not to revoke GPC's exclusive dealing conduct, finding that the Port did not have a sufficient level of demand for towage services to support more than one towage operator. Further, the ACCC concluded that the length of the licence was sufficiently long to allow Smit to recover an adequate return on its upfront investments. The ACCC noted that the competitive tender process would prevent higher prices or lower service quality.

In December 2014, LNG operations began exporting at the Port and were initially serviced by harbour tugs. In accordance with the Licence, Smit procured five LNG tugs to service the LNG trade, and the specifications for the LNG tugs were largely determined with industry, having regard to the minimum standards set by MSQ. In 2015, GPC exercised the optional three year extension to Smit's Licence to allow Smit further time to recoup part of the capital investment it had made, noting the otherwise very short time period over which Smit would be able to amortise once-off and sunk costs such as tug mobilisation.

⁴⁸ Australian Competition and Consumer Commission (2011) *Submissions Svitzer Australia Pty Ltd – 23.11.11 D12+2358464*, available at: <http://registers.accc.gov.au/content/index.php/html/itemId/860220/fromItemId/859018/display/submission>

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Attachment D

Declaration by notifying party

Authorised persons of the notifying party must complete the following declaration.

The undersigned declare that, to the best of their knowledge and belief, the information given in response to questions in this form is true, correct and complete, that complete copies of documents required by this form have been supplied, that all estimates are identified as such and are their best estimates of the underlying facts, and that all the opinions expressed are sincere.

The undersigned are aware of the provisions of sections 137.1 and 149.1 of the *Criminal Code* (Cth).



Signature of authorised person

CEO

Office held

PETER O'SULLIVAN

(Print) Name of authorised person

This 13th day of March 2018

Note: If the Notifying Party is a corporation, state the position occupied in the corporation by the person signing. If signed by a solicitor on behalf of the Notifying Party, this fact must be stated.