

Gladesville Bridge Marina

Alterations and additions to the Gladesville Bridge Marina Social Impact Assessment

October 2019

Executive summary

Gladesville Bridge Marina (GBM) is an existing marina located in Sydney Harbour west of Gladesville Bridge on Parramatta River. GBM currently provides storage for 99 boats and is proposing to provide 31 additional storage spaces. These 130 storage spaces would comprise 115 floating berths and 15 swing moorings.

This Social Impact Assessment (SIA) identifies and assesses the potential social benefits and impacts of the proposal construction and operation, and recommends mitigation measures to address the identified social impacts.

Policy context

GBM is part of the Sydney Harbour boating region. Boaters on the Harbour come from across Greater Sydney and from NSW more broadly. Based on a review of NSW Government policies, there is a reported shortage of on-water boating storage on Sydney Harbour, particularly for large boats. This shortage is affecting the growth of the recreational boating sector on the Harbour and in NSW more broadly.

Social baseline

GBM is located in the suburb of Drummoyne and the City of Canada Bay Local Government Area (LGA). The population of Drummoyne was 11,950 residents in 2016 and the median age was 40 years. Residents of Drummoyne predominantly speak English and generally earn higher incomes compared to the LGA average. Drummoyne comprises a greater proportion of loneperson households and more residents live in terraces, townhouses, flats units and apartments compared to the LGA. Key industries of employment for Drummoyne residents are construction, financial and insurance services, and professional, scientific and technical services.

Social and economic benefits of recreational boating

Research is beginning to demonstrate correlations between wellbeing and blue space such as ocean, lakes, rivers and other water bodies. Benefits associated with water-based leisure activities, such as recreational boating, can be social, cultural and economic:

- Social including physical and mental health, and community cohesion benefits gained through enjoyment of the water itself and participation in activities such as diving, swimming, recreational boating and fishing
- Cultural including connection to place through cultural heritage and cultural practices
- Economic including opportunities in livelihood for business such as fishing, aguaculture and marine tourism and recreation.

Potential social impacts during construction and operation

During construction, the potential social impacts include:

- Small increase in employment opportunities for skilled workers during construction .
- Potential for some local businesses to benefit from increased demand from construction • workforce
- Minor changes to usual views to the bay and Harbour from some residences, which may . affect values related to local character and sense of place

- Intermittent daytime noise for residents living on Drummoyne Avenue and Victoria Place, users of Howley Park and Cambridge Road Reserve, and nearby recreational boaters due to construction activities, which may disrupt their usual activities.
- Perceived safety risk could potentially deter some users from accessing waters adjacent to construction activities. However, it is expected most people would adapt to this change and continue to access other areas.

During operation, the key potential social impacts include:

- Increased provision of on-water storage spaces, which may contribute to increased access to recreational boating and waterways for boat users. This may facilitate health and wellbeing outcomes, and opportunities for social interaction
- Potential for increasing equitable access due to the conversion of moorings to berths, which are more accessible for people with limited mobility
- Improved access to the waterfront for passive recreational boats such as kayaks due to the construction of the gangway leading from the land to the berths near the entrance of the marina
- Improved navigation within the marina for GBM clients that may increase safety and provide more equitable access to waterways by catering to boaters of different skill levels who may not currently feel comfortable navigating in the marina
- Improved visual amenity of Howley Park following proposed landscaping improvements to be made by GBM
- Improved amenity for nearby residents following the decommissioning of the slipway
- Changes to amenity for residents and recreational users due to the extension to the existing marina structure.

Mitigation measures

Potential social impacts resulting from the proposal would generally be minimal and could be managed through mitigation measures identified in other technical studies and the EIS. In addition, this SIA recommends developing a construction communications plan and updating GBM's current operational procedures based on proposed alterations to the marina to manage social impacts. Engagement activities included in the construction communications plan and in the revised operational procedures should inform stakeholders of project activities, any changes to the navigation area and should provide a feedback mechanism for residents to contact the project team

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Glossary

Term	Definition
ABS	Australian Bureau of Statistics
Amenity and character	The noise, air quality, and visual amenity of the area provide for the enjoyment of residents and create a recognisable and distinctive character (Wood et al., 2008).
Community cohesion	Social or community cohesion generally refers to the complex set of social characteristics that contribute to how well society functions, including people's trust in their fellow community members, their sense of belonging in the community and their willingness to help each other (Reeve et al., 2016). While community cohesion is an outcome of the interaction of many social characteristics, the following facets have been considered in this social impact assessment:
	 The presence of social order (such as lack of crime and conflict) Feelings of safety and trust in the community Equitable economic and social development (such as lack of disparities in socio-economic conditions and appropriate services for those who are socio-economically disadvantaged) Social networks and social capital (such as social interactions within the community and civic engagement) (Forrest & Kearns, 2001).
Community values	Community values, or a sense of community, are generally accepted to be the social ties established within a community, in part based around the features and qualities of the built environment that encourage these social ties and contribute to quality of life and wellbeing (Maller & Nicholls, 2014; Paranagamage, Austin, Price, & Khandokar, 2010).
Connectivity	People have the ability to move through their community and access a range of places in and outside their community safely and conveniently (Paranagamage et al., 2010).
DPE	Former Department of Planning and Environment
EIS	Environmental Impact Statement
GBM	Gladesville Bridge Marina
SIA	Social Impact Assessment
Stakeholder	Person or group affected by or concerned with an issue.

1. Introduction

1.1 Background

Gladesville Bridge Marina (GBM) is located in Sydney Harbour on the Parramatta River just west of Gladesville Bridge. GBM has operated as a marina for over 50 years and currently provides boat storage on 44 swing moorings and 50 permanent floating berths (Gladesville Bridge Marina, 2019c).

GBM is proposing to remove 29 swing moorings and increase the marina structure from 50 to 115 permanent berth spaces to provide 31 additional on-water storage spaces. This would help address the undersupply of on-water storage spaces on Sydney Harbour, an issue that is particularly pronounced for larger vessels, and to enhance existing public open space along the Parramatta River foreshore.

As the proposed development constitutes a 'marina', with an intended capacity of more than 15 vessels having a length of 20 metres or more and an intended capacity of more than 80 vessels of any size, it is classified as 'Designated Development' under Schedule 3, Clause 23 of the *Environmental Planning and Assessment Regulation 2000* (EP&A Regulation).

GHD and other technical consultants have been engaged to prepare the technical reports that will form the Environmental Impact Statement (EIS), including this Social Impact Assessment (SIA). The EIS is being prepared by Ethos Urban.

1.2 Secretary's Environmental Assessment Requirements

GBM received the Secretary's Environmental Assessment Requirements (SEARs) for the preparation of an Environmental Impact Statement (EIS) that will accompany the Development Application (DA) to be lodged with Canada Bay Council under Part 4 of the *Environmental Planning and Assessment Act 1979* (EP&A Act), on 15 November 2011.

While the SEARs does not include a specific requirement for an SIA, this document has been prepared in line with leading practice and to support the strategic context requirements as per the SEARs.

1.3 Purpose and scope of this report

The purpose of this SIA is to consider potential social benefits and impacts of the proposed redevelopment of GBM on the local community and the wider Sydney region. The SIA provides:

- A description of the existing social environment of the social study area and the communities that may be affected by the proposal
- Identification of potential benefits and negative impacts of the proposal, along with the stakeholder groups who may be affected
- Strategies to avoid, manage or mitigate potential adverse impacts and maximise benefits to communities and stakeholders.

1.4 Scope and limitations

This report: has been prepared by GHD for Gladesville Bridge Marina and may only be used and relied on by Gladesville Bridge Marina for the purpose agreed between GHD and Gladesville Bridge Marina as set out in 1.3 of this report.

GHD otherwise disclaims responsibility to any person other than Gladesville Bridge Marina arising in connection with this report. GHD also excludes implied warranties and conditions, to the extent legally permissible.

The services undertaken by GHD in connection with preparing this report were limited to those specifically detailed in the report and are subject to the scope limitations set out in the report.

The opinions, conclusions and any recommendations in this report are based on conditions encountered and information reviewed at the date of preparation of the report. GHD has no responsibility or obligation to update this report to account for events or changes occurring subsequent to the date that the report was prepared.

The opinions, conclusions and any recommendations in this report are based on assumptions made by GHD described in this report. GHD disclaims liability arising from any of the assumptions being incorrect.

GHD has prepared this report on the basis of information provided by Gladesville Bridge Marina and others who provided information to GHD (including Government authorities), which GHD has not independently verified or checked beyond the agreed scope of work. GHD does not accept liability in connection with such unverified information, including errors and omissions in the report which were caused by errors or omissions in that information.

2. About the proposal

2.1 Site overview

GBM includes a water-based structure and a land-based building, which is located at 380 Victoria Place, Drummoyne within the Canada Bay Local Government Area (LGA). The site is located on the eastern foreshore of the Parramatta River, to the south of the Gladesville Bridge.

The site is approximately 19,740m² in area, comprising an approximate 1,740m² land-based component and an approximate 18,000m² of lease area, which accommodates the water-based component. The driveway to the marina is located on Crown land. An aerial photo of the site is shown at Figure 2-1.



Source: GHD / NearMaps

Figure 2-1 Aerial photograph of the site

2.2 Current services provided by GBM

GBM currently provides the following services:

- 50 floating berths with berth sizes ranging from 25' to 75.5' (7.6m to 23m)
- 44 swing moorings with no limit in length
- Total capacity for 99 boats
- Transport service for customers to and from marina pontoons to vessels on the swing moorings, available 7 days a week, with dinghies available for after-hours use
- Slipways which provide antifouling, boat surveys and painting. The slipway can accommodate vessels up to 60' (18m) length overall and 16' (5m) beam. Non-flybridge power vessels of up to 40' (13m) are able to be housed in our undercover slipway area for all weather painting and repairs
- Pump out facilities
- Food and beverage kiosk (currently machine based)

- Boat repairs
- Shipwright services
- Mechanical services
- Work berths
- New and used boat sales
- Charter operation (back-of-house).

2.3 Proposed development

The proposed development constitutes alterations and additions to the marina berth layout to provide overall storage for 130 vessels comprising 15 swing moorings and 115 floating berths. The works include:

- removal of 29 existing moorings and retention of 15 existing swing moorings;
- construction of 65 new floating berth spaces of varying sizes, that increases the number of floating berths from 50 to 115;
- cessation of slipway activities;
- demolition of the slipway rails and demolition of the internal office mezzanine structure within the covered slipway area; and
- provision of 8 new valet car parking spaces within the existing slipway area.

To further improve public access to the foreshore, GBM is investigating options to improve the eastern portion of Howley Park. As illustrated in Figure 2-1, the eastern portion of Howley Park is a parcel of underutilised passive open space located at the entrance of the marina driveway.



Figure 2-2 Eastern portion of Howley Park

As Howley Park and the driveway to the marina are located on Crown land, GBM is currently working with the NSW Department of Planning, Industry and Environment to develop a new layout for Howley Park. The aim of the new layout will be to enclose the rubbish bins, improve landscaping to enhance water views, and provide seating.

3. Methodology

The SIA methodology has been guided by leading practice in SIA including:

- NSW Department of Planning and Environment (DPE) Social impact assessment guideline for State significant mining, petroleum production and extractive industry development (2017)
- International Association for Impact Assessment's Social Impact Assessment: Guidance for assessing and managing the social impacts of projects (2015).

Social impacts are those experienced by people due to changes associated with a project (NSW Department of Planning and Environment, 2017). Social impacts can involve both positive and negative changes to people's:

- Way of life
- Community
- Access to and use of infrastructure, services and facilities
- Culture
- Health and wellbeing
- Surroundings
- Personal and property rights
- Decision-making systems
- Fears and aspirations.

3.1 Steps in undertaking this SIA

The SIA involved the following tasks, which are detailed in the sections below:

- Identification of the study area
- Scoping of issues
- Review of background information
- Preparing a social baseline study
- Stakeholder consultation
- Identification and description of social impacts
- Development of mitigation measures

3.1.1 Identification of study area

The social influences of the proposal will extend beyond the GBM development. To understand the potential social impacts, the study area includes:

- The GBM site
- Local social area of influence the suburb of Drummoyne where the site is located, and the City of Canada Bay LGA
- Regional social area of influence GBM services customers from a regional catchment, therefore Greater Sydney was determined as the area of regional social influence, with a focus on Sydney Harbour.

3.1.2 Scoping of issues

Before undertaking detailed research, a preliminary scoping of social issues was undertaken to develop an understanding of the issues that may need to be included as part of the study. This assisted in confirming the study area, identifying stakeholders to be consulted, and identifying key themes/issues related to the proposal.

3.1.3 Review of background information

A detailed review of the proposal description and various background documents was undertaken to determine the scope and extent of social impacts.

Other relevant information reviewed includes:

- NSW Government strategic plans
- City of Canada Bay's Your Future 2030: Community Strategic Plan
- Boating industry information

3.1.4 Preparing a social baseline study

The existing social characteristics of the communities in the study area have been described to understand the interaction of the local and regional communities with GBM. The social baseline includes:

- An overview of Sydney Harbour
- An overview of Canada Bay LGA
- A description of the area and features surrounding GBM
- The demographic profile of Drummoyne including: population, age profile; cultural diversity; dwelling and family characteristics; income, employment; need for assistance with core daily activities, and; means of transportation
- Community values including factors such as local amenity, character, access and connectivity, and community health and safety. These have been identified based on stakeholder consultation outcomes and a review of relevant consultation information
- The regional boating community in Sydney Harbour, including a description of recreational boating demand, storage provision by type, and benefits of recreational boating

3.1.5 Stakeholder consultation

In line with leading practice in SIA, stakeholder consultation was integrated into the SIA process to inform both the social baseline and impact assessment phases. Consultation activities included:

- Interviews with industry stakeholders: Seven phone and face-to-face interviews with maritime specialists from different backgrounds ranging from policy development through to legal, and peak body representatives. The purpose of these interviews was to gain a better understanding of the broader strategic context of the proposed GBM redevelopment, the role of recreational boating in the broader maritime sector, and potential local and regional social benefits and impacts related to the marina redevelopment
- Interviews with community members: Several local community members were invited to participate in an interview with the SIA team to inform the preparation of the SIA. Three face-to-face and phone interviews were held with local community members. The

purpose of the interviews was to gain an understanding of local issues related to the proposal, and potential ways to enhance benefits and mitigate impacts.

- Interview with Canada Bay Council: A phone interview was held with Council's social planning team. The purpose of the interview was to confirm the community profile, community values, potential social benefits and impacts of the proposal, and mitigation strategies.
- Community information session: Members of the SIA team attended a community information session held on 6 September 2019. This provided an opportunity for the SIA team to further understand community issues about the proposal.
- Review of the engagement outcomes: the *Gladesville Bridge Marina DA: Outcomes Report Phase 1* (GHD, 2019a) was reviewed to understand issues raised by community and stakeholders.
- Internal consultation: Ad hoc discussions with the GBM manager, the project team and the EIS team provided additional project information used in this SIA.

Outcomes from the consultation activities undertaken by the SIA team are referenced in this report as SIA consultation.

3.1.6 Identification and description of social impacts

The potential social issues arising from the construction and operation activities of the proposal were identified and assessed based on the scoping exercise, stakeholder consultations, and review of the following technical studies developed to support the EIS including:

- Visual Impact Assessment (Appendix W)
- Traffic and Transport Assessment (Appendix U)
- Navigation Report (Appendix F)
- Air Quality Assessment and Management Plan (Appendix P)
- Marina Strategic Review (Appendix E)
- Heritage Impact Assessment (Appendix Y)
- Noise and Vibration Impact Assessment (Appendix O)
- Lighting Assessment and Concept Plan (Appendix X)
- Construction Management Plan (Appendix R)

The identified social impacts were then grouped according to the categories shown in Table 3-1.

Table 3-1 Social impact categories

Social impact category	Considerations
Recreational boating	Contribution of the proposal to accessibility recreational boating in Greater Sydney.
Employment and economy	Employment and economic impacts include benefits generated by the proposal in the form of employment opportunities, supplying goods and services.
Amenity and way of life	Impacts to the amenity of an area may include changes to the noise levels or visual environment and local air quality as a result of the proposal. Changes to amenity can impact resident, worker and visitor way of life.

Social impact category	Considerations
Access and connectivity	Access and connectivity impacts refer to any changes to the connection of an area with its surroundings, the access to property, open space and the waterfront. It also refers to changes to the way that people move around the area and connect as a community.

The assessment of potential social impacts is based on the impact assessment criteria shown in Table 3-2.

Table 3-2 Impact assessment criteria

	Definition
Nature	Positive – Impacts that result in net benefits for the community.
	Negative – Impacts that result in detriments for the community or
	specific stakeholder groups.
	Neutral – A change that does not result in a positive or negative
	impact but allows continuation of the usual function.
Duration	Temporary – Up to six months
	Short term – Six months to one year
	Medium term – One year to five years
	Long term – Five years or more
Severity	Negligible - Marginal change from the baseline conditions so no
	discernible effect is expected and those affected would not notice the
	change
	Minor – A small but measurable change from the baseline conditions.
	Changes are expected to be temporary or short term and/or only affect
	a small number of people
	Medium – Noticeable and relatively substantial change from the
	baseline conditions. Changes may be short or long term and/or affect
	a small or large number of people
	Major – A change fundamentally altering the baseline conditions in the
	community and affecting a large number of people, and/or a moderate
	number of people over the long-term
Sensitivity	Negligible – No vulnerability of community and ability to absorb and
	adapt to change
	Low – Minimal vulnerability, with a high resilience to change and
	capability to adapt
	Moderate – A number of vulnerabilities, with some resilience to
	change and ability to adapt
	$\ensuremath{\text{High}}$ – Multiple vulnerabilities and / or very little capacity to absorb or
	adapt to change

3.1.7 Development of mitigation measures

Potential mitigation and management strategies have been identified to address the potential social impacts and enhance the social benefits of the proposal. These strategies have been identified based on the outcomes of the SIA and experience and knowledge of the SIA project team.

The development of social impact mitigation and management measures has considered the recommended mitigation measures identified in other EIS technical studies which contribute to mitigating potential social impacts identified in this report.

4. Policy context

This section provides a summary of policy and strategic documents relevant to this SIA.

4.1 NSW Government

Table 4-1 summarises the relevant NSW Government strategic documents.

Table 4-1 NSW Government strategic documents relevant to this SIA

Dooumont	Summoru
Document Eastern City	Summary
District Plan Greater Sydney Commission 2018	The Eastern City District Plan sets out the important role water plays for communities in this part of Sydney, and that future marina planning should consider the Plan's findings and recommendations. This includes protecting and improving the health and enjoyment of Sydney Harbour and the District's waterways.
	The Plan also highlights that as housing density around waterways increases and people increasingly turn to waterways for recreation, these assets will have to be carefully managed to promote equitable pedestrian and boat access to the coast and waterways.
Draft Greener Places Government Architect NSW 2017	This document is being developed by the Government Architect NSW to deliver a strategic approach to planning, design, delivery and management of green infrastructure in NSW. Components of green infrastructure not only include parks and gardens, but waterways as well. The draft strategy identifies the following social benefits delivered by green infrastructure which are relevant to this SIA:
	Encourages physical activity
	Improved mental health
	Creates and improves spaces for socialising, interaction and events
	Creates opportunities for community participating and volunteering
	Reduces stress
	 Improved quality of life and health and wellbeing
	Ease of access to social, recreation and sporting activities
	Improved liveability
	Increase social cohesion
	The upgrade of GBM may contribute to improved access to waterways and will involve some open space improvements, contributing to the above benefits.
Regional Boating Plan: Sydney Harbour Transport for NSW	The aim of the regional boating plan is to 'boost the experience of recreational boating' in Sydney Harbour, which is identified as one of the busiest waterways in the world. The plan highlights that Parramatta River, where GBM is located, is predominantly known for its recreational boating features.
2015	The Plan notes that there are few waterway access points on Sydney Harbour, and 'access to infrastructure facilities at most locations do not

Harbour, and 'access to infrastructure facilities at most locations do not

Document	Summary
	meet demand during peak periods and generally have insufficient parking facilities.'
	Relevant recommendations to this SIA include working with councils and other partners on options to improve the capacity, condition and amenity of existing access facilities in the region.
	The Plan also notes that, while an increase in storage spaces for recreational boating is required across the harbour, this should not be at the expense of community-based groups' and sporting clubs' access to waterways.
Sydney Harbour Boat Storage Strategy	This Strategy identifies that there has been a weaker growth rate of recreational boat registrations in Sydney Harbour compared to NSW more broadly. This is predominantly a result of insufficient on-water storage.
Transport for NSW 2013	The Strategy identifies insufficient on-water storage on the Harbour and projects that the demand for storage on the Harbour will increase by 5,000 vessels between 2013 and 2021. It is estimated that commercial marinas – including GBM – could contribute between 600 and 800 berths and 300 moorings. Further, moorings should be converted to berths to achieve this.
	As a commercial marina that has capacity to expand its services, GBM could contribute towards addressing the need for on-water storage spaces identified in this Strategy and improving the accessibility of recreational boating on the Harbour.
	The Strategy states that the current minimum requirements for parking adjacent to marinas are outdated and contribute to restricting marina growth. The document reports that minimum requirements should be revised to account for the increased availability of alternate parking and transport options. A more flexible approach to parking requirements should therefore be considered in the upgrade of GBM.
Sydney Regional Environmental Plan (Sydney	The Sydney Regional Environmental Plan (Sydney Harbour Catchment) (REP) is a legislative document that establishes a set of planning principles and identifies nine different waterway zones for the region.
Harbour Catchment) NSW Department of Planning and Environment	GBM is located in zone W1 – Maritime Waters and should acknowledge the three objectives associated with this zone. One of these objectives relevant to this SIA is 'to promote equitable use of the waterway, including use by passive recreation craft'.
2005	Aims of the REP that are relevant to this SIA include:
	 To ensure accessibility to and along Sydney Harbour and its foreshores.
	The REP has a strong emphasis on maintaining and enhancing the Harbour as a public asset that should be protected for the public good, which has precedence over the private good. This includes increasing and improving access to and from waterways for public recreational purposes, such as swimming, fishing and boating.
Sydney Harbour Foreshores	This Development Control Plan (DCP) supports the Sydney Regional Environmental Plan (REP) summarised above. The DCP includes 'criteria

Document	Summary
and Waterways Area Development	and guidelines relating to matters such as foreshore access, visual and natural environments, recreation and maritime industrial uses.'
Control Plan NSW	Planning principles for the foreshores and waterways area relevant to this SIA are:
Department of Planning and Environment 2005	 Public access to and along the foreshore should be increased, maintained and improved, while minimising its impact on watercourses, wetlands, riparian lands and remnant vegetation.
	• Development along the foreshore and waterways should maintain, protect and enhance the unique visual qualities of Sydney Harbour and its islands and foreshores.
	• Public access along foreshore land should be provided on land used for industrial or commercial maritime purposes where such access does not interfere with the use of the land for those purposes.
	In line with these principles, developments, particularly along Parramatta River where GBM is located, should amongst other things:
	 Minimise any significant impact on views from and to public spaces, landmarks, heritage items
	Maintain views of natural features
	Enhance the recreational focus of the foreshore
	 Maintain, enhance and promote public access to waterways and foreshores, with foreshore links joining public open spaces or access points being most desirable

• Not interfere with navigation, swimming or other recreational activities.

4.2 City of Canada Bay

Table 4-2 summarises relevant City of Canada Bay strategic documents.

Table 4-2 City of Canada Bay strategic documents relevant to this SIA

Document	Summary
Your Future 2030: Community Strategic Plan	The City of Canada Bay community strategic plan (CSP) reflects a community's needs, priorities and aspirations, which should be considered by developments in the LGA.
City of Canada Bay 2018	A recurring theme raised in the CSP community consultation was access to quality open space, recreation facilities and water, specifically the foreshores of Parramatta River where GBM is located. The community identified areas such as Parramatta River foreshores as being integral to the local identity, and critical to physical and mental health and wellbeing.
	GBM contributes to public access to Parramatta foreshores in this area as the only property between Howley Park East and Gladesville Bridge with non-exclusive access to land-water interface. The CSP identifies that access to water can be improved through provision of marine structures for recreational activities.

Document	Summary
Section 7.11 Development Contributions Plan	This Development Contributions Plan (DCP) applies to all development types in the majority of the Canada Bay LGA, including Drummoyne where GBM is located.
City of Canada Bay 2017	The DCP highlights the need to improve the quality of existing open space and recreation facilities across the LGA. High priority facilities include passive open space, foreshore environmental works associated with pathways, and access for water based recreation. The proposed upgrade of Howley Park East as part of the proposed GBM redevelopment would align with this objective.

5. Social baseline

This section presents an overview of the existing social environment of the study area. It provides on overview of the Sydney Harbour boating region, followed by a demographic analysis of Canada Bay LGA and Drummoyne suburb. It also provides an understanding of recreational boating in Sydney.

5.1 Overview of the Sydney Harbour boating region

GBM is part of the Sydney Harbour boating region, which includes Sydney Harbour and its tributaries (Transport for NSW, 2015). Sydney Harbour is a working harbour and supports a range of recreational boating activities, commercial vessels, cruise ships as well as commuter ferries. According to the *Regional Boating Plan: Sydney Harbour* (Transport for NSW, 2015), Sydney Harbour is divided into five areas:

- Outer Harbour
- North Harbour
- Middle Harbour
- Lane Cove River and Parramatta River (where GBM is located)
- Inner Harbour.

Sydney Harbour spans 13 LGAs, including Canada Bay LGA where GBM is located (Transport for NSW, 2015).

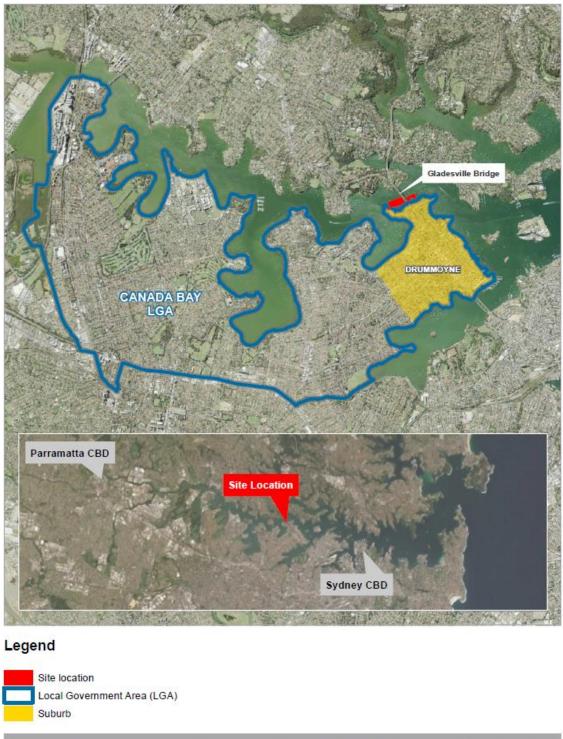
Located in the western portion of the Harbour, Canada Bay LGA is bordered by:

- Parramatta River to the north and east
- Inner West LGA, Burwood LGA and Strathfield LGA to the south
- Parramatta LGA to the west (Profile.id, 2019a).

Canada Bay and Hunters Hill LGAs are illustrated in Figure 5-1 in relation to GBM.

According to the *Eastern City District Plan*, the region plays an integral role in creating a sense of place, providing recreational opportunities, and supporting economic and cultural activities (Greater Sydney Commission, 2018).

Sydney Harbour attracts a number of domestic and international visitors every year and contributes towards generating significant opportunities for employment and industry as a place that distributes business resources and freight across Greater Sydney, regional NSW and all other states (Greater Sydney Commission, 2018).



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FIGURE 5-1	AREA OF SOCIAL INFLUENCE	Map Projection: Trensverse Mercetor Horizontal Detur: COA 1994 Gnid: GDA 1994 MG4 Zone 56

Figure 5-1 Overview of region

5.2 Canada Bay LGA demographic profile

The population of the Canada Bay LGA in 2016 was 88,015 persons. This represented a 16.2% increase since 2011. In line with overall trends for Sydney, the LGA population is expected to continue to experience significant growth, increasing by 36.2% to 119,858 persons by 2036 (Forecast.id, 2019a).

Approximately 24% of the Canada Bay LGA population was born in a country where English was not the main language, and approximately 40% of the population speak a language other than English at home.

The LGA population is generally comparable to the Greater Sydney population, with the same median age of 36 years. Over 70% of households are family households, with a median household size of 2.6 persons, which is consistent with Greater Sydney (2.8 persons). Overall, households earn higher incomes in Canada Bay compared to the average for Greater Sydney (\$2061 per week compared to \$1,750 respectively).

Canada Bay residents are more likely to live in flats, units and apartments (46%) compared to Greater Sydney (25%).

5.3 **Profile of Drummoyne**

5.3.1 Description of place

The suburb of Drummoyne is located approximately six kilometres north-west of the Sydney Central Business District and is bordered by Parramatta River to the north, east and south, and by Janet Street and Byrne Avenue to the west (Profile.id, 2019c). As described in section 2.1, GBM is located in the northern part of Drummoyne, on the southern side of Gladesville Bridge.

Drummoyne is located on the traditional lands of the Wangal (also Wanngal) people of the Eora Nation. The Parramatta River was important to the Wangal people who used it to hunt for fish, shellfish, mud oysters, ducks and other birds (NBRSArchitecture, 2019).

Drummoyne is predominantly a residential suburb. It is also the location of City of Canada Bay's administrative offices, and commercial uses predominantly located along Victoria Road. Victoria Road is a main road which bisects the suburb and connects to Sydney CBD in the east, and Parramatta in the west. There are two ferry wharves located in Drummoyne which connect the suburb to the east, north and west.

The nearest shops and food options to GBM are located a 15 to 20 minute walk or 5 minute drive on Victoria Road. These include a range of take away and dine in cafes and food outlets (e.g.Drummyone Hot Wok Chinese Restaurant, Bowan Island, the Oxford Hotel, IGA, Sushi Bar Sazuki and McDonald's Drummoyne).

Significant features of Drummoyne include:

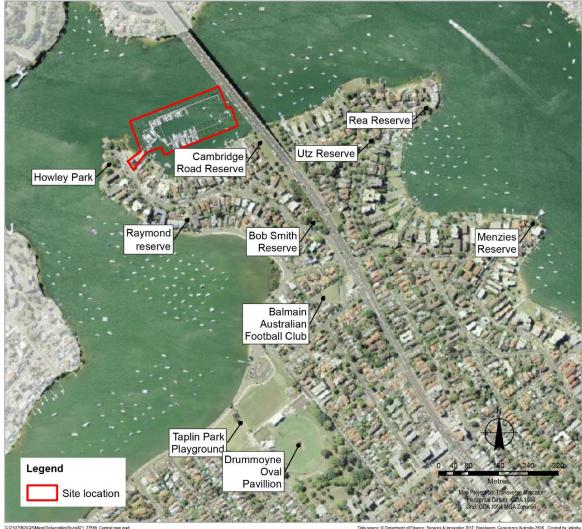
- A portion of the Bay Run track along the harbour
- Birkenhead Point shopping centre and Drummoyne Sailing Club
- Five Dock Boat Ramp
- Drummoyne Oval and other playing fields
- Gladesville Bridge
- GBM.

There are several public open spaces located in close proximity to GBM:

Cambridge Road Reserve at the base of Gladesville Bridge

- Raymond Reserve located to the south of GBM
- Howley Park located to the west of GBM (section 2.3).

There are around 15 private jetties, mooring piles and boatsheds located between GBM and Gladesville Bridge which belong to residents along the waterfront.



G121/27962/GIS/Maps/Deliverables/Social/21_27558_Context map Print date: 02 Sep 2019 - 12:42 source: © Department of Finance, Services & Innovation 2017; Baselayers: Geoscience Australia 250K. Created by: jglast

Figure 5-2 Context map

5.3.2 Drummoyne demographic profile

This section provides a summary of key demographic characteristics for Drummoyne suburb, compared to Canada Bay LGA. Appendix A provides the full list of demographic indicators.

Population and age

The population of Drummoyne in 2016 was 11,950 persons, which was in increase of around 5% since 2011. The population is expected to increase to 13,655 persons or 14.3% by 2036 (Forecast.id, 2019b).

The median of Drummoyne was 40 years in 2016, compared to 36 years for the LGA. As shown in Figure 5-3, there are less young adults aged 18 to 34 years, and 25 to 34 years, and more adults in older age cohorts.

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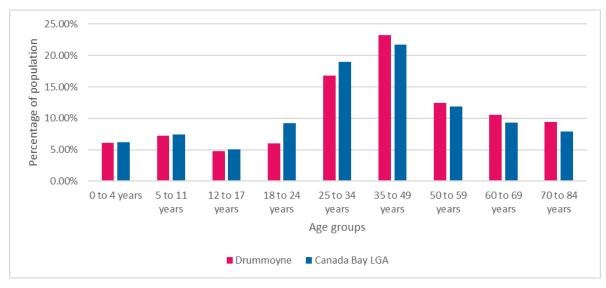


Figure 5-3 Age profile

The proportion of Drummoyne residents who need assistance is slightly higher than the Canada Bay LGA proportion (4.24% and 4.18% respectively).

Cultural and linguistic diversity

There is a significantly lower proportion of the population born in a country where English is not the main language spoken in Drummoyne (19.3%) compared to the LGA (34.9%). The proportion of the population who speak a language other than English at home is also lower than the LGA (21.2% and 40.9% respectively).

Household and family characteristics

There are less family households in Drummoyne (65.3%) compared to Canada Bay LGA (71.6%), and more lone person households (27.9% compared to 22%).

Of the family households, the proportion of couples without children is slightly higher (43.7% compared to 39.8%).

Overall, there are low rates of residential mobility, which is comparable with the LGA. The proportion of the population who lived at the same address five years prior to the Census was 46.9% (compared to 45.4%).

Dwellings and tenure type

Compared to the LGA, Drummoyne has more high and medium density dwellings. In 2016 the proportion of flats, units or apartments was 50% compared to 46.8% for the LGA, and the proportion of semi-detached, terrace house or townhouses was 10.2% compared to 8.6% for the LGA.

The proportion of residents who own their dwelling (either with or without a mortgage) was similar to that of the LGA (59.8% compared to 60.2%), while the proportion of the population who rent was the same in both Drummoyne and the LGA (37.1%).

Household income and labour force participation

Drummoyne has a higher median weekly household income than Canada Bay LGA (\$2,353 and \$2,061 respectively). This is partially due to the higher proportion of households who earn \$2,500 and over per week in Drummoyne (41.6%) compared to the LGA (35.5%). A slightly lower proportion of the Drummoyne population is unemployed (3.6%) or not in the labour force (26.5%) compared to Canada Bay LGA (5.0% and 30.2%)

Key industries of employment are construction (10.7%); financial and insurance services (10.0%); and professional, scientific and technical services (14.4%).

Transport and journey to work

A greater proportion of the population of Drummoyne travels to work by bus (22.3%) or ferry (4.1%) compared to the LGA (8.8% and 2.7%). As there is no train station in or near Drummoyne, the proportion of the population who travel to work by train is considerably lower in Drummoyne compared to the LGA (4.0% compared to 17.6%). The proportion of the population who travel to work by car (as driver or passenger) is comparable to the LGA (51.0% compared to 53.4%).

5.3.3 Community values

Community values, or a sense of community, are the social ties established within a community, in part based around the features and qualities of the built environment that encourage these social ties and contribute to quality of life and wellbeing (Maller & Nicholls, 2014; Paranagamage, Austin, Price, & Khandokar, 2010). A project may impact on these aspects of a community for example through changes in noise and air quality, visual amenity, traffic and access, barriers to movement across the community, and use and enjoyment of community spaces.

This section has been informed by a review of the Canada Bay's *Your Future 2030: Community Strategic Plan* (City of Canada Bay, 2018), the Draft *Local Strategic Planning Statement* (City of Canada Bay, 2019a), and stakeholder consultation undertaken by the SIA team.

Amenity and way of life

Residents of Canada Bay LGA value and have a strong sense of pride in the local character and village feel of the area (City of Canada Bay, 2018). Drummoyne in particular is seen as a busy, friendly, noisy and convenient part of the LGA (City of Canada Bay, 2019b).

Canada Bay LGA is characterised by a high provision of open space that is highly valued by the community, particularly open spaces located along bodies of water (City of Canada Bay). According to SIA consultation, residents with dwellings along the waterfront highly value their views to the Parramatta River. Communities value the Parramatta River foreshore areas as integral to the local identity and critical to mental and physical health and wellbeing of residents (City of Canada Bay, 2018).

According to the City of Canada Bay's community strategic plan, green spaces, local parks and opportunities to be near the water are what community members most value about the LGA (City of Canada Bay, 2018). Despite population growth across the LGA, there has not been a significant increase in open space provision recently which places pressure on existing open space (City of Canada Bay, 2017).

Access and connectivity

As community members place a high value on bodies of water and open space along foreshores, they are also supportive of improved access and connections to Parramatta River (City of Canada Bay, 2019a).

Canada Bay communities place high importance on cycling and walkability and would like to see improved cycle lanes and footpaths (City of Canada Bay, 2018 and 2019a). Despite this,

parking is an important issue across the LGA including increasing provision of parking spaces, particularly in and around local centres (City of Canada Bay, 2019b).

Canada Bay residents also value on-water access and connectivity. Waters around GBM are a popular destination for different types of recreational boating, for both large and small vessels and kayaks (GHD, 2019a). Residents and recreation boaters in the area seek to maintain open channels for safe navigation (GHD, 2019a).

Environment

Protecting and improving the health and enjoyment of the Parramatta River catchment and waterways is a priority for the Canada Bay communities (City of Canada Bay, 2019a).

Community concern for the environment also extends beyond waterways to overall environmental and ecological values (City of Canada Bay, 2019a). Residents are interested in strive to continue focusing on sustainability through a range of means, namely by maintaining green open spaces, protecting natural environments, encouraging walking and cycling to reduce car use, and minimising pollution (noise air water and litter) (City of Canada Bay, 2018).

5.4 Recreational boating in Sydney Harbour

This section provides and overview of recreational boating demand, storage supply on Sydney Harbour. It also provides an overview of the social and economic benefits of recreational boating. Information is based on the Strategic Review (NineSquared, 2019) prepared for the EIS and other documentation, including from Transport for NSW.

Sydney Harbour and its tributaries are popular for a wide range of recreational boating activities, including rowing, kayaking, canoeing and dragon boat racing (Transport for NSW, 2015). According to the *Regional Boating Plan: Sydney Harbour* (Transport for NSW, 2015), one million people use boats as a form of recreation on Sydney Harbour. Figure 5-4 presents key statistics for boating in Sydney.

Sydney Harbour

52,000 boat license holders

9.6% of all license holders in NSW

20,000 registered recreational vessels8% of all registered vessels in NSW

(Transport for NSW, 2015)

Figure 5-4 Boating on Sydney Harbour

According to SIA consultation, accurately projecting the demand for boat storage in one specific region is challenging because boaters travel to Sydney Harbour from across the Greater Sydney region and NSW. Further, boat owners may not store their boats in waterways nearest to their residence (Transport for NSW, 2013). The demand for boat storage in Sydney Harbour is therefore be based on NSW-wide trends and considers other major waterways in and around Greater Sydney to which boat owners have access, such as Georges River, Botany Bay, Pittwater and Hawkesbury (Transport for NSW, 2013).

There has been a steady increase in the number of recreational vessel registrations over the past decades across NSW (Transport for NSW, 2013). In 2010, the NSW Maritime Management Centre found that the recreational boating sector across NSW has been growing steadily since 2003 at a rate of 2.9% per year (as cited in NineSquared, 2019). However, there has not been a proportional increase in the provision of storage spaces (Transport for NSW, 2013).

Based on the Club Marine 2017 Health of the Australian Marina Survey, NSW had the lowest average number of storage spaces per marina, and the highest average marina occupancy rate compared to other states (as cited in Marina Industries Association, 2019). According to the *Marina Berth Demand Study*, specifically in the western portion of Sydney Harbour where GBM is located, the occupancy rate of marina berths at commercial boatshed facilities is of 93% (Australian Marina Management Pty Ltd, 2019). The loss of Woodleys Marina in Berrys Bay and River Quays Marina on Parrmatta River at Mortlake has further increased the demand for marina berths in the western portion of the harbour (Australian Marina Management Pty Ltd, 2019).

Sydney Harbour records the weakest vessel growth rate of all major NSW waterways (Transport for NSW, 2013). Indeed, there has been a small but consistent decline in the ratio of boat ownership per 100 licenses compared to the NSW growth according to the *Marina Berth Demand Study* (Australian Marina Management Pty Ltd, 2019). The undersupply of storage spaces for recreational boats is the main cause for this limited growth and long waiting lists for on-water storage (NineSquared, 2019).

According to the *Sydney Harbour Boat Storage Strategy* (Transport for NSW, 2013), although recreational boat registrations have been rising across NSW, the growth rate in Sydney Harbour has been lower than the state average due to the lack of on-water storage capacity and the limited space to store trailer boats.

According to the *Strategic Review: Gladesville Bridge Marina Expansion*, moorings in Sydney have been in high demand for a number of years with waiting lists across the Harbour totalling approximately 688 applicants in 2019 (NineSquared, 2019).

According to the *Marina Berth Demand Study*, the NSW ownership of vessels 10 metres in length and longer grew by 15.08% over 10 years between 2009 and 2019 (Australian Marina Management Pty Ltd, 2019). As there has been an increase in the size of recreational vessels across NSW – and particularly on the Harbour – storage issues are more pronounced for larger vessels (over six metres in length) (Transport for NSW, 2013). According to the *Strategic Review: Gladesville Bridge Marina Expansion*, the average size of storage spaces is not consistent with the average size of recreational vessels, and vessels larger than 10 metres generally struggle to be allocated a mooring due to area requirements (NineSquared, 2019).

Based on the *Sydney Harbour Boat Storage Strategy* (Transport for NSW, 2013), it is expected that the number of vessels in Sydney Harbour will increase by 5,000 between 2013 and 2021. However, as discussed in *Strategic Review: Gladesville Bridge Marina Expansion*, market growth is likely to be limited if it is not matched with an increase in boat storage options to support private boat ownership (NineSquared, 2019).

It is understood from SIA consultation there are no potential greenfield sites around Sydney Harbour to construct new marinas. Therefore to increase supply of boat storage, existing marinas will need to expand.

5.4.1 Socio-economic benefits of recreational boating

The socio-economic benefits of interactions with nature and green space are well documented, with research identifying benefits including physical and mental health, wellbeing, productivity and community cohesion. Both government and non–government sectors are increasingly considering the potential socio-economic benefits of green space in their policy and planning frameworks (Shanahan, Astell-Burt, Barber, et al., 2019). In addition, an emerging body of research is making the same correlations between human wellbeing and what is being termed 'blue space', which includes the ocean, lakes, rivers and other water bodies (Bell et al, 2017; Caddick et al, 2014; Foley, 2019; Völker, Kistemann, 2011).

A 2018 survey of over 1,700 participants across NSW was undertaken in a study to identify and categorise the benefits that communities gain from the NSW marine estate (Gollan, Michelle, Jordan & Barclay, 2018). The survey identified benefits that are categorised into the following themes:

- **Social** including physical and mental health, and community cohesion benefits gained through enjoyment of the water itself and participation in activities such as diving, swimming, recreational boating and fishing
- **Cultural** including connection to place through cultural heritage and practices including Aboriginal cultural use
- **Economic** including opportunities in livelihood for business such as fishing, aquaculture and marine tourism and recreation.

The study identified overall wellbeing benefits resulting from enjoyment and participation in a number of water-based leisure activities. Foley, Kearns, Kistemann & Wheeler (2019) suggest that the social benefits of engaging in nature, specifically 'blue-space', are likely enhanced when engaging in 'blue-space' for the purpose of leisure. Other social benefits associated with sport and recreation more broadly include improvements in social cohesion, positive influences on numeracy and literacy in young people, and reductions in antisocial behaviour (RYA, 2014). Recreational boating is a form of water-based leisure activity that can be accessed by a diverse group of people because it ranges from 'easy to extreme, low to high impact, individual to team pursuits, casual to committed participation, modest to sophisticated equipment usage, and from relatively inexpensive to expensive setup and participation costs' (Jennings, 2007).

Several studies have identified various benefits are associated with recreational boating (Thomas & Vogelsong, 2004; Gray et al., 2010; Vanderkooi Consulting, 2015). These include:

- Mental health benefits and relaxation
- Improved physical health as a result of higher cardio-vascular activities, such as racing and kayaking
- Stronger social capital as a result of socialising with family and friends
- Increased access to marine spaces and some natural places that can only be accessed via boat. Experiencing nature has also been identified in one study as the strongest motivating factor for participation in recreational boating.

SIA consultation also indicated that recreational boating provided increased access to associated recreational activities such as fishing, water-skiing and swimming.

Industry stakeholders also identified during SIA consultations several benefits associated with commercial marinas, such as providing public access to Sydney Harbour. Public access to Sydney Harbour is growing increasingly scarce given the high number of domestic berths and private marinas which are not publicly accessible, particularly as foreshores are increasingly being developed for private residential use (Transport for NSW, 2013; Greater Sydney Commissions, 2018).

According to a survey conducted by the Marina Industries Association in 2015 which had 137 marinas across Australia respond, most Australian marinas offer social and recreational benefits to the broader community. Key findings include:

- 51.1% of survey respondents held structured social and/or recreational programs or events that were available to the general public
- 58.4% provided support to the community in the form of cash or in-kind support
- 84.7% allowed the general public to access the marina

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• 29.2% had a boat launch facility that was available to the general public.

In 2019, the NSW recreational boating sector directly generated \$2 billion in revenue and employed 7,000 people (Transport for NSW, 2019). According to a 2015 report providing background information on social and economic benefits of the marine estate, recreational boating also generates indirect revenue related to travel and tourism spending (Vanderkooi Consulting, 2015). According to the same study, the recreational boating sector supports an industry that extends beyond construction and storage of boats to include maintenance and repair of boats (Vanderkooi Consulting, 2015; RYA, 2014).

According to SIA consultation, some marinas also contribute to local economic opportunities by encouraging other businesses to co-locate, such as retail outlets, cafes and restaurants. Further, the boating industry and marinas themselves can also bolster local economies by becoming destinations that attract visitors who then visit and potentially increase spending at nearby businesses (AEC Group, 2008; Vanderkooi Consulting, 2015). The Destination Marinas program is an RMS initiative in which participating Sydney Harbour marinas can allow non-client boaters to use their amenities and facilities (Roads and Maritime Services, 2019). GBM is one of the 19 participating marinas in the Destination Marinas program (NineSquared, 2019).

6. Social impact assessment

This section describes the potential social benefits and issues that may arise from the construction and operation of the proposed redevelopment of GBM. Social impact categories and impact assessment criteria are described in section 3.1.6. A summary of the assessment is presented in Table 6-1 and Table 6-2.

6.1 Construction

6.1.1 Recreational boating

Access to existing moorings and berths at the marina would be maintained during construction. As a result, impacts to recreational boaters are not be expected during to occur during construction.

6.1.2 Employment and economy

Potential employment opportunities

It is anticipated that construction works may generate a small number of employment opportunities for skilled workers in the construction industry. As discussed in section 5.3.1, construction and professional, scientific and technical services are key industries of employment in Drummoyne. There is some potential for local residents to be employed on the project, depending on the businesses contracted to undertake the works.

Potential benefits to local businesses

During the construction period of approximately six to twelve months, construction workers may access local businesses described in section 5.3.1 for food and other goods and services. Increased expenditure from construction workers would be a minor benefit to local business owners.

6.1.3 Amenity and way of life

Visual amenity

As discussed in section 5.3.3, Drummoyne foreshore residents value their view to the bay and Harbour (Gladesville Bridge Marina, 2019a). Some residents living along the foreshore on Victoria Place and Drummoyne Avenue could have direct views of construction activities, such as construction equipment on barges to the west of Gladesville Bridge, as described Construction Management Plan (Appendix R). These visual changes may temporarily affect residents' views. However, changes to views would not be expected to alter residents' way of life and would be a minor social impact.

As discussed in section 5.3.1, residents of Drummoyne and Canada Bay LGA have a strong sense of pride in the character of their area, and a strong attachment to the Parramatta River foreshore areas (City of Canada Bay, 2018). The Gladesville Bridge Marina site is in the vicinity of a number of heritage items contributing to the character of the area including a number of residential properties along the foreshore, Federation House boatshed, the current Gladesville Bridge and the former Gladesville Bridge sandstone abutments at the south banks of the Parramatta River on the site of Howley Park. The Heritage Impact Assessment indicates the construction of the proposed development will not undermine or otherwise cause physical damage to the identified heritage items, as the proposed development is physically separated, therefore impacts would be limited to views and settings to and from these items

Avenue to experience changed views of Parramatta River and nearby heritage items. This could affect their sense of pride in the local area, and some visitor's enjoyment of views. As discussed above, these visual changes and views of construction activities would be temporary and therefore have a minor social impact.

As discussed in the Heritage Impact Assessment, while it is recognised there may be historical connections to the area and Parramatta River, an Aboriginal Heritage Information Management System (AHIMS) search confirms no Aboriginal sites or places are recorded or have been declared within 200 metres of the site. In addition, no land based excavation is proposed, and works within the Harbour are limited to piling, therefore the likelihood of encountering any Aboriginal relics is low. Therefore, no social impact is anticipated.

Noise and vibration

The main sources of noise during the construction phase of the proposal are expected to be caused by pile-driving of new piers on the water to the east of the marina building, demolition of the slipway (Pulse Acoustic Consultancy, 2019). It is noted that noise modelling used in the Noise and Vibration Report are for worst-case scenarios. Construction noise is expected to occur intermittently during daytime hours.

Noise from construction works could affect the following sensitive receptors:

- Residents at 50 Drummoyne Avenue due to works in the eastern part of the site
- Residents at 376 Victoria Place due to works immediately around the marina building
- Some residents located along Drummoyne Avenue, particularly those on the foreshore
- Some residents along Victoria Place
- Users of Howley Park and Cambridge Road Reserve described in section 5.3.1
- Potential kayakers and canoers described in section 5.3.3.

Residents living to the east of the marina building and residents living along the foreshore opposite works occurring on the marine structure would experience the highest noise increases. According to the Noise and Vibration Report, road traffic is not expected to generate noticeable noise due to the small number of vehicle movements. Additional information on noise and vibration can be found in the Noise and Vibration Report (Appendix O of the EIS).

While the above residents may be affected by general construction noise, the Noise and Vibration Report states that noise levels would comply with noise criteria. While individuals' perception of noise changes would vary, increased noise has the potential to lead affect community members' way of life through:

- Disruption to usual activities of some local residents mentioned above, such as reading, watching television, napping or having conversations during the daytime. Some people may choose to close doors and windows, which may cause some nuisance
- Potential for some recreational users to be deterred from using areas near construction activities (e.g. to relax in Howley Park or to kayak in nearby waters).

As changes to daytime noise amenity would be temporary and are expected to only affect a small group of people, the above social impacts are expected to be minor.

Air quality

Most demolition and construction activities would occur from the water. According to the Air Quality Assessment (Appendix P of the EIS), this would serve as a natural mitigation measure against potential dust generation on local roads as construction would not be land-based.

Dust generation may occur during the removal of the slipway located on the south eastern side of the marina (GHD, 2019b). The only residential receiver that may be affected is 376 Victoria Place which is currently vacant.

Further, based on findings from the Air Quality Assessment, dust generated from the slipway demolition is not expected to affect community members (GHD, 2019b).

Based on the findings of the Air Quality Assessment and the mitigation measures which would control dust to safe levels, dust generated by construction activities is not expected to affect community members, therefore no social impacts are expected to occur.

6.1.4 Access and connectivity

Community cohesion

As mentioned in section 6.1.1, access to existing moorings, berths and to the marina would be maintained during the construction phase of the proposal. Consequently, there would be no impact to the cohesion of the existing boating community as GBM customers and other boat users would be able to continue with their activities.

Parking

As discussed in section 5.3.3, both LGA and Drummoyne communities place high value on availability of car parking. SIA consultation indicates that local residents believe there is a parking shortage in the vicinity of the marina. Based on the Traffic and Transport Study (Colston Budd Rogers & Kafes Pty Ltd, 2019), construction works are not be expected to affect resident parking as most activities would occur from the water. For a small component of the work, construction workers would commute to GBM by road and would park at one of the existing 14 parking spaces at the site. Construction materials would also be located on the site. As a result, on-street parking on Victoria Place is not expected to be affected during construction, and therefore no social impact is expected to occur.

Traffic

As per the Traffic and Transport Study (Colston Budd Rogers & Kafes Pty Ltd, 2019), the number of vehicles generated during the construction phase of the proposal would likely be small, with approximately 10 additional vehicles travelling to the site per day via Victoria Place. The study found that due to the small number of vehicles, access of residents and visitors to the area is not expected to change. Therefore no social impact is expected to occur.

On-water navigation

According to SIA consultation, members of the public may launch passive recreational boats, such as kayaks, near GBM. A number of other vessels, such as ferries and sailboats, pass near GBM. As a Destination Marina (section 5.4.1), GBM also attracts boaters from outside the area.

As mentioned above, the Traffic and Transport Report indicates that construction activities would generally occur from the water. During SIA consultation, community members expressed concern regarding navigation around GBM during the construction phase of the proposal (GHD, 2019a). As a result, community members could potentially perceive that on-water construction may pose a safety risk to users.

Perceived safety risk could potentially deter some users from accessing waters adjacent to construction activities. However, it is expected most people would adapt to this change and continue to access other areas. This is considered a minor, short term social impact for some recreational boaters in the area.

The Navigation Assessment in EIS Appendix F provides more detail.

6.1.5 Summary

Table 6-1 presents a summary of the potential social impacts that are expected to occur during construction.

Description of change resulting from proposal	Summary of social impact	Nature of impact	Duration	Severity	Sensitivity	Stakeholder impacted
Employment and economy						
Potential employment opportunities required for construction	Small increase in employment opportunities for skilled workforce	Positive	Short term	Minor	Low	Skilled workers
Local expenditure by construction workers	Potential small increase in business income for some local businesses	Positive	Short term	Minor	Low	Local business owners
Amenity and way of life						
Changes to the views of nearby residents due to the construction of berths	Change in some residents' usual view to the bay and Harbour, which is valued by foreshore residents. This may affect values associated with views, local character and sense of pride.	Negative	Short term	Minor	Low	Residents living on foreshore
Potential increase in noise from construction activities around the marina building	Potential for disruption to residents' usual activities which may cause nuisance.	Negative	Short term	Minor	Low	Residents Recreational users
and from the water near the berths. Noise would occur intermittently during daytime.	Recreational water users and users of Howley Park may be deterred from using these areas during construction.					
Access and connectivity						
Potential perception that on-water construction may pose a safety risk to users	Perceived safety risk could potentially deter some users from accessing waters adjacent to construction activities. However it is expected most people would adapt to this change and continue to access other areas	Negative	Short term	Minor	Low	Recreational boaters

Table 6-1 Summary of potential social impacts during construction

6.2 **Operation**

6.2.1 Recreational boating

The 31 additional storage spaces at GBM would help address some of the undersupply of storage spaces on Sydney Harbour highlighted in section 4. This may indirectly contribute to improved accessibility to recreational boating and waterways. This aligns with the *Sydney Harbour Boat Storage Strategy* and the *Regional Boating Plan: Sydney Harbour* discussed in section 4.1. This would be a long term overall benefit for recreational boat users across the region.

According to SIA consultation, berths are often viewed as more secure and safe than a mooring because boaters can walk directly onto their boat rather than use a dingy to access their vessel. Existing boaters may therefore want to relocate their boats to one of the new berths at GBM for increased convenience and safety. This opportunity would be most beneficial for boaters who have limited mobility, such as older people or people who experience disability. As discussed in section 5.3.1, residents of Drummoyne are comparatively older than the average for Canada Bay LGA and the proportion of residents who need assistance is also slightly higher. There is potential for some customers who are also local Drummoyne residents to benefit from increased accessibility.

Based on SIA consultation, it is understood that berths are typically more expensive to hire than moorings and, as mentioned in section 5.4, there are long waiting lists for moorings on Sydney Harbour. If some existing users of moorings in waters close to GBM chose to relocate their boats to the expanded marina, more affordable mooring options could become available to boaters on waiting lists. Although the number of moorings at GBM will reduce from 44 to 15, this potential flow on effect could make a small contribution towards improving access to recreational boating and waterways.

As discussed in section 5.4.1, recreational boating is a social activity that is often enjoyed as a group. The increased provision of storage spaces would increase opportunities for improved health and wellbeing as a result of relaxation and physical activity, and increased social interactions (section 5.4.1).

GBM is one of 19 marinas in Sydney Harbour that participates in the Sydney Harbour Boating Destinations Plan, which supports the general boating public by providing a destination berth for temporary access to services and amenities (section 5.4.1). There is potential for the proposed improvements to the marina to make a small contribution to tourism in Sydney as a result of any visiting boaters accessing Sydney via this program.

6.2.2 Employment and economy

No particular impacts or benefits have been identified with regard to employment and economy during the operational phase of the proposal.

6.2.3 Amenity and way of life

Visual amenity

As indicated in SIA consultation and in section 5.3.3, residents of Drummoyne highly value their foreshore views, particularly residents living in properties on Parramatta River, located on Drummoyne Avenue and Victoria Place. EIS community consultation indicates that local residents are concerned about how the proposal would change their visual amenity (Gladesville Bridge Marina, 2019a). The Visual Impact Assessment takes into consideration the higher importance and sensitivity placed on views from the public domain than private residences

properties located on Drummoyne Avenue and Victoria Place, as views of the proposed marina structure would not significantly reduce views to the waterway, foreshore channel and bridge (APRL, 2019). However, considering community concerns these changes to views from residential properties may have a minor impact on some resident's sense of pride.

As discussed in section 2.3 and the Visual Impact Assessment (ARPL, 2019), upgrades to the eastern portion of Howley Park would improve visual amenity in the area by enclosing rubbish bins, improving landscaping, and providing seating. These enhancements would be a small long-term positive effect for local residents with views to the park, and community members in the area.

The Light Spill Assessment (SLR, 2019) found that light spillage would only be likely to occur at the vacant property next to GBM (378 Victoria Place). Therefore no social impact is expected to occur as a result of light spill from GBM's operations.

As described in section 2.3, the proposal would increase the size of floating berths, which would lead to the marina structure extending further east. Based on the *Gladesville Bridge Marina Feedback Summary* report (Gladesville Bridge Marina, 2019a), the new configuration of berths would better optimise use of space than the current layout. This may change the visual amenity of residents and recreational users. However, people's perceptions of visual changes vary, and over time, most people tend to adapt to visual changes. In addition, changes to views are not expected to alter residents' way of life or affect recreational users' activities. As a result, the proposal would have a negligible social impact in terms of visual amenity.

Heritage and character

As discussed in section 5.3.3, residents of Drummoyne and Canada Bay LGA have a strong sense of pride in the character and believe that Parramatta River foreshore areas are integral to the local identity (City of Canada Bay, 2018). A number of heritage items identified in the Heritage Impact Assessment (discussed in section 6.1.3) also contribute to local character. As discussed in section 6.1.3, heritage impacts would be limited to views to and from these items. The Heritage Impact Assessment found the changed views to and from heritage items are considered minor as the marina structure will not interrupt or obscure current views, or have an adverse impact on established historical and aesthetic heritage significance.

From a social perspective, some residents and visitors may feel that changes to views to and from Parramatta River and heritage items may alter the visual amenity of the area. This may have a minor impact on visitors and community members' values associated with local character and sense of place.

Noise and vibration

The slipway would be removed as part of the proposal. According to Pulse Acoustic Consultancy, this would reduce existing noise levels for residents located near the marina on Victoria Place and recreational users at Howley Park (Pulse Acoustic Consultancy, 2019). This would be a positive long-term impact for these community members

According to the Noise and Vibration Report (Pulse Acoustic Consultancy, 2019), local residents living adjacent to and around the marina currently experience existing traffic related noise due to vehicles along Gladesville Bridge. Residents also likely experience existing noises associated with operation of GBM.

During operation, some residents along Drummoyne Avenue particularly those on the foreshore, and recreational users at Cambridge Road Reserve and on Parramatta River may experience a change in noise levels as the berths would extend further east from the marina building towards Gladesville Bridge. Noises are expected to be similar to the existing marina noises such as:

- Boat usage (e.g. boat engine starting, speeding boat)
- Patron activity from the marina or from boats (e.g. raised voices)
- Use of the car park on the western side of the marina building (e.g. car engine starting, door closing, car manoeuvring).

According to the Noise and Vibration Report, the above noises would be sporadic and below the normal ambient noise already experienced by these sensitive receptors. Noise levels are also predicted to comply with noise criteria, including sleep disturbance noise criteria. As a result, additional activity at the marina would therefore have a negligible social impact for local community members and recreational users.

For more information on noise and vibration impacts refer to the Noise and Vibration Report in EIS Appendix O.

Air quality

According to the Air Quality Assessment found in Appendix P, the predicted future air quality during operation would be compliant with relevant criteria (GHD, 2019b). It is anticipated air pollutants during operation would be primarily associated with combustion emissions from idling boats at the marina (GHD, 2019b).

Given the duration of idling in the marina is limited to 10 minutes per boat under the marina's existing operation model (GHD, 2019b), and boaters are likely to exit the marina into Sydney Harbour rather than remain within the marina with their engine on, there would be a minimal change in the local air quality of the area surrounding GBM. A negligible social impact is therefore expected. Refer to the Air Quality Assessment in Appendix P for further detail.

6.2.4 Access and connectivity

Community cohesion

By improving and expanding GBM facilities, the proposal would increase the number of boaters who can use the marina. This may have flow on social benefits as discussed in section 5.4.1.

SIA consultation indicated that GBM organises events and activities for recreational boaters, such as weekly twilight sailing during daylight savings. New GBM clients would be able to access these events and activities, which could provide opportunities for social interaction between recreational boaters. This would represent a long term minor benefit to the boating community.

Parking

The proposal will include an additional eight parking spaces on site within the existing slipway area. This proposed parking provision would benefit GBM customers and reduce the need for on-street parking.

The Traffic and Transport Study indicates on-street parking is near capacity most times of the day. SIA consultation indicates there is existing community concern related to shortage of onstreet parking in the local area, and accessible parking on-site.

As per the Traffic and Transport Study, the existing local parking shortage is not caused by marina activity, and the proposed parking provision would be sufficient to meet demand generated by the additional storage spaces at GBM (Colston Budd Rogers & Kafes Pty Ltd, 2019). Therefore, the proposal is not expected to generate additional demand for on street parking and would not have an impact on local resident parking access.

Traffic

Based on the Traffic and Transport report, there may be an increase of less than five vehicles per hour (two-way) during peak periods along Victoria Place as a result of the proposal (Colston Budd Rogers & Kafes Pty Ltd, 2019). Due to the small number of vehicles, access of residents and visitors to the area is not expected to change and no social impact would be expected to occur.

Access to waterways and foreshore

The proposed upgrades to the marina would improve access to recreational boating and waterways, benefiting some local and regional boat users. As discussed in section 5.3.3, community members highly value access and connections to Parramatta River.

As discussed in section 5.4.1, greater access to foreshore and waterways for recreational purposes may contribute towards enhancing the mental and physical health of community members.

The proposed marina redevelopment aims to upgrade the currently underutilised eastern portion of Howley Park (section 2.3). The proposed enhancements would make a small contribution to increased access to the foreshore, and align with community values associated with providing quality open space (section 5.3.3), and make a small contribution to addressing the need for upgraded and embellished open space in the LGA (section 4.2).

Based on the benefits described above, the proposal would have a minor, long term positive social impact for local and regional community members as well as GBM users.

Based on SIA consultation, some community members including GBM users and nearby residents value the slipway services due to the ease of access and convenience of repairing and maintaining their boat near where it is stored. As a result, these community members may be inconvenienced by travelling further to alternate slipway services for boat maintenance and repairs. Other marinas near GBM offer these services, such as White Bay 6, Woolwich marina and Birkenhead Point marina, all located between 3km and 6km by car from GBM. Decommissioning the slipway is therefore expected to have a minor impact on current users of GBM's slipway services, as most people are expected to adapt to this change.

On-water navigation

According to the Navigation Assessment (Moore, 2019), the inclusion of the gangway leading from the land to the berth structure near the entrance of the marina arms would improve access to the waterfront for passive recreational boats such as kayaks. The proposal is also expected to improve access by repositioning and extending the existing pontoons, increasing the number of wet berths and removing 29 swing moorings (NineSquared, 2019). This would enable greater space for vessel operators to navigate and berth within the marina (NineSquared, 2019). These changes are expected to provide long-term benefits to recreational boat users.

Improvements to the navigable area within the marina due to reconfigured layout may lead to improved safety for boaters. Improved safety may in turn improve equitable access to waterways by catering to boaters of different skill levels who may not currently feel comfortable navigating in the marina. As a result, the proposal would have a long term, medium benefit on navigation for GBM clients.

According to the project team, changes were made to the design of the structure and sizes of some of the vessels to address navigation issues based on outcomes of community EIS consultation activities. As a result, the proposal is not expected to block the access of boat users from the bay to the main channel or adversely impact on river traffic (Gladesville Bridge Marina, 2019a; Moore, 2019). However, it was noted during SIA consultation that residents

along the Drummoyne foreshore and recreational boaters in the area were concerned about potential navigation impacts that could occur following the expansion of the marina structure, and recreational boaters' ability to access the main channel (Gladesville Bridge Marina, 2019a). SIA consultation also indicates some residents have concerns related to access for water-based emergency service boats.

According to the Navigation Assessment, GBM is developing Safe Operating Procedures (SOPs) to address potential safety concerns, and to inform GBM clients and the broader community about navigation around the marina. These provide guidance material on marina operations and how GBM clients should safely interact with other vessel operators and conduct themselves as good neighbours.

A small number of private and commercial mooring users may need to be relocated within the current boundaries to maintain 15 commercial moorings, and to make way for the structure and associated channel requirements. To address this, GBM would continue working with Roads and Maritime Services to determine how this could be done and would engage with affected mooring users.

Based on the mitigation measures outlined above, the proposal would not result in social impacts in terms of navigation.

For additional details on navigation, please refer to the Navigation Assessment in Appendix F.

6.2.5 Summary

Table 6-2 presents a summary of the potential social impacts that are expected to occur during construction.

Description of change resulting from proposal	Summary of social impact	Nature of impact	Duration	Severity	Sensitivity	Stakeholder impacted
Recreational boating						
Greater number of on- water storage spaces, including spaces for larger vessels	Greater accessibility to recreational boating and consequentially increasing the opportunity to enjoy social benefits of boating	Positive	Long term	Medium	Negligible	Greater Sydney recreational boaters
Conversion of berths to moorings	Boaters who currently have boats at moorings may decide to relocate to berths. This would be most beneficial for people with limited mobility such as older boaters as berths are generally seen as safer	Positive	Long term	Medium	Low	Greater Sydney recreational boaters
Potential relocation of boats currently at moorings to berths and resulting availability of moorings	Increased availability of moorings for boaters on waiting lists for more affordable on-water storage options	Positive	Medium	Medium	Low	Greater Sydney recreational boaters
Increased attraction of boaters to GBM through the Destination Marina program as a result of improvements to amenities and services	Proposed improvements to the marina could make a small contribution to tourism in Sydney	Positive	Long term	Medium	Negligible	Greater Sydney recreational boaters
Amenity and way of life						
Larger berth structure extending further east from the marina towards Gladesville Bridge	Change to the visual amenity of residents and recreational users. However, people's perceptions vary and, over time, most people tend to adapt to visual changes	Negative	Long term	Minor	Low	Some foreshore residents
	Changes to views to and from identified heritage items may be perceived by some	Negative	Long term	Negligible	Low	Some foreshore residents

Table 6-2 Summary of potential social impacts during operation

Description of change resulting from proposal	Summary of social impact visitors and residents as an impact on	Nature of impact	Duration	Severity	Sensitivity	Stakeholder impacted
Upgrades to the eastern portion of Howley Park	local character and sense of place Improvements to the visual amenity of Howley Park may improve some community members' enjoyment and sense of pride in the area	Positive	Long term	Minor	Low	Some foreshore residents Visitors
Reduction of noise impact due to cessation of slipway activity	Improved noise amenity for residents on Victoria Place and recreational users of Howley Park	Positive	Long term	Minor	Low	Some foreshore residents Visitors
Extension of marina structure that could potentially change noise amenity for residents along Drummoyne Avenue, particularly those on the foreshore, and recreational users at Cambridge Road Reserve and on Parramatta River near GBM	Slight nuisance for sensitive receptors. However, noise levels will comply with noise criteria and would be below existing ambient noises that are predominantly generated by traffic on Gladesville Bridge	Negative	Long term	Negligible	Low	Some foreshore residents Visitors
Potential increase in emissions from idling boats	Given that the duration of idling in the marina is limited to 10 minutes per boat and boats are likely to leave the marina into Sydney Harbour, local air quality around the marina is unlikely to be affected, and therefore social impacts are unlikely.	Neutral	Long-term	Negligible	Low	Some foreshore residents Visitors

Description of change resulting from proposal	Summary of social impact	Nature of impact	Duration	Severity	Sensitivity	Stakeholder impacted
Access and connectivity						
Greater number of customers and other recreational boaters frequenting the marina	Potential increase in social interactions between recreational boaters	Positive	Long term	Minor	Low	GBM users
Enhancement to east Howley Park	Improvement to existing open space for community enjoyment	Positive	Long term	Minor	Low	Local and regional community members GBM users
Discontinuation of slipway-related services	Inconvenience and slight reduction in accessibility to boat-maintenance services	Negative	Long-term	Minor	Low	GBM users Other boat users
Inclusion of a gangway leading from the land to the berth structure near the entrance of the marina arms	Improved access to the waterfront for passive recreational boats such as kayaks	Positive	Long term	Minor	Low	Users of passive recreational boats
Improved navigation within the marina through the repositioning and extension of existing pontoons	Potential safety improvements that could attract boaters of different levels to the marina. This would improve equitable access to waterways	Positive	Long term	Medium	Low	GBM users

7. Mitigation measures

A range of mitigation and management measures recommended in various technical studies and chapters in the EIS will assist avoiding and/or managing social impacts identified and described in section 6. Recommended measures are summarised in Table 7-1.

Table 7-1 Recommended mitigation measures

Category	Mitigation or management	Refer to EIS technical study
Amenity and way of life	As per the Construction Management Plan, a construction communications plan would be developed for the	Visual Impact Assessment
	construction phase of the proposal phase to ensure affected community members are informed about potential impacts. GBM's current operational procedures should also be	Light Spill Assessment
	reviewed based on proposed alterations to the marina to keep local community members and key stakeholders	Heritage Impact Assessment
	informed.	Noise and Vibration Report
	Engagement activities included in the construction communications plan and in the revised operational procedures should include:	Air Quality Assessment
	 Notifying affected residents of planned activities, duration of activities, and expected impacts. Communications should consider vulnerable community members such as older residents and people experiencing disability. Notifications should target residents living along the waterfront near GBM on Victoria Place and Drummoyne Avenue, and GBM users 	Construction Management Plan
	 Communicating project information through GBM's communication channels, such as GBM's website 	
	• Providing a feedback mechanism for residents to contact GBM.	
Access and connectivity	GBM should also communicate any changes to the navigation area to GBM users if these occur, local residents	Traffic and Transport Study
	and other recreational boaters in Greater Sydney to inform them of changes. Communications could be through GBM's website and through Destination Marinas newsletters.	Navigation Assessment
		Strategic Review
		Construction Management

Plan

8. Conclusion

This report has been prepared to support the EIS for the proposed upgrade of GBM. This report document the methods, findings and recommendations of the SIA for the construction and operational phases of the proposal.

During construction, the potential social impacts include:

- Small increase in employment opportunities for skilled workers during construction
- Potential for some local businesses to benefit from increased demand from construction workforce
- Minor changes to usual views to the bay and Harbour from some residences, which may affect values related to local character and sense of place
- Intermittent daytime noise for residents living on Drummoyne Avenue and Victoria Place, users of Howley Park and Cambridge Road Reserve, and nearby recreational boaters due to construction activities, which may disrupt their usual activities.
- Perceived safety risk could potentially deter some users from accessing waters adjacent to construction activities. However, it is expected most people would adapt to this change and continue to access other areas.

During operation, the key potential social impacts include:

- Increased provision of on-water storage spaces, which may contribute to increased access to recreational boating and waterways for boat users. This may facilitate health and wellbeing outcomes, and opportunities for social interaction
- Potential for increasing equitable access due to the conversion of moorings to berths, which are more accessible for people with limited mobility
- Improved access to the waterfront for passive recreational boats such as kayaks due to the construction of the gangway leading from the land to the berths near the entrance of the marina
- Improved navigation within the marina for GBM clients that may increase safety and provide more equitable access to waterways by catering to boaters of different skill levels who may not currently feel comfortable navigating in the marina
- Improved visual amenity of Howley Park following proposed landscaping improvements to be made by GBM
- Improved amenity for nearby residents following the decommissioning of the slipway
- Changes to amenity for residents and recreational users due to the extension to the existing marina structure.

Potential social impacts resulting from the proposal would generally be minimal and could be managed through mitigation measures identified in other technical studies and the EIS. In addition, this SIA recommends developing a construction communications plan and updating GBM's current operational procedures based on proposed alterations to the marina to manage social impacts. Engagement activities included in the construction communications plan and in the revised operational procedures should inform stakeholders of project activities, any changes to the navigation area and should provide a feedback mechanism for residents to contact the project team.

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Appendices

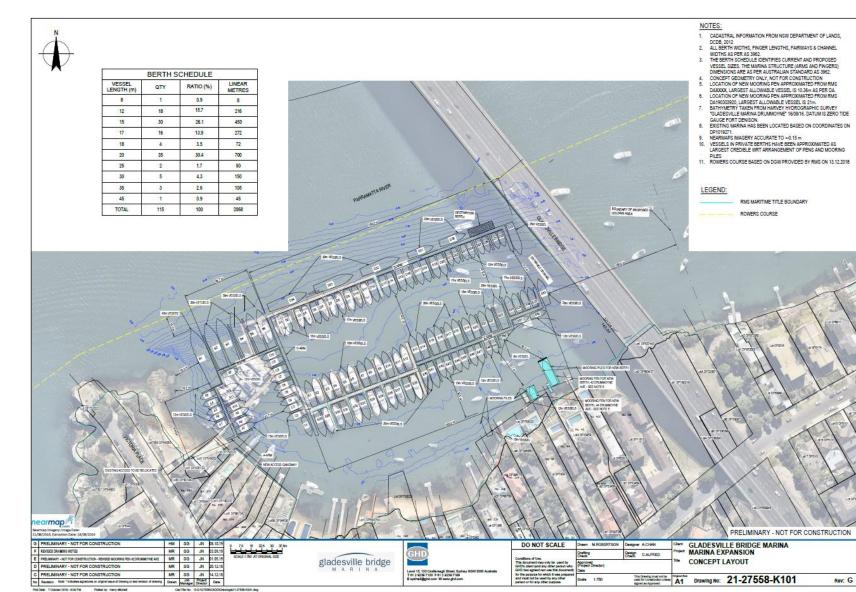
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Appendix A – Detailed demographics

	Drummoyne	Canada Bay LGA	Greater Sydney
Population:			
Total Persons	11,950	88,015	4,823,991
Median Age (years)	40	36	36
Cultural Diversity:			
Indigenous persons	0.29%	0.47%	1.5%
Persons born in Non Main English Speaking countries	19.33%	34.89%	30.0%
Language spoken at home other than English	21.20%	40.86%	35.8%
Speaks English Only	70.94%	53.44%	58.4%
Household Characteristics:			
Family households	65.29%	71.57%	73.6%
Lone person household	27.93%	22.01%	21.6%
Group household	6.78%	6.41%	4.7%
Average household size (number of persons)	2.3	2.6	2.8
Family Characteristics:			
Couple family with children	42.33%	45.45%	49.5%
Couple family without children	43.66%	39.80%	33.4%
One parent family	12.06%	12.56%	15.2%
Other characteristics:			
Need for assistance	4.24%	4.18%	4.9%
Dwellings:			
Separate House	28.15%	35.63%	52.5%
Semi-detached, terrace house, townhouse	10.19%	8.57%	12.9%
Flat, unit or apartment	49.95%	46.81%	25.9%
Tenure Type:			
Fully owned	32.76%	30.78%	30.2%
Owned with a mortgage	27.03%	29.37%	34.5%
Rented (Total):	37.08%	37.13%	35.3%
Household Income:			
Median Household income (\$/weekly)	2353	2061	1750
Labour Force:			
Labour force participation	65.40%	63.84%	61.6%
Total employed	96.42%	94.95%	94.0%
Unemployed persons	3.64%	5.04%	6.0%
Not in labour force	26.46%	30.19%	32.3%
Occupation:			
Managers	22.17%	18.38%	13.7%
Professionals	36.01%	33.09%	26.3%
Technicians and trades	6.88%	8.71%	11.7%
Community and personal service	7.21%	7.45%	9.6%
Clerical and administrative	13.28%	14.76%	14.6%
Sales	8.68%	9.08%	9.0%

	Drummoyne	Canada Bay LGA	Greater Sydney
Machinery operators and drivers	1.48%	2.33%	5.6%
Labourers	2.76%	4.33%	7.5%
Key Industry:			
Agriculture, Forestry and Fishing	0.41%	0.29%	0.5%
Mining	0.25%	0.20%	0.3%
Manufacturing	5.33%	5.30%	7.3%
Electricity, Gas, Water and Waste Services	0.82%	0.80%	1.1%
Construction	10.72%	11.24%	13.3%
Wholesale Trade	5.33%	4.72%	4.1%
Retail Trade	7.03%	7.35%	8.0%
Accommodation and Food Services	6.18%	6.81%	6.3%
Transport, Postal and Warehousing	3.91%	4.93%	7.2%
Information Media and Telecommunications	4.03%	3.55%	3.2%
Financial and Insurance Services	10.02%	8.93%	6.4%
Rental, Hiring and Real Estate Services	2.90%	3.45%	1.9%
Professional, Scientific and Technical Services	14.40%	13.77%	10.4%
Administrative and Support Services	2.80%	3.31%	3.3%
Public Administration and Safety	5.61%	5.35%	5.7%
Education and Training	5.89%	4.60%	4.5%
Health Care and Social Assistance	5.61%	5.54%	5.2%
Arts and Recreation Services	2.36%	1.85%	1.7%
Mobility:			
Lived at same address 1 year ago	74.81%	74.56%	76.6%
Lived at same address 5 years ago	46.93%	45.42%	49.8%
Journey to work (by one method only):			6.5%
Train	3.97%	17.65%	0.5%
Bus	22.34%	8.82%	0.2%
Ferry	4.10%	2.65%	0.3%
Car, as driver	47.99%	49.84%	0.9%
Car, as passenger	3.05%	3.60%	0.7%
Bicycle	1.39%	0.90%	4.3%
Walked only	2.91%	2.97%	



Appendix B – Concept layout

GHD | Report for Gladesville Bridge Marina - SIA, 2127558

GHD

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https://projects.ghd.com/oc/Sydney1/gladesvillebridgemar/Delivery/Documents/SIA/2127558 - Gladesville Bridge Marina DA - SIA_Rev0.docx

Document	Status
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Revision	Author	Reviewer		Approved for Issue		
		Name	Signature	Name	Signature	Date
0	A. Jobin C. Lau J. Glasby	L. Harding	\$	L. Harding	A A	30.10.19

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