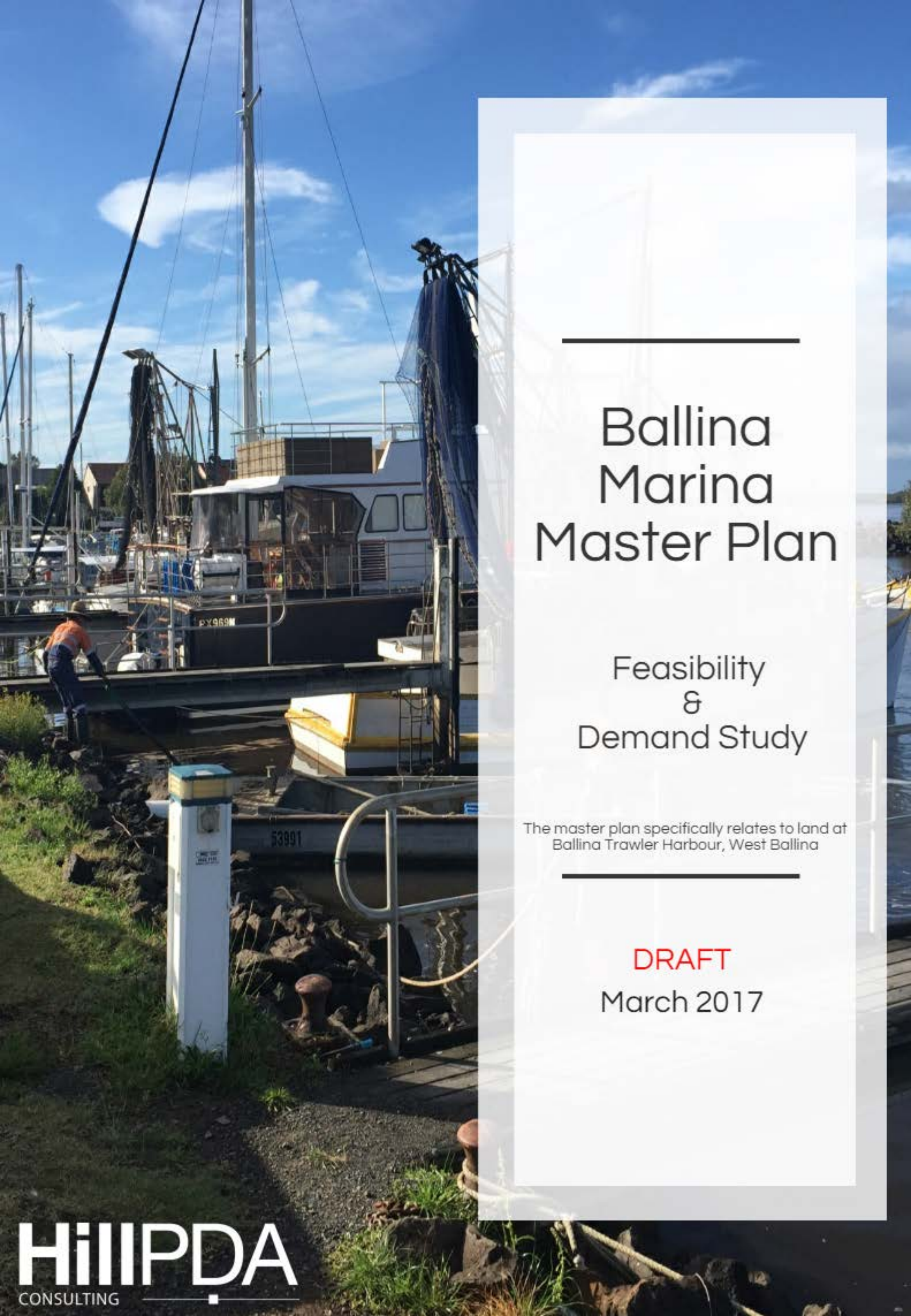

Ballina Marina Master Plan

Feasibility & Demand Study

The master plan specifically relates to land at Ballina Trawler Harbour, West Ballina

DRAFT

March 2017

HillPDA CONSULTING

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EXECUTIVE SUMMARY

The current provision of marine infrastructure within and around Ballina is "*inadequate to provide the expected level of service for both local and visiting boats*"[1]. The closure of the 50 berth Ballina marina in 2002 redirected boats stored there toward the Ballina Trawler Harbour and Martin Street Harbour, causing them to reach capacity. Remaining boats were either moved to locations outside of Ballina or sold. Increased stress will be placed on existing marine infrastructure as a result of the projected increase in local boat ownership and tourism.

As such, this study was commissioned by Ballina Shire Council (Council) to advise on the demand and feasibility of redeveloping the Ballina Trawler Harbour (subject site) into a larger and more diverse marina which may include other associated land uses such as commercial and residential.

To fulfil the project brief the study was divided into two key sections, these being

1. The need for increased marine infrastructure (including on-water storage options) which could be accommodated on the subject site; and
2. Feasibility testing on two Master Plan options for the subject site.

Existing marine infrastructure

Ballina currently provides a wide range of marine infrastructure for use by its community and commercial businesses. This infrastructure includes five public boat ramps, slipway facilities, Richmond River Pass, storage services, ferry services and marine industrial industries.

There are two main on water storage areas within Ballina these being the subject site which provides 34 berths of which 17 are reserved for a commercial fishing fleet while Martin Street harbour provides a further 20 berths.

Smith Drive industrial estate is the main clustering of supportive marine services within Ballina. Contained within this cluster are Ballina Slipway, Ballina Barge and Jetty services, hard stand storage, marine joinery services, and building services.

[1] Lower Richmond Recreational Boating Study (GHD 2005)

Demand for marine infrastructure

The focus on this study was to provide Council with an understanding on the likely demand for on-water berthing storage options for boats within Ballina and any additional marine infrastructure that is lacking, of which, could be included within the redevelopment of the subject site.

Demographic analysis

Analysis of demographic trends and projections provides an indication as to the likely demand for on-water berthing options. It was found that Ballina LGA is projected to experience strong population growth over the coming years (to 2031). This is reflected in the LGA forecasted to experience an annual increase of 1.0%, compared to an annual growth rate of 0.5% for Regional NSW.

However, with limited natural growth within the LGA, there will be a continuing trend of an ageing population. This is evident in persons aged 50+ years comprising 59% of this additional growth. This age group are more likely to increase the demand for additional marina berths, as they tend to want convenient access with “hassle-free” berthing options and club facilities.

As of 2011, 76 local residents we employed within marine related industries within the LGA however, the LGA only provided 56 marine related jobs. The higher number of local residents employed within marine related industries versus the total number of marine jobs provided within the LGA, highlights that there is potential for the marine industry to grow. This would provide more employment opportunities for local residents allowing them to live and work in close proximity while increasing the attractiveness of the area as a tourism destination.

It is estimated that marine related industries contribute around $4 million each year to Ballina’s GRP. Further, it is estimated that expenditure captured within Ballina LGA, as a result of marine related tourism, was approximately $71 million in 2014 or 39% of all tourism related spend.

Current level of boating storage

Of the approximately 319 current storage spaces for boats (excluding sailing clubs and dinghy storage) within Ballina, 45 or 14% were attributed to swing moorings, 64 or 20% were commercial berths,

200 or 63% were private jetties and ten or 3% were on-land dry storage.

Boat ownership projections

Historic annual growth rate

Applying historic annual growth rates in boat registrations and population, HillPDA deduced the "real increase" in boat registrations over the period from 2006 and 2016. This was applied separately to the categories of boats under and over six metres.

It was determined that boats under six metres would increase by 5.8% per annum while boats over six metres would increase by 9.4% per annum.

From 2016 to 2031 boat ownership levels are likely to increase by approximately 1,409 boats or +48% over the period.

Of this total growth 225 or 16% is attributed to boats over 6 meters

These proportions were then applied to the 2016 boat registration figure provided by RMS to forecast the number of vessel ownerships within Ballina LGA to 2031 (Table 18).

Using this methodology it was estimated that over the period between 2016 and 2031, boat ownership levels were likely to increase by approximately 4,352 boats or +149% over the 15 years period. With boats over six metres forecasted to increase by 800 boats or 285% over the period, representing an annual increase of 53 boats.

Applied annual growth rate

However, these "real increase" growth rates have been inflated by boat ownership levels almost doubling over the previous ten year period, with boats over 6 meters increasing by a proportion of 140% (164 boats) over the period.

Furthermore, as stated, with these proportions applied boats over 6 meters would witness a net increase of 800 boats or an annual increase of 53 boats (to 2031).

Given that over the previous ten years an annual increase of 16 boats was recorded, it is unlikely that this net increase would likely be realised. As such, sustaining such growth rates is deemed unrealistic, considering State projections, which project annual boat ownership levels across NSW at 2.9%.

As such, HillPDA has applied a conservative annual growth rate of 3% for boats under 6 meters and 4% for boats over 6 meters.

Using these growth rates it is projected that over the period to 2031, boats over 6 meters would witness a net increase of 225 boats or 80% from its base of 281 boats in 2016.

Boat storage projections

The growth in boats over the 6 metre mark was applied to the proportions of various boat storage options (excluding trailers).

Ballina would likely need an additional 32 swing moorings and 124 additional marina berths between 2016 and 2031

Two different scenarios were tested, these were:

i) Scenario 1– this scenario applies the current proportions of storage within the study area as identified in the 2016 audit; and

ii) Scenario 2 – applies minimal storage growth within swing moorings with additional growth being diverted to marina berths and dry storage. The trend of on-water storage being diverted form swing moorings to marina berths is being witnessed in Sydney Harbour locations such as Middle Harbour. Additional swing moorings opportunities within Richmond River would be limited as a result of navigation, flooding and moving siltation issues.

Table 1: Scenario proportions by storage type

	Private swing moorings	Commercial swing moorings	Commercial marina berths	Private jetties	Dry storage
Scenario 1	10%	4%	20%	63%	3%
Scenario 2	3%	3%	50%	14%	30%

Source: HillPDA

Applying the above proportions to the five year incremental growth in boats, it was deduced that the study area would likely need an additional 32 to 22 swing moorings and 45 to 124 additional marina berths over the period from 2016 to 2031.

Table 2: Net additional storage demanded by type (2015-2041)

	Private swing moorings	Commercial swing moorings	Commercial marina berths	Private jetties	Dry storage
Scenario 1	23	9	45	142	7
Scenario 2	11	11	124	34	45

Source: HillPDA

Using the take up of water-space for marina berths verse swing moorings discussed earlier the study area would likely need between

3.2 to 4.5ha of additional water-space to accommodate the additional swing moorings to 2031, while only 0.7 to 1.9ha of water-space would likely be need to for the additional marina berths.

Implications for Trawler Harbour Marina

The subject site currently provides 34 occupied berths. Of these 17 berths are reserved for a commercial fishing fleet. A site visit to the subject site revealed a current fleet of around the size of six to eight fishing boats. However, it is recommended that the 17 reserved spaces be replaced for use by the commercial fishing fleet or emergency services upon completion.

Taking the above into account, it is surmisable that a marina of approximately 110 berths could be accommodated within the subject site.

This would increase marina berth storage options within the locality by an additional 76 berths, with a residual demand of 48 berths remaining by 2031. These could be absorbed by an expansion of the subject site marina in the future or redevelopment and expansion of the Martin Street Harbour area. For this reason it is recommended that water space be reserved for any possible expansions.

It would also be recommended that some off-water space be reserved for hard stand storage. This would provide additional price points for storage to residents.

Marine industry consultation

Stakeholder engagement is an important element in the successful development of the master plan. HillPDA undertook informal interviews with local businesses, cooperatives, emergency services and other marine related services to understand the likely marine facilities that could be incorporated into a successful master plan.

It was found that the lack of on-water storage options such as marina berthing was the primary reason for locals opting not to owner a boat over the 6 meters mark. Therefore, redevelopment of the subject site with on-water storage options would likely have a corresponding effect of increased local boat sales and ownership, with the marina “filling up” with boats, relieving this latent demand.

The lack of on-water storage options further limited the number and length of stay for boats visiting the area. The close location of the airport to the subject site also provides the opportunity for Ballina to

become an area were boat owners from cyclone inclined areas or areas were winters are colder to relocate for a period while the owners fly in and fly out.

Consultation with Ballina Fisherman's Cooperative highlighted the opportunity for Fishermen's Cooperative to be accommodated within the master plan. It was noted that the current location of the Coop is disconnected from the harbour and relocation to the harbour would provide better integration with fishing operations, while providing an anchor role for the redevelopment upon operation.

It was also noted that local elderly residents were deterred from owning boats as the lack of marine infrastructure such as platoon berthing options, pump-outs and fuel pumps increased the difficulty associated with ownership. The development of a marina provided an opportunity for "hassle-free" berthing options with associated marine infrastructure to cater for elderly boat owners and users.

Redevelopment of a marina would also ideally include come commercial space. This would primarily be occupied by related services such as boat sales, boating hire, marine equipment and marine apparel. This would allow clustering of marine services which are currently dispersed though out the town.

Implications for Trawler Harbour Marina

As an outcome of the consultation the following elements were noted for possible inclusion within the redevelopment;

- Possible relocation of the Fisherman's Coop to the subject site or the provision of 2,000sqm for the development of a fresh seafood outlet;
- Possible additional café or restaurant;
- Commercial tenant space (5-10 small suits)
- Division of the harbour into a working side and private side (no clear division or impermeable barrier);
- Increased on-water berthing storage;
- Inclusion of hard stand or tailer storage;
- Inclusion of a fuel pump;
- Inclusion of an out-pump; and
- Inclusion of shower and toilets.

Feasibility analysis

HillPDA assessed the viable redevelopment of the trawler harbour based on the local economics, boat storage projections, market research, marine industry consultation and development options provided by the Client.

HillPDA was provided with two redevelopment options for the subject site. However, having undertaken a review of two previous redevelopment feasibility studies for the subject site (undertaken by WorleyParsons), it was our opinion that one of the options would likely be less viable than the other.

This was determined because of the size of the harbour to be excavated within the option and hence the capital investment required. This would have reduced the viability of the option and hence the successful outcome of the project.

As such, with our advice and in consultation with Council the less viable concept master plan was excluded from testing. The remaining master plan option however, was tested for its viability. This master plan option expands the current marina with residential development sites occurring on around the harbour and water edge.

Commercial buildings are located to the north of the marina with frontage on to the pubic esplanade. Further details in relation to the draft master plan are contained within the Master Plan Report.

Figure 1: Ballina design development option

Please refer to the Master Plan Report

To increase the viability of the master plan and acknowledge the extended timeframe of the redevelopment (up to 20 years), HillPDA in consultation with Council proposes the following staging of the master plan. Further information on the staging is contained within the Master Plan Report.

Figure 2: Ballina master plan stagging plan

Please refer to the Master Plan Report

Based on the assumptions detailed in Chapter 7, the development of the preferred master plan option shows an RLV of $2.63 million based on a 20% development margin.

This shows a positive cash and viable master plan development. This option includes allowances of $10 million and $2.2 million made for the boat harbour extension and relocation of RMS depot respectively.

Overall this viable development option will enhance the existing marina by creating an integrated a public space that will benefit the local community.

The results of the cash flow modelling are summarised in the table below:

Table 3: Ballina Feasibility Financial Results

EstateMaster Development Feasibility — **SUMMARY OF PROJECT RETURNS**

Ballina Marina Harbour
Masterplan
Superlot Subdivision 10 year staged

Time Span:	Jul-17 to Mar-27
Type:	Residential
Status:	Under Review
Site Area:	
#N/A	:1
Project Size:	351 Units

	Quantity	SqM	AUD/Quantity	Total AUD
Revenues				
Gross Sales Revenue	401	1,910.00	[illegible]	29,285,867
Detached Dwelllings Lots	351	175.00	70,570.39	24,770,207
Commerical Office	50	1,200.00	80,913.26	4,045,663
Retail Shops	-	535.00	-	469,997
Less Selling Costs				(1,215,255)
NET SALES REVENUE				28,070,612
TOTAL REVENUE (before GST paid)				28,070,612
Less GST paid on all Revenue				-
TOTAL REVENUE (after GST paid)				**28,070,612**
Costs				
Land Purchase Cost				1
Land Acquisition Costs				22,000
Construction Costs (inc. Contingency)				20,380,616
Other Construction Costs				19,410,111
Contingency				970,506
Professional Fees				1,572,068
Statutory Fees				163,013
Depot Relocation				2,200,000
Interest Expense				604,289
TOTAL COSTS (before GST reclaimed)				24,941,987
Less GST reclaimed				(2,108,176)
Plus Corporate Tax				-
TOTAL COSTS (after GST reclaimed)				**22,833,810**
Performance Indicators				
[1] **Net Development Profit**				**5,236,802**
[2] **Development Margin (Profit/Risk Margin)**		Based on total costs (exc selling & leasing costs)		**22.82%**
[3] **Net Present Value**		Based on Discount Rate of 12% p.a. Effective		**2,627,425**
[4] **Benefit Cost Ratio**				1.2226
[7] **Project Internal Rate of Return (IRR)**		Per annum Effective		**81.03%**
[8] Residual Land Value		Based on NPV (Exclusive of GST)		2,357,436
Equity IRR		Per annum Effective		24.10%
Equity Contribution				1,364,402
Peak Debt Exposure				-
Equity to Debt Ratio				N.A.
[9] Weighted Average Cost of Capital (WACC)				20.00%
[10] Breakeven Date for Cumulative Cash Flow		Month 110		Sep-2026
[11] Yield on Cost				0.00%
[12] Rent Cover				N.A.
[13] Profit Erosion				N.A.

1 INTRODUCTION

HillPDA was commissioned by Ballina Shire Council (Council) to undertake a boating storage / maritime infrastructure demand and feasibility analysis study in relation to the Ballina Marina Master Plan Project (the Project).

Council has various plans that consider the redevelopment of the Ballina Trawler Harbour (subject site) into a larger and more diverse marina, with this support arising from the potential economic and community benefits associated with an expansion in marine infrastructure.

However, Council is not a land owner within the subject site. Therefore, the intention of the Project is the preparation of a master plan that would assist and encourage local and State Government as well as private interests to consider the site for investment and redevelopment.

The subject site

The subject site is located 2km west of Ballina CBD and is bounded to the east by Fishery Creek, to the south by the Richmond River and to the north and west by residential areas.

Four land lots comprise the subject site totalling 9.2ha of land. Land uses within the subject site range from industrial style buildings (RTA works depot), vacant land, public boat ramp, mangroves and a working harbour with 32 berths and access to Richmond River. Commercial trawlers reserve 17 of the berths with the remaining being reserved for private yachts. The subject site also provides berthing for emergency services.

Figure 3: Subject site location and boundary (red outline)

Source: HillPDA

Study purpose

The purpose of this study is to provide input into the master plan as to the level in demand, need for and types of marina elements / facilities that would likely be attractive to the market place to encourage interest in redevelopment of the subject site.

Furthermore, upon the development of two master plan concepts the study would provide advice as to the feasibility of redevelopment of the subject site. This advice would influence the development of a final development concept that encourages and facilitates the viable redevelopment of the subject site as an enhanced marina.

Existing marine infrastructure

Ballina currently provides a wide range of marine infrastructure for use by its community and commercial businesses. This infrastructure includes boat ramps, repair facilities, storage services, Ballina Pass and marine industrial industries.

The Richmond River mouth contains a breakwater (the Pass) which protects the harbour from adverse weather and waves. It is understood that the Pass may need to be widened as shifting sand bars narrow the Pass at times making navigation more challenging.

There are five public boat ramps located in close proximity to Ballina CBD these are located at (1) corner of Emigrant Creek Ln and River St, (2) the north east corner of the subject site, (3) the southern end of Brunswick St (4) next to the Richmond River Sailing and Rowing Club and (5) the junction of Cawrra St and Martin St, Ballina. These boat ramps provide launch sites for small commercial fishing vessels as well as recreational fisherman. Parking and public toilets at each boat ramp are also provided.

A ferry crossing provides a connection for residents on the southern side of the Richmond River to the northern bank via Burn Point Ferry Rd. This connection provides a travel savings by car of approximately ten minutes for residents in South Ballina.

There are two main on water storage areas within Ballina, these being the subject site which provides 34 berths of which 17 are for a commercial fishing fleet while Martin St harbour provides a further 20 berths.

Smith Drive industrial estate is the main clustering of supportive marine services. Contained within this cluster is Ballina Slipway,

Ballina Barge and Jetty services, hard stand storage, marine joinery services, and building services.

A summary of marine related infrastructure within the area around Ballina CBD is provided in the figure below.

Figure 4: Existing storage and marine infrastructure

Source: HillPDA

Study structure

To meet the requirements of the project brief and fully consider the future infrastructure need (in terms of boat storage and marine industries) and feasibility of master plan concept options, the study is set out in the following manner:

PART A

- **Chapter 2**|undertakes a contextual review of planning and legislative policies of relevance to the Project;
- **Chapter 3**| undertakes a high level assessment of the socio-demographic characteristics of Ballina LGA, with particular focus on characteristics that would influence further level of boat ownership and demand for marine services;
- **Chapter 4**|undertakes a review of boat ownership patterns and current levels of boat storage within the study area. This analysis

is used with State boating projections to forecast the level of boat storage within the study area by specific types; and

- **Chapter 5**|provides commentary on consultation with local industry representatives.

PART B

- **Chapter 6**|undertakes market intelligence relating to the demand for additional residential, commercial and retail land uses within the local area and which could be accommodated within the subject site; and
- **Chapter 7**|undertakes feasibility analysis of the concept master plan options and a final concept option.

2 CONTEXTUAL REVIEW

This Chapter undertakes an appraisal on the likely demand / planning for marine related industries based on State, Subregional and local planning guidelines and strategies.

Key findings

The current provision of marine infrastructure within and around Ballina is "*inadequate to provide the expected level of service for both local and visiting boats*"[2]. The closure of the 50 berth Ballina marina in 2002 redirected boats stored there toward the subject site and Martin Street Boatharbour, causing them to reach capacity. Remaining boats were either moved to location outside of Ballina or sold.

With the projected increase in local boat ownership and tourism, demand for such infrastructure would only further increase stress on current infrastructure provision.

A number of studies have highlighted the subject site as an ideal location for the development large-scale marine precinct. The sites access to Richmond River, proximity to Ballina Town Centre and the availability of land being key strengths of this location.

The development of a marine precinct at the subject site with associated commercial and residential development would also be in line with the vision of Ballina in that the development would:

- Drive small business innovation by creating a place for such businesses to cluster and share ideas;
- Provide a site for residential dwellings with access to services and facilities for future residents;
- Provide an opportunity for apartment style dwellings that would allow residents to down size while aging in place;
- Increase the likelihood for marine investment in infrastructure and a place embellish and promote community and business opportunities associated with access to the coast and waterways; and
- Provide an opportunity to growth the visitor economy.

[2] Lower Richmond Recreational Boating Study (GHD 2005)

Lower Richmond Recreational Boating Study (GHD 2005)

The Lower Richmond Recreational Boating Study was completed in 2005 for Ballina Shire Council. The purpose of the study was to investigate the existing and future recreational boating requirements of residents and visitors using the Lower Richmond River.

The conclusions of the study were:

- The current provision of marine infrastructure was inadequate to provide the expected level of service for both local and visiting boats;
- There would be a 50% increase in demand for boating infrastructure over the next 10 years; and
- To achieve growth within the marine industry market, improved services and infrastructure were required.

Of relevance for this study was the recommendation that over a 5-10 year time frame, redevelopment of the subject site should occur with the incorporation of a marina with 200 berths and commercial development components, at a capital cost of $33.5 million.

The report highlighted the effect that closure of Ballina Marina in 2002 had upon boat storage capacity and ownership within Ballina. At the time, Ballina Marina provided 50 berths, closure of the marina redirected vessels moored there towards the subject site and Martin Street Boatharbour causing them to reach capacity, any remaining vessels were relocated to Yamba, Evans Head or Southport. A proportion of any remaining vessels were reportedly sold due to the lack of suitable wet storage in Ballina.

The Study further stated that Ballina's current maritime infrastructure was insufficient to meet the needs of the local boating community. Furthermore, the subject site was one of the two most preferred sites at which to provide an increase in the maritime infrastructure to meet the projected increase in demand[3].

Redevelopment of Ballina Trawler Harbour, Feasibility Study (WorleyParsons 2010)

The Ballina Trawler Harbour feasibility Study was prepared on behalf of the NSW Property and Management Authority. The Study considered three development option for the redevelopment of the subject site these being:

[3] Redevelopment of Ballina Trawler Harbour, feasibility Study (2010)

1. Option 0B: under this option no redevelopment occurs and the site largely remains “as is”;
2. Option 1E: this option involved expansion of the Trawler Harbour to the north. Stage One extended the water area of the Trawler Harbour some 40m northwards, this allowed the development of three floating marina arms and increased the opening into Fishery Creek Canal. Stage Two replaced the RTA depot with residential properties and an expanded car park for the public boat ramp.
3. Option 5E: this option involved an expansion of the Trawler Harbour to the north and west. Stage One extended the water area of the Trawler Harbour 40m northwards and 40m westwards, this allowed the development of three floating marina arms and increased the opening into Fishery Creek Canal. Stage Two replaced the RTA depot with residential properties and relocates the public boat ramp to a new site near the main town area of Ballina.

The feasibility further tested a combination of these options with other options stages. For example Option 1E (stage one) with Option 5E (stage 2). As such the following results were concluded:

- *The financial appraisal has evaluated a number of different options, ranging from a do-nothing (without-project) option to various full redevelopment (with-project) options. The appraisal has found that if monetary cash flows resulting directly from the development are the only criterion, the favoured option would be the without-project Option Ob - Ob; and*
- *Given the significant non-monetary and excluded monetary benefits of a development of the boat harbour, development may be favoured over the without-project option. In this case, the Enhanced Option 1 e - 5d provides the best with-project financial outcome, with a positive net present value of AUD$ 22.28 million (after subtracting the without-project option capital costs, which are assumed to be funds already committed by LPMA), based on the assumptions of this analysis*.

Feasibility Study update (WorleyParsons 2011)

An update to the feasibility study was undertaken in 2011 to include:

- *Updated construction costs for 2-storey and 3-storey development in line with Rawlinsons 2010;*
- *Adjusted the floor space ratios for residential construction to more conservative values;*

- *Inclusion of a 5.6% inflation rate for future costs and benefits; and*
- *Maintained a discount rate of 13% for the net present value calculation.*

The study found:

- *The best with-project outcome is from Option 1 e - Ob, with a net present value at 13%discount rate of AUD$ 6.8 million at 2010 prices;*
- *The best overall financial outcome is the Status Quo Minimum Works situation, Option Ob - Ob, with a positive net present value at 13% discount rate of AUD$ 13.6 million at 201 O prices. This does however not involve any redevelopment at the site; and*
- *The worst financial outcome is from Option 5d - 1 e, with a net present value at 13%discount rate of AUD$ -7.1 million at 2010 prices*.

Ballina Shire Growth Management Strategy (2012)

The Ballina Shire Growth Management Strategy (Strategy) provides a framework for managing population and employment growth within Ballina Shire, over the period to 2031. The Strategy particularly provides guidance and encouragement to potential residential, commercial and industrial development opportunities within the LGA, with significant consideration changes to Council's land use planning regime as a mechanism to achieve this.

Of relevance to this study was the two below actions:

- **Investigate potential locations for a marina facility** – investigate the establishment of a large-scale marine precinct within West Ballina; and
- **Investigate the broadening of marine-based activity in the Smith Drive locality** - Smith Drive industrial estate located directly to the west, promoted for marine infrastructure, but having a mixture of land uses including storage and 'bulky goods retailing'. Consider strengthening of marine-based industry in the locality through appropriate development controls and other measures.

Ballina Major Regional Centre Strategy (BSC 2016)

The BSC 2016 seeks to enhance Ballina as a key economic centre built on a strong community and exceptional environmental features and recreational opportunities.

The BSC 2016 undertook extensive community engagement to promote a vision for Ballina which reflects the communities preferred outcome for the centre. Of relevance to this study are the following outcomes of the community engagement:

- **Small business innovation** - Recognise the value of small business as the key driver of future economic growth and activity by fostering networking and innovation in the sector.
- **Population change** - Recognise and prepare for population ageing, whilst encouraging demographic balance through the attraction of younger cohorts. Attraction of working families is important to the balance and economic prosperity of the community.
- **Population growth potential** - Prepare for the population growth that is anticipated to occur with the development of major urban growth areas, in a manner which enhances lifestyle opportunities and access to services and facilities for existing and future residents. This includes an ongoing strategy of greenfield development in the Shire supported by targeted infill in Ballina.
- **Maritime opportunities** - Leverage of Ballina's maritime location through appropriate investment in infrastructure and embellishment to promote community and business opportunities associated with access to the coast and waterways.
- **Visitor economy** - Harness opportunities for local business associated with the growth of the visitor economy, whilst managing the impacts of tourism on access to facilities and sense of place for the local community.

Actions identified within the BSC 2016 do not specifically relate to the subject site however provides initiatives to increase housing supply, encourage businesses development and economic growth. Redevelopment of the subject site with a range of land uses would be in support of these actions. The strategy also includes actions to augment existing marina facilities and identifies a location for a larger mania and/or maritime industries.

3 DEMOGRAPHICS

The following chapter undertakes a demographic analysis of the Ballina LGA with particular regard to the population and economic status of residents within the LGA.

In order to highlight unique local demographic trends that would influence boat ownership or provided context to the economic contribution marine related industries provide to the local economy. HillPDA has (where appropriate) benchmarked the LGA against the Regional NSW[4].

Data bases used to inform this section include the Australian Bureau of Statistics (ABS), Forecast ID and the Bureau of Transport Statistics (BTS).

Demographic findings

Population demographics

Despite Ballina's population experiencing slower growth over the last decade, when compared to Regional NSW. However, this is expected to reverse over the next 15 years (to 2031) with Ballina projected to accommodate an additional 6,500 new residents, representing an annual increase of 1.0%. This is compared to an annual growth rate of 0.5% for Regional NSW.

The majority of this additional population is expected to come from the immigration of new residents form overseas and internal migration. This influx of new residents is projected to have a positive effect on the age composition of Ballina with particular focus on the 0-14 and 35-49 age cohorts.

These two age cohorts are projected to increase by over 2,250 residents or +15% over the period. The 30-49 age cohort is typically regarded as parents and homebuilders however, with the large influx of new residents a large proportion of these would likely be seeking employment opportunities located close to home.

However, with little natural growth within the LGA there will be a continuing trend of an ageing population. This is evident in persons aged 50+ years comprising 59% of this additional growth. This age group are more likely to increase the demand for additional marina berths, as they tend to want convenient access with "hassle-free" berthing options and club facilities.

[4] This area excludes the previous 41 local government areas that comprise Greater Sydney

HillPDA has estimated that an additional 4,425 dwellings over the next 15 years to accommodate this anticipated growth, representing an annual increase of 432 dwellings per annum. The subject site has the capacity and potential to provide a mixed use development with a residential component. This would likely be in the form of apartment / villa style dwellings increasing dwelling diversity within the local area. Furthermore, this provision of apartments would increase housing affordability and provide housing people at different stages of their lives.

Employment and income

Ballina generated approximately 15,300 jobs in 2014/15, representing an 8% increase from that provided in 2011. Of total jobs provided in 2011, 56 jobs were attributed to marine industries, with the top two marine industries (by total employment), being shipbuilding and repair services (13 jobs) and commercial fishing (12 jobs).

Of the 16,500 employed local residents as of 2011, marine related industries accounted for 76 employed residents. Commercial fishing employed 27 local residents while shipbuilding and repair services only employed 6 residents.

The higher number of local residents employed within marine related industries versus the total number of marine jobs provided within the LGA highlights that there is potential for the marine industry to grow. This would provide more employment opportunities for local residents allowing them to live and work in close proximity while increasing the attractiveness of the area as a tourism destination.

It is estimated that marine related industries contribute around $57 million each year to Ballina's GRP.

HillPDA has further estimated that expenditure captured within Ballina LGA, as a result of marine related tourism, was approximately $71 million in 2014 or 39% of all tourism related spend.

Population and age demographics

Total population growth (2005-2015)

Between 2005 and 2015 the population of Ballina increased by 2,523 persons or by a proportion of 6.4%, representing an annual increase of 0.6%.

This proportional growth was slightly below that of the Region NSW which experienced an annual increase of 0.9% over the period.

Table 4: Population growth 2003 – 2015

	2005	2015	Total change	% change	Annual increase
Ballina	39,305	41,828	2,523	6.42%	0.62%
Regional NSW	2,777,125	3,029,880	252,755	9.10%	0.87%

Source: ABS Regional Population Growth, Australia

Age composition (2001-2011)

Over the period between 2001 and 2011 Ballina witnessed a significant decrease in the total number of residents within the age bracket of 05 to 49 years (-1,383 persons or -57%). As a proportion of the total population, this age cohort decreased from a total proportion of 57% to 50% over the period (-7%).

The age cohorts that witnessed the greatest growth, in terms of total number and proportional change, were the age cohorts of 50 to 59 years and 60 to 69 years (parents and homebuilders and empty nesters and retirees), which increased by a total of 2,865 persons or 35%.

Table 5: Age composition

	Ballina LGA					
Age structure - Service age groups	2001		2011		Difference 2001-2011	% change 2001-2011
	#	%	#	%		
Babies and pre-schoolers (0 to 4)	2,101	6%	2,173	5%	72	3%
Primary schoolers (5 to 11)	3,630	10%	3,347	8%	-283	-12%
Secondary schoolers (12 to 17)	3,390	9%	3,122	8%	-268	-11%
Tertiary education and independence (18 to 24)	2,427	7%	2,415	6%	-12	0%
Young workforce (25 to 34)	3,682	10%	3,306	8%	-376	-15%
Parents and homebuilders (35 to 49)	8,113	22%	7,669	19%	-444	-18%
Older workers and pre-retirees (50 to 59)	4,730	13%	5,950	15%	1,220	50%
Empty nesters and retirees (60 to 69)	3,523	9%	5,168	13%	1,645	68%
Seniors (70 to 84)	4,657	13%	4,897	12%	240	10%
Elderly aged (85 and over)	965	3%	1,598	4%	633	26%
Total	**37,218**	**100%**	**39,645**	**100%**	**2,427**	**100%**

Source: ABS Time Series

Population projections 2014-2031

The population of Ballina is projected to increase by 6,500 persons or 15% over the period between 2016 and 2031, representing an annual growth of 1%. While, the wider Regional NSW area is projected to increase by 10% over the period, representing an annual growth of 0.5%.

The strong growth within the LGA is projected to be as a result of immigration and internal migration from other areas such as Sydney rather than a natural increase[5]. These additional residents would likely increase the demand for additional dwellings and local employment opportunities.

Table 6: Population projections 2015-2031

	2016	2031	Total change	Annual growth
Ballina*	42,506	48,997	6,491	1.0%
Regional NSW**	3,051,300	3,366,700	315,400	0.5%
Greater Sydney	4,286,300	5,861,850	1,204,250	1.2%

Source: *Forecast ID, **Department of Planning 2014 Projections and HillPDA

Age composition forecasts

Ballina's population is forecast to continue to reflect that of an ageing population. This is evident in the proportion of residents aged 70+ years, which are forecast to increase by 47% over the period. This trend is in line with regional NSW which is also forecast to experience rapid growth in older cohorts.

However, as a result of the expected influx of new residents (form the internal migration and immigration), there is also expected to increases each of the other age cohorts with particular strong growth within the 0-14 and 35-49 age cohorts.

These two age cohorts are projected to increase by over 2,250 residents or +15% over the period. The 30-49 age cohort is typically regarded as parents and homebuilders however, with the large influx of new residents a large proportion of these would likely be seeking employment opportunities located close to home.

[5] Forecast ID

Table 7: Forecast age composition

	Ballina LGA*						Regional NSW % growth
	2011		2031		Total growth 11-31	Total % growth 11-31	16-31**
	#	%	#	%			
0-14 years	7,457	18%	8,576	20%	1,119	15%	5.0%
15-24 years	4,196	10%	4,407	10%	211	5%	-0.4%
25-34 years	3,788	9%	3,988	9%	200	5%	-2.8%
35-49 years	7,870	19%	9,002	21%	1,132	14%	10.3%
50-59 years	6,015	14%	6,137	14%	122	2%	-4.8%
60-69 years	6,081	14%	6,456	15%	375	6%	7.0%
70-84 years	5,428	13%	8,304	20%	2,876	53%	32.5%
85+ years	1,672	4%	2,125	5%	453	27%	8.5%
Total	**42,507**	**100%**	**48,995**	**102%**	**6,488**	**128%**	**55%**

Source: *Forecast ID, **Department of Planning 2014 Projections and HillPDA

Dwelling forecasts

HillPDA has applied the number of persons per dwelling sourced from the NSW DPE's population and dwelling projections to the population forecasted by Forecast ID.

Using this method it is anticipated that as a result of population increased and decreasing housing sized, Ballina LGA would need an additional 4,425 dwellings over the period to 2031. This represents an annual increase of 432 dwellings per annum over the 15 year period.

Table 8: Implied dwelling projections

	2016	2031	Increase	% increase
Ballina dwellings*	18,650	21,300	2,650	14%
Ballina population*	41,950	44,750	2,800	7%
Persons per dwelling	2.25	2.10		
Ballina population**	42,506	48,997	6,491	15%
Implied dwellings	18,897	23,321	4,424	23%

Source: *Department of Planning and Environment 2014 Projections, ** Forecast ID

Employment and income

As of 2014/15 approximately 15,300 jobs were provided within Ballina. Of these, the top two employment industries within the LGA were the retail trade (2,243 jobs or 15% of jobs) and construction (2,092 jobs or 14% of jobs).

Accommodation and food services was the fourth largest employment industry within the LGA employing 1,590 persons or 10% of total jobs. This reflects the areas popularity as a tourist destination.

Highly skilled employment industries witnessed a decrease in employment over the period with the industries of information media and telecommunications; financial and insurance services and professional, scientific and technical services witnessing a reduction of 83 jobs or a -7% decrease.

Table 9: Employment within Ballina

Industry	2011	2014/2015	Growth	% growth
Agriculture, Forestry and Fishing	720	694	-26	-3.7%
Mining	45	46	1	3.0%
Manufacturing	852	730	-122	-14.3%
Electricity, Gas, Water and Waste Services	121	122	1	0.7%
Construction	1,189	2,092	903	76.0%
Wholesale Trade	407	428	21	5.1%
Retail Trade	2,102	2,243	141	6.7%
Accommodation and Food Services	1,386	1,590	204	14.7%
Transport, Postal and Warehousing	427	501	74	17.3%
Information Media and Telecommunications	167	151	-16	-9.7%
Financial and Insurance Services	319	287	-32	-9.9%
Rental, Hiring and Real Estate Services	275	257	-18	-6.4%
Professional, Scientific and Technical Services	771	736	-35	-4.5%
Administrative and Support Services	340	531	191	56.1%
Public Administration and Safety	779	781	2	0.3%
Education and Training	1,390	1,248	-142	-10.2%
Health Care and Social Assistance	2,157	2,058	-99	-4.6%
Arts and Recreation Services	203	219	16	8.1%
Other Services	535	576	41	7.6%
Inadequately described	132			
Not stated	127			
Total	**14,444**	**15,291**	**1,106**	**7.7%**

Source: Forecast ID, BTS JTW 2011

Resident industry of employment

As of 2011, 16,534 local residents were employed within the LGA. This represented 51% of persons over the age of 15 years within the area. The three largest industries that residents were employed within as of 2011 were retail trade; education and training and health

care and social assistance, which when combined, employed 6,437 or 39% of employed residents.

It must also be noted that as of 2011, 3,611 or 22% of employed residents worked within industries that incorporated marine related services. These industries are manufacturing; transport, postal and warehousing and accommodation and food services.

Table 10: Resident labour force industry of employment (2001-11)

Industry	Ballina LGA					
	2001		2011		Growth 01-11	% Growth 01-11
	#	%	#	%		
Agriculture, forestry and fishing	1,004	7.09%	709	4.3%	-295	-29%
Mining	25	0.18%	68	0.4%	43	172%
Manufacturing	1,093	7.72%	983	5.9%	-110	-10%
Electricity, gas, water and waste services	89	0.63%	148	0.9%	59	66%
Construction	1,002	7.07%	1,502	9.1%	500	50%
Wholesale trade	580	4.09%	468	2.8%	-112	-19%
Retail trade	1,924	13.58%	2,145	13.0%	221	11%
Accommodation and food services	1,203	8.49%	1,466	8.9%	263	22%
Transport, postal and warehousing	453	3.20%	483	2.9%	30	7%
Information media and telecommunications	247	1.74%	219	1.3%	-28	-11%
Financial and insurance services	346	2.44%	383	2.3%	37	11%
Rental, hiring and real estate services	304	2.15%	291	1.8%	-13	-4%
Professional, scientific and technical services	661	4.67%	845	5.1%	184	28%
Administrative and support services	422	2.98%	487	2.9%	65	15%
Public administration and safety	672	4.74%	935	5.7%	263	39%
Education and training	1,430	10.09%	1,741	10.5%	311	22%
Health care and social assistance	1,655	11.68%	2,551	15.4%	896	54%
Arts and recreation services	171	1.21%	224	1.4%	53	31%
Other services	590	4.16%	614	3.7%	24	4%
Inadequately described/Not stated	295	2.08%	272	1.6%	-23	-8%
Total	**14,166**	**100%**	**16,534**	**100%**	**2,368**	**17%**

Source: ABS Time Series

Marine related industry employment

As of 2011 there were 56 jobs provided within the LGA attributed to marine industries. The two top marine industries that provided

employment within the LGA were shipbuilding and repair services (13 jobs) and commercial fishing (12 jobs).

Of local residents 76 persons as of 2011 were employed within marine related industries. However, it is unsure where there place of work is. Commercial fishing employed 27 local residents while shipbuilding and repair services only employed 6 residents.

This reveals three points:

1. There is potential for marine related industries to grow within the LGA;
2. There is potential for commercial fishing to increase within the LGA; and
3. Shipbuilding and repair services imported workers from outside the LGA.

Table 11: Marine related industry employment (2011)

Industry	Jobs in LGA*	Employed Residents
Aquaculture	7	5
Boatbuilding and Repair Services	6	5
Commercial Fishing	12	27
Marine Equipment Retailing	9	5
Scenic and Sightseeing Transport	9	10
Seafood Processing	0	4
Shipbuilding and Repair Services	13	6
Water Freight Transport	0	7
Water Passenger Transport	0	0
Water Transport Support Services	0	3
Water Transport, nfd	0	4
Total	**56**	**76**

Source: ABS Table Builder, *Place of Work – the number of jobs provided in the LGA by that industry, **number of local residents that are employed within that industry regardless of Place of Work.

Marine industry value added

Industry Value Added (IVA) refers to the market value of goods and services produced by an industry, minus the cost of goods and services used in the production process, which leaves the gross product of the industry (also called its Value Add).

The components include compensation of workers, net taxes on production and imports and gross operating surplus. IVA is commonly referred to as the contribution made to the local economy (GDP).

Table 12: Estimated industry value added ($2015)

Industry	Local workforce	Industry / Value Added / Worker	Industry Value Added ($m)
Shipbuilding and Repair Services	13	$89,752	$1.17
Boatbuilding and Repair Services	6	$89,752	$0.54
Aquaculture	7	$90,810	$0.64
Commercial fishing	12	$52,713	$0.63
Marine Equipment Retailing	9	$61,331	$0.55
Scenic and Sightseeing Transport	9	$52,278	$0.47
Total	**56**		**$4.00**

Source: ABS 2011, IBIS World Reports 2015 and HillPDA

As shown in the above table, marine industries are estimated to contribute around $4 million every year to the local Ballina economy.

Gross annual household income

Annual household incomes within Ballina were comparative to that of wider Regional NSW. However, as evident in the median household income, the earning potential within the LGA was slightly below that of Regional NSW.

This lower earning potential could be as a result of only 9% of local residents being employed within higher skilled industries such as information media and telecommunications; financial and insurance services and professional, scientific and technical service industries.

Table 13: Gross annual household income (2011)

Annual Income	Ballina LGA	Regional NSW
$0 - $20,800	17%	20%
$20,800 - $41,600	28%	27%
$41,600 - $65,000	20%	18%
$65,000 - $104,000	16%	15%
$104,000 - $156000	7%	8%
$156,000+	2%	3%
Median household income	**$48,349**	**$50,016**

Source: ABS time series, HillPDA

Marine tourism

Assessing the value of marine related tourism is difficult. This being said, the contribution that marine relate tourism provides to the local economy is undoubtedly substantial.

While there is a standard approach of attributing the economic contribution for tourism to a geographical area, there is no consensus on the approach for quantifying or identifying the contribution marine tourism provides.

The only existing methodology for this apportionment was developed in the 1989 *report Oceans of Wealth?.* In the report, 19% of international and 40% of domestic tourism was attributed to marine related activities[6].

Given the significant exposure to water and coastal based activities that the LGA provides, these portions have been applied to tourism statistics for the area. This conveys an understanding of the potential contribution that marine tourism provides to the local economy.

Economic contribution of visitors

HillPDA has estimated that expenditure captured within Ballina LGA, as a result of marine related tourism, was approximately $71 million in 2014 or 39% of all tourism related spend.

Table 14: Estimated expenditure from marine tourism ($2014)

	Total visitor nights / days (2014/15)	Marine tourism capture rates	Average spend per night or day (Sydney Area)	Estimated tourism spend related to marine tourism ($m)
International Tourists	13,000	19%	$551	$1.36
Domestic Overnight	280,000	40%	$494	$55.33
Domestic Day	327,000	40%	$109	$14.26
Total	**1,423,733**			**$70.95**

Source: Destination NSW LGA Profile Ballina LGA 2014

[6] The AIMS Index of Marine Industry 2014

4 BOAT STORAGE PROJECTIONS

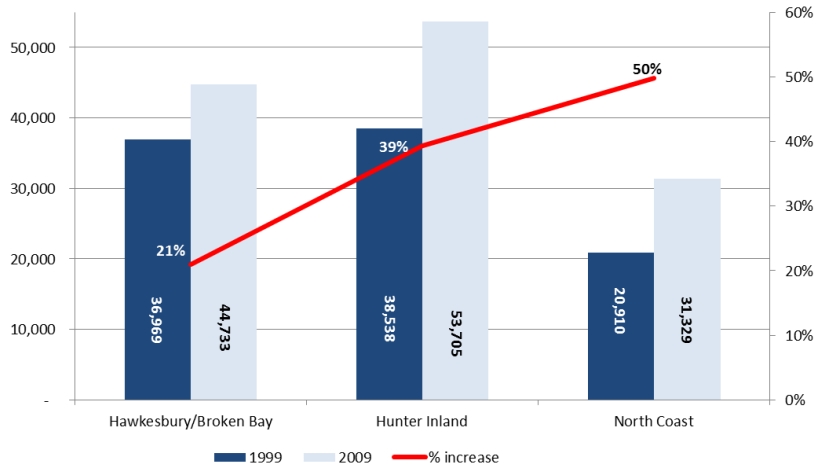
The following undertakes a supply and demand analysis relating to boat usage and storage within Ballina LGA. This Chapter has been sourced from various government, industry and HillPDA reports including NSW Boat Ownership and Storage: Growth Forecasts to 2026, NSW Roads and Maritime Services (RMS) and Transport NSW.

Regional boat ownership trends (1999 to 2009)

In 2010, the then NSW Maritime released a study entitled *NSW Boat Ownership and Storage Growth Forecasts to 2026*. Over the period between 1999 and 2009 the North Coast region (which Ballina LGA is included) experienced a total increase in boat ownership of 10,419 boats or 50%. Of the surrounding regions this was the largest proportional growth however, the Hunter region experienced the greatest total growth in registration with a 15,167 or 39% increase in registrations.

If this growth rate were to continue, then over the ten year period from 2009 an additional 15,665 boats could be accommodated within the North Coast region. This would increase the total number of registered boats to approximately 47,000, highlighting the popularity of the region for on water boating activities increasing the need for more on-water storage facilities.

Figure 5: Increase in Boat Registrations (1999 to 2009)



Source: NSW Boat Ownership and Storage Growth Forecasts to 2026

Boat storage types

Boat storage can be divided into boats stored on trailers and non-trailers. The focus of this study is on non-trailer storage types such as:

- Private swing moorings (PML);
- Commercial swing moorings (CML Sites);
- Commercial marina wet berths;
- Private marina and mooring pens; and
- Dry storage.

The six metre mark for boat storage

Boats of all sizes need to be stored either on or off water. Boats longer than six metres are stored on-water in either marina berths or moorings at a higher frequency than those of a smaller nature. As such, an increase in boats of this size requires an increase in on-water storage infrastructure. Therefore, this demand and supply analysis focuses on boats that are six metres and over.

Study area boating trends

Study area boat registrations

As of 2016, there were 2,923 registered boats within Ballina LGA. Of this total 2,642 or 90% were for boats under the length of six metres while the remaining over this length.

Since 2006, boat registrations have increased by 1,275 registrations with boats over six metres accounting for 164 or 13% of the growth. This historic data reveals an annual increase for boats over six metres of 16 boats per annum or an annual increase of 9.2% per annum.

Table 15: Ballina LGA boat registration data (2006-16)

Year	Vessel size		Total
	<6m	>6m	
2006	1,531	117	**1,648**
2007	1,634	133	**1,767**
2008	1,727	148	**1,875**
2009	1,823	169	**1,992**
2010	1,963	194	**2,157**
2011	2,084	214	**2,298**
2012	2,191	231	**2,422**
2013	2,306	248	**2,554**
2014	2,426	259	**2,685**
2015	2,559	275	**2,834**
2016	2,642	281	**2,923**
Total increase 03-15	**1,111**	**164**	**1,275**

% increase 03-15	**73%**	**140%**	**77%**
Annual increase	**111**	**16**	**128**
Annual compound growth	**5.61%**	**9.16%**	**5.90%**

Source: RMS Boat Registration Data

The significant annual increase in registrations for boats over six meters further reinforces the present day demand for on-water storage within Ballina

It must also be noted that consultation with local marine industry representatives, indicate that there is additional demand for on-water storage within Ballina above that of the resident population. This additional demand is driven by persons seeking to store their boats within Ballina during the cyclone season to the north and colder winters to the south. The airport also provides an opportunity for these persons to "fly in and fly out". These members, visitors would the demand for on-water storage (primarily berthing and dry storage) above the number of resident registrations.

Boat ownership to population

Boat ownership as a proportion of overall population has been increasing over the previous 10 years, from 4% in 2005 to 7% in 2015.

It is interesting to note that around the Global Financial Crisis (GFC) in 2009, boat ownership levels within Ballina still increased which was opposite to that experienced in other areas such as Pittwater in Sydney.

Table 16: Proportion of boats to Ballina's population

	LGA	Boat size		Total boats
	Ballina	<6m	>6m	
2005	39,305	3.90%	0.30%	4%
2006	39,537	4.13%	0.34%	4%
2007	39,284	4.40%	0.38%	5%
2008	40,020	4.56%	0.42%	5%
2009	40,295	4.87%	0.48%	5%
2010	40,571	5.14%	0.53%	6%
2011	40,747	5.38%	0.57%	6%
2012	41,015	5.62%	0.60%	6%
2013	41,321	5.87%	0.63%	6%
2014	41,617	6.15%	0.66%	7%
2015	41,828	6.32%	0.67%	7%

Source: Forecast.id, RMS Registrations and HillPDA

Existing storage volume

It is estimated that as of 2016, Ballina LGA contained at least 319 on-water storage options (including approximately 200 private jetties[7]). Additionally there were an estimated 10 dry storage spaces and dinghy and trailer storage areas.

Of the approximately 311 storage spaces for boats (excluding sailing clubs and dinghy storage) 45 or 14% were attributed to swing moorings, 64 or 20% were commercial berths, 200 or 63% were private jetties and ten or 3% were on-land dry storage.

Table 17: Existing storage within study area

Storage type	Storage #	Storage %
Marina berths	64	20%
Swing moorings	45	14%
Private jetties	200	63%
Dry Storage	10	3%
Total	**319**	**100%**

Source: RMS, HillPDA

Commercial berth facilities

There are two locations within Ballina which provide 54 on-water berths for commercial and private boats. Ballina Trawler Harbour provides 32 of which 17 are reserved for commercial trawlers. An additional 22 berths are provided at Martin Street Harbour.

Furthermore there is an estimated ten berths provided within the Smith Industrial Estate, however these are primarily associated with commercial businesses such as the slipway (five berths).

Swing moorings

As of 2016 there were 45 swing moorings within Ballina LGA[8]. Of these swing moorings 38 moorings or 84% were attributed to Private Moorings (PMs)[9], while the remaining 24 moorings or 16% were Commercial Moorings (CMs)[10].

Of the 45 swing moorings within Ballina 33 were provided in Emigrant Creek, 10 in Richmond River and 2 were provided in Broadwater.

[7] Desktop review
[8] RMS
[9] A private mooring licence permits the licensee to moor their vessel on navigable waters and is renewable annually
[10] A commercial mooring license is issued to a business entity trading to provide marine type services to the boating public

Private jetties

A desktop review of the study area has identified approximate 200 private jetties. These jetties provide on-water storage for boats and off-water storage for smaller boats.

As the exact number of boats stored on-water at private jetties is difficult to source, there has been an assumption that these jetties currently provide one on-water storage space.

Dry storage

It is estimated that there are at least 10 dry and hard stand storage spaces within Ballina LGA. These spaces were provided by Ballina Slip way and catered for boats in the size range of 25 to 50 foot. The boats were primary stored while they were worked upon.

Sailing and other clubs

Richmond River Sailing and Rowing Club is located at 4 River Street. Clubs and facilities of this nature often provide storage to their members for smaller boats (less than 6 metres). These boats are predominantly stored in dry stack within the club or its surrounds. As stated within the Regional Boating Plan:

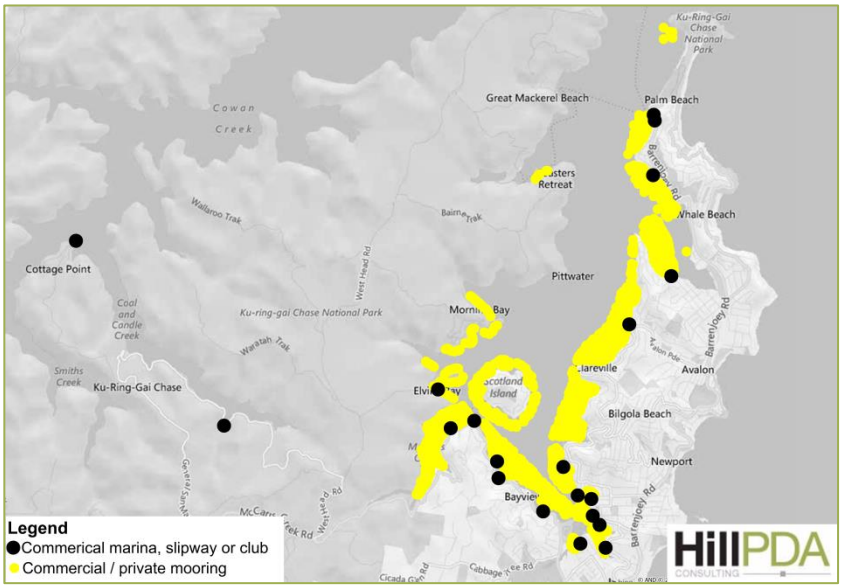
"*sailing clubs and associated facilities can often store from small numbers to in excess of 60 sailing (beach-launch) craft. Those boats stored on land are usually not required to be registered and so do not appear in those total numbers*."

As such, this study does not quantify the number of boats stored at these facilities and excludes them from boating storage projections.

Swing moorings verse marina berths, a Pittwater case study

When it comes to on-water storage options, swing moorings usually contribute the greatest both proportionally and numerically. This is evident in there being almost 2.5 swing moorings to every berth within Pittwater (Figure 6).

Figure 6: Existing storage by broad type, Pittwater 2015



Source: HillPDA

As evident in the map above, the large number of swing moorings has had a corresponding effect of taking up a larger proportion of water-space compared to other on-water storage options. During consultation with marine related industries within Pittwater (these included marinas, ferries and scenic air tours) the number of swing moorings was raised as an issue for increasing navigation and manoeuvring difficulties.

To give a comparison between the area of water-space needed to store approximately the same number of boats the following analysis was undertaken.

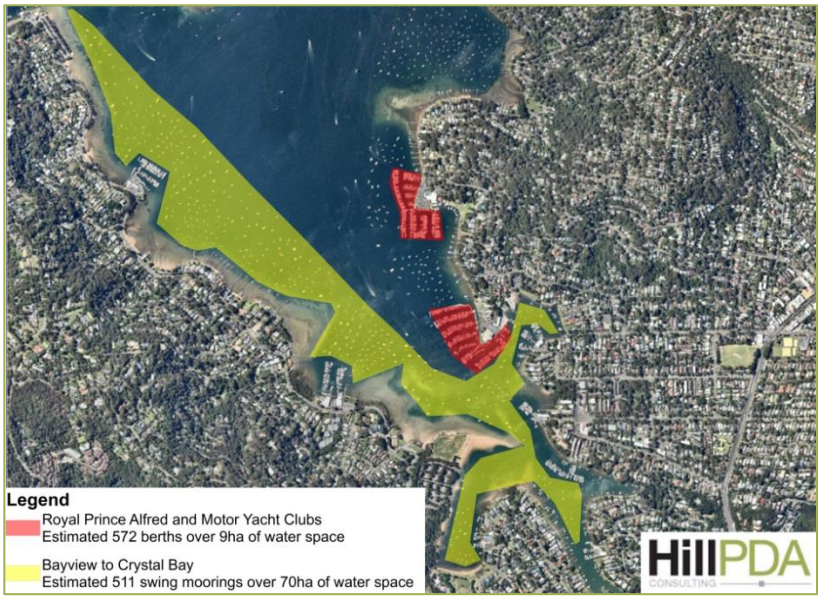
As of 2015, the bays and coves of Bayview, Crystal Bay, Winji Jimmi and Winnererremy Bay contained a total of 511 swing moorings over an area roughly calculated at approximately 70ha of water-space. By comparison the Royal Prince Alfred Yacht Club and Royal Motor Yacht Club provide 572 berths over an estimated 9ha of water-space (as seen in the figure below, marinas highlighted red).

The two clubs provided an additional 61 berths or +12%, over a water-space area that was in size, 61ha or 678% smaller when compared to the analysed swing mooring area.

Further, this analysis highlights the efficiency of marina berth storage where 64 berths can be provided for every 1ha compared to seven swing moorings per 1ha.

However, it is noted that swing mooring provide a crucial cost efficient solution for many local residents and visitors when compared to berthing rates. This analysis was undertaken to provide insight from a water-space take up point of view only. Furthermore, there are more efficient mooring designs such as a two tie up system (stern and bow).

Figure 7: On water-space comparison swing moorings verse berths (Pittwater)

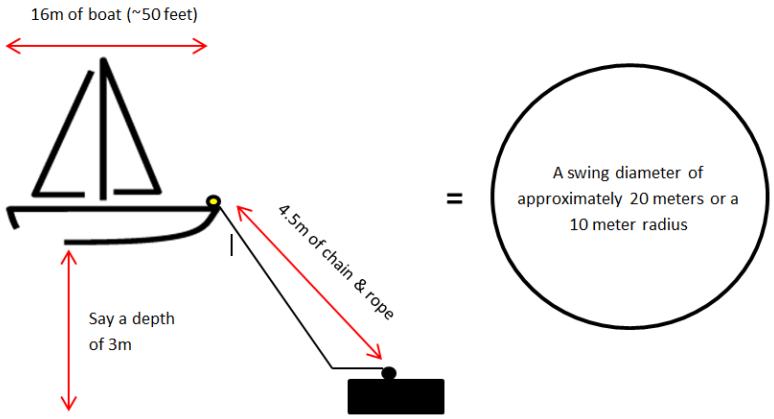


Source: HillPDA, RMS 2015

The primary reason for this difference in amount of water-space taken up by swing moorings verse berth - is by their very nature swing moorings need “swing” space to allow for changes in tide and wind direction. HillPDA has calculated an average swing space of 20 metres in diameter for a 16 metre boat within three metres of water. The amount of rope and chain needed has been calculated at an average of 1.5 times the depth[11]. The figure below provides a visual diagram of this.

[11] RMS 2015

Figure 8: Swing mooring, "swing" space calculation diagram



Source: HillPDA

With an average swing space of 20 metres in diameter, HillPDA has calculated that one swing mooring equates to eight berths. This has been calculated by overlaying a 20 metre diameter circle over four marinas within Pittwater.

Figure 9: 10 Meter radius over wet berths (Pittwater)

Source: Nearmap (radiuses) – Top Left – Royal Prince Alfred Yacht Club (8 berths), Top Right Royal Motor Yacht Club (8 berths), bottom left The Quays Marina (7 – 8 berths) and bottom right Holemport Marina (8 berths),

The importance of this analysis is that with increasing boat sizes there would be a corresponding increase in swing space as a result of either deeper moorings or the increase in boat size itself. The increasing swing space would result in a reduced number for swing moorings to be accommodated within the Richmond River (i.e reduced saturation point) or expansion into additional areas.

Furthermore, the narrow nature of the Richmond River when compared to traditional harbours could further reduce the number of additional swing moorings while maintaining free navigation. Marina berths could provide a more effective and efficient storage option in terms of on water-space usage.

Boat ownership projections

Forecasting boat ownership within Ballina area has been undertaken to provide an estimate to the level of additional on-water storage needed over the next 15 years. This is intended to provide guidance as to the number of berths that could be accommodated within the master plan.

Forecasting methodology

Historic annual growth rate

HillPDA applied a methodology that used the historic annual growth in boat registrations and population to deduce the real increase in boat registrations over the period from 2006 and 2016. This was applied separately to the categories of boats under and over six metres.

These “real increase” proportions were then applied to the forecast annual population growth rate within Ballina LGA for 2015 to 2031 (which was 0.95%). This determined the forecast proportion for boat under and over six metres separately.

It was determined that boats under six metres would increase by 5.8% per annum while boats over six metres would increase by 9.4% per annum.

These proportions were then applied to the 2016 boat registration figure provided by RMS to forecast the number of vessel ownerships within the study area to 2031 (Table 18).

Using the above methodology it is estimated that over the period between 2016 and 2031 boat ownership levels are likely to increase by approximately 4,352 boats or +149% over the 15 years period.

Furthermore, boats over six metres are forecast to increase by 800 boats or 285% over the period, representing an annual increase of 53 boats.

Applied annual growth rate

The “real increase” growth surmised above has been inflated by boat ownership levels almost doubling over the previous ten year period, with boats over 6 meters increasing by a proportion of 140% (164 boats) over the period.

As identified above applying the “real increase” boat growth proportions, an additional 800 boats over 6 meters would be realised within Ballina LGA in the next 15 years. This is unlikely to occur and as such sustaining these growth rates is deemed unrealistic, considering State projections that project annual boat ownership levels across NSW to increase at 2.9% per annum.

As such, HillPDA has applied a conservative annual growth rate of 3% for boats under 6 meters and 4% for boats over 6 meters.

Previous studies undertaken by HillPDA have found that “real increases” in boat ownership levels within the Sydney area have been increasing at 2.54% per annum for boats over 6 meters and around 1.9% for boats over 6 meters.

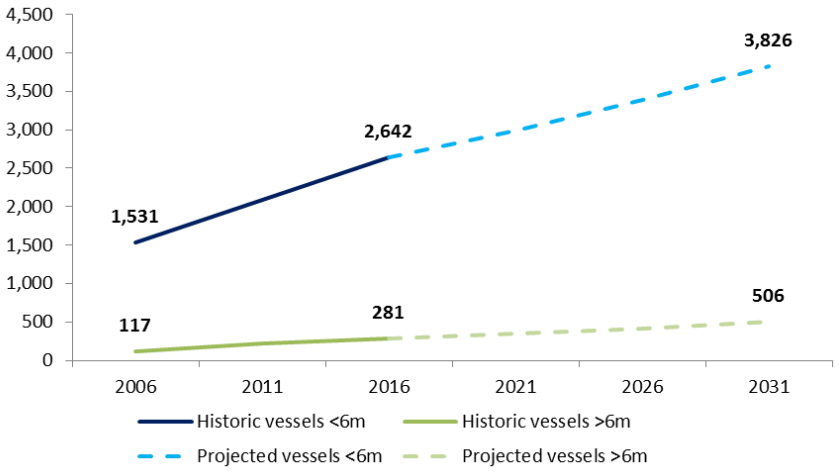
Therefore, it would be presumable that these growth rates would be appropriate for Ballina, however, HillPDA has applied a higher growth rate for boats over six meters to reflect the historic increase in boats of this size within the area.

Boat ownership projections

Using the above methodology it is estimated that over the period between 2016 and 2031 boat ownership levels are likely to increase by approximately 1,409 boats or +48% over the 15 years period.

This can be seen in Figure 10 below.

Figure 10: Study area boat ownership projections by size



Source: HillPDA

Furthermore, boats over six metres are forecast to increase by 225 boats or 80% over the period, representing an annual increase of 15 boats.

However, with an aging population, increasing persons within the age cohort of home builders and increasing boat sizes, this annual rate would be expected to increase in the coming decades.

Table 18: Study area boat ownership projections by size

Year	Vessel size		Total
	<6m	>6m	
2016	2,642	281	**2,923**
2021	2,989	342	**3,331**
2026	3,382	416	**3,798**
2031	3,826	506	**4,332**
Growth #	**1,184**	**225**	**1,409**
Growth %	**45%**	**80%**	**48%**
Annual Growth	**79**	**15**	**94**

Source: HillPDA 2016

Boat storage demand projections

The following undertakes a demand analysis for storage options for boats over six metres within the study area.

Boat storage projections

The five year incremental growth in boat ownership for vessels over six metres was applied to various boat storage options proportions (excluding trailers).

Two different scenarios were tested, these were as follows:

i) Scenario 1– this scenario applies the current proportions of storage within the study area as identified in the 2016 audit; and

ii) Scenario 2 – applies minimal storage growth within swing moorings with additional growth being diverted to marina berths and dry storage. The trend of on-water storage being diverted form swing moorings to marina berths is being witnessed in Sydney Harbour locations such as Middle Harbour. Furthermore, swing mooring growth within Richmond River would be limited as a result of navigation, flooding and moving siltation issues.

These proportions are provided in the table below.

Table 19: Scenario proportions by storage type

	Private swing moorings	Commercial swing moorings	Commercial marina berths	Private jetties	Dry storage
Scenario 1	10%	4%	20%	63%	3%
Scenario 2	5%	5%	55%	15%	20%

Source: HillPDA

Scenario 1 storage projections

Applying the current storage proportions to the projected five year incremental increase in boat ownership levels reveals that the study area would likely need an additional 23 private swing moorings, 9 commercial swing moorings, 45 marina berths, 142 private jetties and 7 dry storage spaces.

Using the take up of water-space for marina berths verse swing moorings, in this scenario an additional 4.5ha of water-space would likely be needed for the 32 additional swing moorings and 0.7ha for the berths.

Table 20: Base case storage projections

Scenario 1	Boat growth (five year increase)	Private swing moorings	Commercial swing moorings	Commercial marina berths	Private jetties	Dry storage	Total
		10%	4%	20%	63%	3%	
2016-21	61	6	2	12	38	2	61
2021-26	74	7	3	15	47	2	74
2026-31	90	9	4	18	57	3	90
Total	**225**	**23**	**9**	**45**	**142**	**7**	**225**

Source: HillPDA

Scenario 2 projections

Applying minimal growth proportions to swing moorings within the area and directing this growth towards marina berths (a trend that is currently underway within surrounding Sydney Harbour locations, while reflecting the restrictive nature of Richmond River and flooding issues) to the projected five year incremental increase in boat ownership levels reveals that the study area would likely need an additional 24 private swing moorings, 24 commercial swing moorings, 400 marina berths, 112 private jetties and 240 dry storage spaces.

Using the take up of water-space for marina berths verse swing moorings, in this scenario an additional 3.2ha of water-space would likely be needed for the 124 additional swing moorings and 1.9ha for the berths.

Table 21: Scenario 2 projections

Scenario 2	Boat growth (five year increase)	Private swing moorings	Commercial swing moorings	Commercial marina berths	Private jetties	Dry storage	Total
		5%	5%	55%	15%	20%	
2015-21	61	3	3	33	9	12	61
2021-26	74	4	4	41	11	15	74
2026-31	90	5	5	50	14	18	90
Total	**225**	**11**	**11**	**124**	**34**	**45**	**225**

Source: HillPDA

Implications for Trawler Harbour Marina

The subject site currently provides 34 occupied berths. Of these 17 berths are reserved for a commercials fishing fleet. A site visit to the subject site revealed a current fleet of around the size of six to eight fishing boats. However, it is recommended that the 17 reserved spaces be replaced for use by the commercial fishing fleet or emergency services upon completion.

Taking the above into account, it is surmisable that a marina of approximately 110 berths could be accommodated within the subject site.

This would increase marina berth storage options within the locality by an additional 76 berths, with a residual demand of 48 berths remaining by 2031. These could be absorbed by an expansion of the subject site marina in the future or redevelopment and expansion of Martin Street Harbour. For this reason it is recommended that water

space at Martin Street Harbour and around the subject site be reserved for any possible expansions.

It is also recommended that some off-water space be reserved for hard stand storage. This would provide additional price points for storage to residents.

5 MARINE INDUSTRY CONSULTATION

This Chapter summarises the common themes identified during stakeholder engagement with local representatives from marine related industries. The issues relating to the provision of marine infrastructure and preferred outcomes were all identified by the various stakeholders that participated in consultation.

Views within this Chapter do not reflect those of HillPDA or stakeholders that did not participate.

Stakeholder engagement

Stakeholder engagement is an important element in the successful development of the master plan. Council has undertaken prior stakeholder engagement with the findings of this engagement being summarised in this Chapter.

HillPDA has also undertaken informal interviews with local businesses, cooperatives, emergency services and other marine related services to understand the likely marine facilities that could be incorporated into a successful master plan.

Council stakeholder meetings

Stakeholders were invited to participate in face-to-face meetings with the project team to discuss the Project. Participants in these meetings were affiliated with the development industry, Port of Ballina Taskforce, Ballina Fishermen's Coop, the boat building and servicing industry, recreational fishing, recreational boating, other commercial boating enterprises and the Ballina Chamber of Commerce.

Overall participants of the engagement were supportive of the Project and identified the following elements to Council as desirable for inclusion in the master plan:

- Expansion of marina area to accommodate more boats;
- The Project to be developed in conjunction with the Martin Street marina so that options and facilities complement each other;
- Use this site for the longer-term and day-to-day servicing of boats (refuelling, waste pump- out etc) and Martin Street for short-term stay (1 -2 nights) and tourist activities;

- Do not include hard-tack facilities for boat building and major servicing here as operations are too dirty and noisy;
- Boat storage facilities, in particular 'rack and stack' and with or without trailers;
- Provision of safe and secure refuelling (diesel and ULP) and waste pump-out facilities;
- Maintenance of the marina entry from Fisheries Creek, although design and width should be reconsidered;
- Maintenance of the commercial fishing fleet within the subject site;
- Multiple use, including the commercial fishing fleet, recreational boating, access for recreational fishing, marine-focussed retail and servicing (eg marine mechanic), eateries, passive recreational access and opportunities, and accommodation;
- Provision of facilities for boat-based travellers, such as toilets, showers and laundry;
- Relocation of the Fishermen's Coop onsite to provide retail access to fresh fish and to enable people to watch the trawlers unloading;
- Upgrade of boat ramp and/or extension of southern pontoon in Fisheries Creek;
- Accommodation, with across the board support for short-term / tourist accommodation;
- Development of associated café and / or restaurant;
- General recreation facilities, such as picnic tables, open space, swimmer access to the River;
- Public amenities: toilets, rubbish bins, fish cleaning areas;
- Effective security for the marina, boats, retail and commercial shops and accommodation areas; and
- Maintenance of public access and amenity, especially to the riverfront.

Ballina fisherman's cooperative

Consolation undertaken by HillPDA with Ballina Fisherman's Cooperative highlighted the opportunity for Fishermen's Cooperative to be accommodated within the master plan.

It was noted that the current location of the Coop is disconnected from the harbour and relocation to the harbour would provide better

integration with fishing operations, provide an anchor role for the development upon operation. The relocation would further allow visitors eat the seafood which they saw unloaded from the trawlers minutes before.

This would provide a better connection between the visitors and there food, which would be a draw card to potential tourists. This concept is currently performed at Sydney's fish markets. Approximately 2,000sqm of leasable space was sated as being sufficient for their operations.

The Coop also indicated that on-water and off-water storage, toilet, shower, out-pumping and repair facilities should also be considered for inclusion in the master plan to support the private boat operations of the master plan.

The breakwater or "pass" was also noted as needing continual maintenance to maintain free navigation. For example, as a result of shifting sand bars it was stated that only 60 working days a year is possible for the trawler fleet to fish out of the Richmond River, whereas 120 days is possible in Tweed Heads. This fact has initiated the relocation of a proportion of the fleet (2 boats) to Tweed Heads even though the crew reside within Ballina.

Ballina slipway

Ballina slipway is located within Smith Drive Industrial Estate. The location of this Estate is optimal as it reduces the potential for land use conflicts and allows for heavy marine services to occur unabated. The close proximity of existing residential uses to the subject site coupled with the possible inclusion of a residential component in the master plan would reduce the appropriateness of such uses being included in the master plan.

Consultation undertaken by HillPDA with Ballina slipway revealed that they provided five berths, hard stand storage, swing moorings and four to five trailer storage options. It was stated that these storage options were highly sought after with locals and persons from along the east coast.

The lack of on-water storage options limited boat ownership levels within the Ballina as well as the number and length of stay for boats visiting the area. The close location of the airport provides the opportunity for Ballina to become an area were boat owners from cyclone inclined areas or areas were winters are colder to relocate for a period while the owners fly in and fly out.

Regarding marine infrastructure that is lacking within Ballina it was noted that refuelling pumps and on-water storage were the main forms of infrastructure that were needed.

The redevelopment of the subject site provided an ideal opportunity to provide on-water storage and refuelling pumps as well as commercial space for associated marine services such as a mechanic, canvas work, boat sales and cafes.

Ballina marineland boat sales

Consultation undertaken by HillPDA with local boat sales representative indicated that the lack of storage options within the locality was the primary reason for locals opting not to owner a boat over 6 meters (boats over this size a predominately stored on-water).

The development of a marina with on-water storage options would likely have a corresponding effect of increased local boat sales, with the marina "filling up" with boats and relieving this latent demand.

It was also noted that local elderly residents were deterred from owning boats as the lack of marine infrastructure such as platoon berthing options, pump-outs and fuel pumps increased the difficulty associated with ownership.

For example currently residents are forced to carry jerry can to fill up their boats. This lack of adequate fuelling areas coupled with floating berthing pontoon which would allow easy access to elderly resident has deterred many older residents from boat ownership.

Development of a marina would also ideally include come commercial space. This would primarily be occupied by related services such as boat sales, boating hire, marine equipment and marine apparel. This would allow clustering of marine services which are currently dispersed though out the town.

Main actions

- Possible relocation of the Fisherman's Coop to the subject site or the provision of 2,000sqm for the development of a fresh seafood outlet;
- Possible additional café or restaurant;
- Commercial tenant space (5-10 small suits)

- Division of the harbour into a working side and private side (no clear division or impermeable barrier);
- Increased on-water berthing storage;
- Inclusion of hard stand and/or tailer storage;
- Inclusion of a fuel pump;
- Inclusion of an out-pump; and
- Inclusion of shower and toilets.

6 MARKET INTELLIGENCE

This Chapter provides market research on sales and rental values for new residential apartment dwellings, retail units and development sites within Ballina.

The data provided in this section is based on consultation with market and industry experts as well as a review of property databases. This data informs the rates and assumptions applied in the feasibility testing for the identified master plan options in Section 7.

Market research key findings

Market research indicates that the following would likely be achievable as end sale and lease rates for land uses provided on the subject site:

- Average residential end sale vales for:
  - 1 Bedroom - $7,807 TO $8,500/sqm;
  - 2 Bedroom - $6,131 TO $7,000/sqm; and
  - 3 Bedroom - $7,019 TO $8,000/sqm.
- A lease rate range of $250 to $300/sqm for retail floorspace;
- A end sale value of $2,000 to $3,000/sqm for retail floorspace;
- A lease rate range of $200 to $250/sqm for commercial floorspace;
- A end sale value of $1,500 to $2,500/sqm for commercial floorspace; and
- An average charge rate of $6,000 for commercial berths;

Ballina market overview

Ballina's current residential market is stable with a variety of housing stock available on the market. This stability has been driven by the areas popularity as a holiday location, retirement area and in recent years a more affordable destination.

Ballina is predominantly comprised of single detached low density housing with a mix of townhouse and apartment style developments. Discussions with local agents indicated that the owner- occupier market comprises of a mix of buyers; downsizers and young families.

Furthermore a number of investors from Sydney or Queensland have purchased dwellings within Ballina either as a holiday house, which they may let in the popular months of the year, or to live in. The recent growth in Sydney house prices was noted as a contributor for persons seeking to purchase and live in the area.

The presence of Ballina-Byron Gateway airport provides a key attractor to these new residents with major eastern board cities being within an hour commute by flight.

Demand for apartments was noted as being strong within the area with locations within proximity of a town centre being highly sought after. Water views were also another key attractor for potential purchases.

Recent new housing releases in places such as Ballina Heights and Ferngrove have assisted in creating a more affordable detached housing market.

According to Residex, the current median sale price for residential hoses in Ballina suburb was $452,000[12] as of March 2016; the median demonstrated a strong increase of 10% from March 2016, when compared to the suburbs of East Ballina and West Ballina which each recorded a median growth of 8.9% and 6.5% respectively to record a median value of $613,500 and $501,000 respectively. However this was below that of Bryon Bay which recorded a median house price of $1million in March 2016, representing a growth of 24% from that recorded in 2015.

Strata median sale price in Ballina suburb as of March 2016 was $351,500, representing a 10.9% growth form the previous year. This proportional growth was just below that of Byron Bay (12.35) which recorded a median price for strata of $561,000.

East Ballina and West Ballina suburbs both recorded positive strata price growths over the year (8% and 9.6% respectively) to a median of $425,000 and $367,500 respectively.

Apartments sales evidence

The majority of apartment sales within Ballina Township are comprises of “second hand” stock with new stock limited to a hand full of developments in recent years.

[12] Residex, State Market Report NSW March 2016

Currently the Reside Living project is the only residential apartment developments being marketed in Ballina. The project comprises of 34 apartments with a mix of one, two and three bedroom apartments bounded by River Street and Richmond River. Table 22 provides a summary of the new development details as well as sale values and internal apartment sizes.

A full breakdown of available end sale values by apartment number, level and bedroom mix can be sourced in Appendix A.

It must be noted that although this development is within close proximity to the subject site. Resides location near the town centre was noted as a major attractor to potential buyers and investors. The "out of centre" location of the subject site couple would likely see reduced end sale values, with one local agent stating as much as a 20% reduction.

Table 22: Reside Living, Ballina

	Reside Living	274 River Street, Ballina
The Reside Living development is located near the corner of Kerr and River Streets. The project comprises 34 apartments, five ground floor commercial suites (totalling 558sqm) and a 296sqm restaurant front the Richmond River.		
Marketing Agent:		LJ Hooker – Ballina
Apartments sold:		29 apartments have been sold off the plan to date. The retail on the ground floor was sold off the plan and is planned to be a restaurant.
Sales Rate:		Advised by the marketing agent, the project commenced marketing in September 2014, indicating a sales rate of approximately 1 unit every two months. It must be noted that sales occurred before DA approval and as such may have contributed to a slower take up rate.
Buyer Profiles:		Indicated by the marketing agent, buyer profiles comprise retirees and semi-retired persons/couples from Sydney that are looking to downsize or retire to Ballina.

Asking/Sale Prices						
Product Type	**Total apartments**	**Mixture (%)**	**# Sold To date**	**Internal sizes**	**Sale Price Range**	**Median $/sqm**
1 Bedroom	5	15%	5	59-66	$445,000-$500,000	$7,807
2 Bedroom	12	35%	10	103-123	$575,000 - $760,000	$6,131
3 Bedroom	17	50%	12	130	$850,000-$1,025,000	$7,019
Restaurant	1		1	200	$550,000 + GST	$2,750

Source: RP Data and enquiries to local marketing agents

Development site sales

Research has been undertaken to reveal current development sites within Ballina to understand the dollar per square metre on land value basis.

Table 23 displays a variety of development sites within Ballina, ranging in size, location and current zoning. From our analysis we concluded that B3 commercial zoned development sites sale per site value ranged from $386/sqm to $485/sqm, B4 mixed use and R3

medium density zoned for $510/sqm to $2,223/sqm. All sites range in dollar per square metre based on the size and price.

Table 23: Development site sales in Ballina

274 River Street, Ballina	$2,200,000 (May-2013)
	**Sale Price**: $2,200,000 **Date:** May-2013 **Land Size:** 4,534sqm **$/sqm:** $485/sqm **Zoning:** B3 **FSR:** NA **Proposed:** 34 units **$/unit:** $64,706 **Comments:** A DA lodged and approved after sale for a mixed commercial & residential development comprising 6 commercial suites, a restaurant and 34 residential apartments.
256-270 River Street, Ballina	**$2,300,000 (Oct-2013)**
	**Sale Price**: $2,300,000 **Date:** Oct-2013 **Land Size:** 5,962sqm **$/sqm:** $386/sqm **Zoning:** B3 **FSR:** NA **Proposed:** Nothing lodged **$/unit:** NA **Comments:** Acquired by the adjoining Ballina RSL Club (to the west). Enquiries to council indicate there has been no planning or advice given to the owners for potential redevelopment at this current time.
338 River Street, Ballina	**$1,075,000 (Dec-2014)**
	**Sale Price**:$1,075,000 **Date:** Dec-2014 **Land Size:** 2,106sqm **$/sqm:** $510/sqm **Zoning:** B4 **FSR:** NA **Proposed:** Nothing lodged **$/unit:** NA **Comments:** Corner frontage with rear lane access to workshop. Approximately 400sqm of building area plus hardstand.
27 Ross Street, Ballina	**Asking price $400,000**
	**Sale Price:** Current on the market. **Land Size:** 435sqm **$/sqm:** $919/sqm **Zoning:** R3 **FSR:** NA **Proposed:** 2 Townhouses **$/unit:** $200,000 **Comments:** The site has recently being subdivided from a larger lot to two townhouses and the residue house (see photo). Marketing agent has indicated the existing owner is taking off the market and proceeding to develop the lot with the existing DA.

69 Crane Street, Ballina	$2,250,000 (Dec-14)
	**Sale Price**: $2,250,000 **Date:** $2,250,000 **Land Size:** 1,012sqm **$/sqm:** $2,223/sqm **Zoning:** R3 **FSR:** NA **# units:** 5 x 2br units $/**unit:** $450,000 **Proposed:** Nothing lodged. **Comments:** The purchaser acquired the whole property comprising 5 x 2br units. The site has dual frontage.

Source: RP Data and enquiries to local marketing agents.

Retail market intelligence

The following provides an overview of the retail market within Ballina and West Ballina suburbs. It must be noted that recent activity has been subdued however, the below provides a good indication as to possible sale and lease rates to be achieved within the subject site.

Retail sales evidence

Our research has demonstrated that recent retail sales achieved in Ballina range from $2,000/sqm-$4,300/sqm depending on the size, location, parking and age of the premises.

Table 24: Retail sales

Address	Space use	Quality	Sale price	Sale date	Building Area	$/sqm
1/183 River St	Retail Shop	Second hand	$620,000	22-Apr-16	143	4,336
60 River St	Shop/Office	Second hand	$155,000	15-Dec-15	54	2,870
84 Kerr St	Shop	Second hand	$85,000	26-Nov-15	29	2,931
60 River St	Shop/Office	Second hand	$113,000	5-Aug-15	53	2,132
2 Martin St	Shop	Second hand	$155,000	29-Jul-15	43	3,605
26-54 River St	Shop	Second hand	$611,000	16-Jun-15	123	4,967

Source: PIMS

Retail lease evidence

Recent retail leases have been limited within Ballina and West Ballina (last 12 months) however, our research has demonstrated that recent leases achieved with retail in Ballina range from $250/sqm to $400/sqm depending on the size, location, parking and age of the premises.

The below premises are predominantly occur within the central business district of Ballina, as such, it would be anticipated that rents

achieved on the subject site would be on the lower side at least until the area was established.

Discussions with local agents highlighted the popularity of Ballina Main Street with tenants revealing that there was no available stock in this location and only one shop for lease close to the RSL. Depending on location net rents ranged between $240 to $350/sqm for retail space.

Table 25: Retail leases

Address	Floor(sqm)	Income (pa)	$/sqm	Net/gross	Date
247 River St	73	$18,720	$256	Net	On market
140 River St	35	$12,012	$343	Net	On market
165 River St	143	$75,400	$433	Net	On market
27 Cherry St	63	$18,000	$285	Net	7th May 2015

Source: HillPDA Research, PIMS, realcommercial.com.au

Commercial market intelligence

The following provides an overview of the commercial market within Ballina and West Ballina suburbs. It must be noted that recent activity has been subdued however, the below provides a good indication as to possible sale and lease rates to be achieved within the subject site.

Commercial sales

Our research has demonstrated that recent commercial sales achieved in Ballina range from $1,800/sqm to $3,500/sqm depending on the size, location, parking and age of the premises.

Table 26: Commercial sales

Address	Space use	Quality	Sale price	Sale date	Building Area	$/sqm
24 Moon St	Commercial Cottage	Second hand	420,000	14-10-15	120	3,500
339 River St	Office	Second hand	1,260,000	12-06-15	700	1,800
26 Southern Cross Dr	Office Suite	Second hand	248,000	2-07-15	93	2,667
7 Stinson St	Office Suite	Second hand	255,000	22-12-15	141	1,809

Source: PIMS

Commercial lease evidence

Our research has demonstrated that recent commercial leases achieved in Ballina range from $200 to $300/sqm depending on the size, location, parking and age of the premises.

Discussions with local agents indicated that rents ranged between $150 to $320/sqm. The lower end of this range was for commercial office space located within the industrial areas.

Table 27: Commercial leases

Address	Floor(sqm)	Income (pa)	$/sqm	Net/gross	Date
183 River St	143	$42,900	$300	Net	On market
95 Tamar St	81	$20,000	$247	Net	On market
144 Rver St	156	$31,644	$203	Net	On market
144 River St	28	$8,400	$300	Net	On market
216 River St	65	$19,500	$300	Net	1st Feb 2014
48 Tamar St	53	$11,400	$215	Net	9th Feb 2014

Source: HillPDA Research, PIMS, realcommercial.com.au

Marina berth rates

Coffs Harbour marina

Coffs Harbour Marina is located approximately 214km[13] or a two hour and forty four minute drive south of Ballina, within the township of Coffs Harbour.

The Marina provides 165 berths, slipway, hard stand, commercial / retail outlets, restaurants, pump out, laundry and a fuel outlet. The Marina also caters for a small fishing fleet which offloads to the Co-operative where locals and visitors can enjoy fresh seafood. The charge rates for the marina.

Yamba marina

Yamba Marina is located approximately 99km[14] or a one hour and twenty three minute drive south of Ballina, within the township of Yamba.

The Marina provides 90 berths, 15 swing moorings, slipway, hard stand, cafe, showers, laundry, pump out and a fuel outlet. The Marina also caters for a small fishing fleet which offloads to the Co-operative where locals and visitors can enjoy fresh seafood. The charge rates for the marina.

[13] Goggle drive times
[14] Goggle drive times

Marina charge rates

Table 28 provides a summary of the berthing charge rates for Yamba and Coffs Harbour marinas. Given the comparable rates below it would be reasonable that berthing charge rates within the subject site could range between $5,000 to $7,000 per annum, depending on the length of the boat.

Table 28: Marina berthing charge rates

		Yamba					Coffs Harbour				
Metre	**Feet**	**Daily**	**Weekly**	**Monthly**	**Quarterly**	**26 weeks**	**Daily**	**Weekly**	**Monthly**	**Quarterly**	**Yearly**
10	33	$40	$240	$655	$1,650	$3,475	$37	$180	$515	$1,150	$4,200
11	36	$44	$265	$725	$1,725	$3,650					
12	40	$46	$275	$745	$1,880	$3,980	$44	$210	$620	$1,400	$5,000
13	43	$49	$295	$790	$1,955	$4,125					
14	46	$53	$330	$825	$2,075	$4,375					
15	50	$60	$360	$860	$2,199	$4,645	$55	$265	$760	$1,750	$6,380
16	53	$68	$400	$915	$2,320	$4,910					
17	56	$73	$430	$1,030	$2,575	$5,445					
18	60	$80	$480	$1,120	$2,780	$5,950	$65	$320	$950	$2,100	
20	66						$70	$380	$1,140	$2,500	
21	70	$88	$520	$1,165	$2,995	$6,050					
Commercial vessel											10% surcharge

Source: Coffsharbourmarina.com, Yambamarina.com

7 FEASIBILITY ANALYSIS

This Chapter explains the methodology and criteria used to assess the financial viability of each development options and the financial results.

Financial modelling methodology

To undertake this analysis, HillPDA has utilised its proprietary development feasibility software - Estate Master. This software is an industry benchmark used by developers, financiers and property valuers alike. The analysis follows the approach of a hypothetical development feasibility adopting an acquisition land value and all the costs associated with the nominated hypothetical development including:

- Site diligence and legal;
- Professional fees (design and management);
- Waterworks, site works and construction (including marina facility, roads and carpark);
- Statutory fees (DA and CC Fees);
- Equity, finance charges and interest on debt;
- Marketing and selling costs; and
- Revenue from sales, rentals and other income.

The hypothetical development cash flow is calculated and discounted to determine the internal rate of return before interest costs on an annual effective basis. Such an approach is commonly applied by developers and funders to determine if a project is viable to proceed or whether an alternative land purchase price is required.

Option analysed

In light of the methodology described above, HillPDA assessed the viable redevelopment of the subject site based on the local economics, boat storage projections, market research, marine industry consultation and development options provided by the Client.

HillPDA was provided with two redevelopment options for the subject site. However, having undertaken a review of two previous redevelopment feasibility studies for the subject site (undertaken by WorleyParsons), it was our opinion that one of the options would likely be less viable than the other.

This was determined because of the size of the harbour to be excavated within the option and hence the capital investment required. This would have reduced the viability of the option and hence the successful outcome of the project.

As such, with our advice and in consultation with Council the less viable concept master plan was excluded from testing. The remaining master plan option however, was tested for its viability. This master plan option expands the current marina with residential development sites occurring on around the harbour and water edge.

Commercial buildings are located to the north of the marina with frontage on to the pubic esplanade. Further details in relation to the draft master plan are contained within the Master Plan Report.

Figure 11: Ballina design development option

Please refer to the Master Plan Report

Staging

To increase the viability of the master plan and acknowledge the extended timeframe of the redevelopment (up to 20 years), HillPDA in consultation with Council proposes the following staging of the master plan. Further information on the staging is contained within the Master Plan Report.

Figure 12: Ballina master plan stagging plan

Please refer to the Master Plan Report

Assumptions

In order to undertake the modelling some key assumptions have been made for each option as set out below:

Table 29: Feasibility assumptions

Description	Assumption
Land Purchase & Acquisition Costs	Site diligence and legal $20,000
Professional Fees	Master plan $250,000 Consultants 4% of Construction Costs
Escalation	Costs 2.5%p.a Revenue 3%p.a

Description	Assumption
Construction and Sales Staging (S)	S1: Residential Lots 10/11/12 S2: Fish Co-op/ Marina Facility/ Residential Lots13 S3: Residential Lots 9/ 10 S4: Residential Lots 5/4/7 S5: 50 berths & marina facility and Residential Lots 6/3/2/1
Construction Costs	West Park Lots 10/11/12 $200/sqm Boat harbours and carpark $250sqm Open Space $200/sqm Creek Park $200/sqm Boat Harbour Extension $10mil Marina $25,000/berth Marina Facility $1,800/sqm Contingency 5% of construction
Statutory Fees	1% of Construction
Depot Relocation	$2.2milion
Selling Costs	Sales Commissions – 2% Residential development site lots – 1.5% Commercial – 2% Retail Marketing 1% of Gross Sales Master plan display and launch $100,000 Legal on survey 0.5% of Gross Sales
Sales	12mths between stages Revenue – Residential Lots $50,000/unit site yield (unimproved) – Retail Fish Co-Op $600/sqm (unimproved) – Retail – Festive & Marina Facility$800/sqm (unimproved) – Berths $50,000/berth
Finance	100% Equity Funded
Project Hurdle Rates	IRR 12% & Development Margin 20%

Performance criteria

For our hypothetical modelling, we have set a target project IRR of 12% p.a as the primarily indicator, regard is also given to the Development Margin of 20% p.a.

A 12% IRR was adopted given the long project duration of 10 years which is the appropriate risk adjusted return for superlot land - subdivision of this nature.

- **Residual Land Value (RLV)** – This is the purchase price of the land whilst achieving a zero Net Present Value (NPV).
- **Project Internal Rate of Return (IRR)** – This is the discount rate where the Net Present Value equates to zero. A minimum project IRR of 12% is assumed for a project to be feasible.
- **Development Margin (DM)** – This is profit divided by total development costs (including selling costs). A minimum development margin of 20% is assumed to be required for a project to be feasible. This requirement is particularly relevant for a project to meet the lending criteria of the funding market.

As shown in the table below if the feasibility modelling returns an:

- The RLV of the development scheme is considered viable;
- Project IRR of 12% or higher, the development scheme is considered viable; and
- With a DM of 20% or higher, the development scheme is considered viable.

Financial results

Based on the assumptions above the development of the preferred master plan option shows an RLV of $2.63 million based on a 20% development margin.

This shows a positive cash and viable master plan development. This option includes allowances of $10 million and $2.2 million was made for the boat harbour extension and relocation of RMS depot respectively.

Overall this viable development option will enhance the existing marina by creating an integrated a public space that will benefit the local community.

The results of the cash flow modelling are summarised in the table below:

Table 30: Ballina Feasibility Financial Results

EstateMaster Development Feasibility

SUMMARY OF PROJECT RETURNS

Ballina Marina Harbour
Masterplan
Superlot Subdivision 10 year staged

Time Span:	Jul-17 to Mar-27
Type:	Residential
Status:	Under Review
Site Area:	
#N/A	:1
Project Size:	351 Units

	Quantity	SqM	AUD/Quantity	Total AUD
Revenues				
Gross Sales Revenue	401	1,910.00	[illegible]	29,285,867
Detached Dwelllings Lots	351	175.00	70,570.39	24,770,207
Commerical Office	50	1,200.00	80,913.26	4,045,663
Retail Shops	-	535.00	-	469,997
Less Selling Costs				(1,215,255)
NET SALES REVENUE				28,070,612
TOTAL REVENUE (before GST paid)				28,070,612
Less GST paid on all Revenue				-
TOTAL REVENUE (after GST paid)				**28,070,612**
Costs				
Land Purchase Cost				1
Land Acquisition Costs				22,000
Construction Costs (inc. Contingency)				20,380,616
Other Construction Costs				19,410,111
Contingency				970,506
Professional Fees				1,572,068
Statutory Fees				163,013
Depot Relocation				2,200,000
Interest Expense				604,289
TOTAL COSTS (before GST reclaimed)				24,941,987
Less GST reclaimed				(2,108,176)
Plus Corporate Tax				-
TOTAL COSTS (after GST reclaimed)				**22,833,810**

Performance Indicators		
[1] **Net Development Profit**		**5,236,802**
[5] **Development Margin (Profit/Risk Margin)**	Based on total costs (exc selling & leasing costs)	**22.82%**
[6] **Net Present Value**	Based on Discount Rate of 12% p.a. Effective	**2,627,425**
Benefit Cost Ratio		1.2226
[7] **Project Internal Rate of Return (IRR)**	Per annum Effective	**81.03%**
[8] Residual Land Value	Based on NPV (Exclusive of GST)	2,357,436
Equity IRR	Per annum Effective	24.10%
Equity Contribution		1,364,402
Peak Debt Exposure		-
Equity to Debt Ratio		N.A.
[9] Weighted Average Cost of Capital (WACC)		20.00%
[10] Breakeven Date for Cumulative Cash Flow	Month 110	Sep-2026
[11] Yield on Cost		0.00%
[12] Rent Cover		N.A.
[13] Profit Erosion		N.A.

APPENDIX A: RESIDE END SALE VALUES

Below is a table detailing the end sale values for each apartment within the Reside apartment complex. The breakdown provides details on the level, bedroom number and size.

Table 31: Reside apartment's sale values

Level	Unit No.	Beds	Strata Lot No	Int Area	Balcony	Total Area	Price	Rate ($/sqm)
2	**3**	3	9	130	38	168	$915,000	$7,038
	4	2	10	103	38	141	**Sold (unknown)**	
	5	3	11	130	47	177	$950,000	$7,308
	6	1	12	57	23	80	$445,000	$7,807
	7	1	13	57	23	80	$445,000	$7,807
3	**8**	3	14	130	38	168	$965,000	$7,423
	9	2	15	103	38	141	$710,000	$6,893
	10	3	16	130	47	177	**Under contract**	
	11	1	17	57	23	80	$460,000	$8,070
	12	1	18	57	23	80	$460,000	$8,070
	13	3	19	130	61	257	$875,000	$6,731
	14	2	20	103	44	223	$635,000	$6,165
	15	1	21	66	18	82	$500,000	$7,576
4	**16**	3	22	130	38	168	**Under contract**	
	17	2	23	103	38	141	$760,000	$7,379
	18	3	24	130	47	177	$1,025,000	$7,885
	19	2	25	123	36	159	$710,000	$5,772
	20	3	26	130	47	177	$850,000	$6,538
	21	2	27	103	38	141	$575,000	$5,583
	22	3	28	130	38	168	$850,000	$6,538
5	**23**	3	29	130	38	168	$995,000	$7,654
	24	2	30	103	38	141	$740,000	$7,184
	25	3	31	130	47	177	**Sold (unknown)**	
	26	2	32	123	36	159	$730,000	$5,935
	27	3	33	130	47	177	**Under contract**	
	28	2	34	103	38	141	**Under contract**	
	29	3	35	130	38	168	$880,000	$6,769
6	**30**	3	36	130	38	168	$1,025,000	$7,885
	31	2	37	103	38	141	$730,000	$7,087
	32	3	38	130	47	177	**Sold (unknown)**	
	33	2	39	123	36	159	$750,000	$6,098
	34	3	40	130	47	177	$910,000	$7,000
	35	2	41	103	38	141	$615,000	$5,971
	36	3	42	130	38	168	$900,000	$6,923

Source: McGrath Realestate

Disclaimer

1. This report is for the confidential use only of the party to whom it is addressed ("Client") for the specific purposes to which it refers and has been based on, and takes into account, the Client's specific instructions. It is not intended to be relied on by any third party who, subject to paragraph 3, must make their own enquiries in relation to the issues with which this report deals.

2. HillPDA makes no representations as to the appropriateness, accuracy or completeness of this report for the purpose of any party other than the Client ("Recipient"). HillPDA disclaims all liability to any Recipient for any loss, error or other consequence which may ari se as a result of the Recipient acting, relying upon or using the whole or part of this report's contents.

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4. This report and its attached appendices are based on estimates, assumptions and information provided by the Client or sourced and referenced from external sources by HillPDA. While we endeavour to check these estimates, assumptions and information, no warranty is given in relation to their reliability, feasibility, accuracy or reasonableness. HillPDA presents these estimates and assumptions as a basis for the Client's interpretation and analysis. With respect to forecasts, HillPDA does not present them as results that will actually be achieved. HillPDA relies upon the interpretation of the Client to judge for itself the likelihood of whether these projections can be achieved or not.

5. Due care has been taken to prepare the attached financial models from available information at the time of writing, however no responsibility can be or is accepted for errors or inaccuracies that may have occurred either with the programming or the resultant financial projections and their assumptions.

6. This report does not constitute a valuation of any property or interest in property. In preparing this report HillPDA has relied upon information concerning the subject property and/or proposed development provided by the Client and HillPDA has not independently verified this information except where noted in this report.

7. In relation to any valuation which is undertaken for a Managed Investment Scheme (as defined by the Managed Investments Act 1998) or for any lender that is subject to the provisions of the Managed Investments Act, the following clause applies:

   This valuation is prepared on the assumption that the lender or addressee as referred to in this valuation report (and no other) may rely on the valuation for mortgage finance purposes and the lender has complied with its own lending guidelines as well as prudent finance industry lending practices, and has considered all prudent aspects of credit risk for any potential borrower, including the borrower's ability to service and repay any mortgage loan. Further, the valuation is prepared on the assumption that the lender is providing mortgage financing at a conservative and prudent loan to value ratio.

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