HUNTER RESEARCH FOUNDATION CENTRE

THE UNIVERSITY OF NEWCASTLE AUSTRALIA

John Hunter Health and Innovation Precinct:

Social Impact Assessment for State Significant Development Application

Final report

12 May 2021

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Table of contents

Executive summary 1
Overview 1
Subject site 1
SSDA Proposal 1
Response to SEARs 2
Overall approach to this social impact assessment 3
Summary of potential impacts 4
Summary of mitigation measures 5
Summary of enhancement measures 6
Conclusion 7
1. Background 8
1.1 Introduction 8
1.2 Project overview 8
1.3 Requirements for a social impact assessment 10
1.4 This social impact assessment 10
2. Assessment approach 11
2.1 Overview 11
2.2 Five Capitals framework 11
2.3 Assessing social impacts 12
2.4 Linking potential impacts to the five capitals 12
2.5 Evidence base for this social impact assessment 13
3. Five Capitals baseline 14
3.1 Overview 14
3.2 Manufactured capital 14
3.3 Financial capital 14
3.4 Social capital 17
3.5 Human capital 18
3.6 Natural capital 18
4. Construction impacts 19
4.1 Overview 19
4.2 Manufactured capital 19
4.3 Financial capital 23
4.4 Social capital 24
4.5 Human capital 29
4.6 Natural capital 29

4.7 Summary 33
5. Operational impacts 34
5.1 Overview 34
5.2 Manufactured capital 35
5.3 Financial capital 44
5.4 Social capital 46
5.5 Human capital 51
5.6 Natural capital 54
5.7 Summary 54
6. Conclusion 55
Appendix A: Details of technical studies reviewed 56
Appendix B: Details of the online survey 57
B.1 Respondent details and confidence levels 57
B.2 Survey promotion and distribution 57
B.3 Survey demographics 57
B.4 Survey instrument 59

Executive summary

OVERVIEW

In June 2019, the NSW Government announced a significant expansion of the John Hunter and John Hunter Children's Hospitals with the $780 million John Hunter Health and Innovation Precinct (JHHIP) project.

The JHHIP will transform healthcare services for Newcastle, the greater Hunter region and northern NSW communities. The infrastructure will provide additional inpatient capacity to the John Hunter Hospital (JHH) and the John Hunter Children's Hospital (JHCH) and create further opportunities for partnerships with industry and higher education providers.

The JHHIP will deliver an innovative and integrated precinct with industry-leading facilities working in collaboration with health, education and research partners to meet the current and future needs of the Greater Newcastle, Hunter New England and Northern NSW regions.

The JHHIP Project is being planned and designed with ongoing communication and engagement with clinical staff, operational staff, the community and other key stakeholders with a strong focus on the following:

- Patient-centred care
- Contemporary models of care
- Future economic, health and innovation development opportunities
- Environmental sustainability.

SUBJECT SITE

The John Hunter Health Campus (JHHC) is located on Lookout Road, Lambton Heights, within the City of Newcastle Local Government Area (LGA), approximately 8km west of the Newcastle CBD. The hospital campus is located approximately 3.5km north of Kotara railway station.

The JHHC comprises the JHH, JHCH, Royal Newcastle Centre (RNC), the Rankin Park Rehabilitation Unit and the Nexus Unit (Children & Adolescent Mental Health). JHHC is a Level 6 Principal Referral and tertiary hospital, providing the clinical hub for medical, surgical, child and maternity services within the Hunter New England Local Health District (HNELHD) and across northern NSW through established referral networks. Other services at the campus include the Hunter Medical Research Institute (HMRI), Newcastle Private Hospital and the HNELHD Headquarters.

SSDA PROPOSAL

Approval is being sought for a new Acute Services Building (ASB) and refurbishment of existing hospital facilities at JHH comprising:

- Construction and operation of a new seven-storey ASB (plus four semi-basement levels) to provide:
    - An expanded and enhanced Emergency Department
    - Expanded and enhanced medical imaging services
    - Expanded and enhanced intensive care services – Adult, Paediatric and Neonatal
    - Expanded and enhanced Operating Theatres including Interventional Suites
    - An expanded Clinical Sterilising Department
    - Women's Services including Birthing Unit, Day Assessment Unit and Inpatient Units
    - Integrated flexible education and teaching spaces

- Expanded support services
- Associated retail spaces
- New rooftop helipads
- New semi-basement car parking

- Refurbishment of existing buildings to provide:
  - Additional Inpatient Units;
  - Expanded support services;
- A new hospital entry canopy and works to the existing drop off
- Link bridge to the HMRI
- Campus wayfinding and signage
- Landscape works
- Site preparation including bulk earthworks, tree removal, environmental clearing, cut and fill
- Mines grouting remediation works
- Construction of internal roads network and construction access roads and works to existing at-grade car parking
- Connection to the future Newcastle Inner City Bypass
- Inground building services works and utility adjustments.

RESPONSE TO SEARs

The Social Impact Assessment is required by the Secretary's Environmental Assessment Requirements (SEARs) for SSD 9351535. The following table identifies the SEARs and relevant reference within this report.

Sections in the SIA where SEARs requirements are addressed

SEARs details	Relevant report section
• Prepare a social impact assessment, which:	
○ considers how potential environmental changes in the locality may affect people's way of life; community; access to and use of infrastructure, services, and facilities; culture; health and wellbeing; surroundings; personal and property rights; decision-making systems; and fears and aspirations, as relevant and considering how different groups may be disproportionately affected	Section 4 and Section 5
○ identifies and analyses the potential social impacts of the development, from the points of view of the affected community/ies and other relevant stakeholders, i.e. how they expect to experience the project	Section 4 and Section 5
○ assesses the significance of positive, negative, and cumulative social impacts considering likelihood, extent, duration, severity/scale, sensitivity/importance, and level of concern/interest	Section 4 and Section 5
○ includes mitigation measures for likely negative social impacts, and any proposed enhancement measures	Section 4 and Section 5
○ details how social impacts will be adaptively monitored and managed over time.	Section 4 and Section 5

OVERALL APPROACH TO THIS SOCIAL IMPACT ASSESSMENT

The Hunter Research Foundation Centre (HRFC) at the University of Newcastle was commissioned by Health Infrastructure NSW (HI) to undertake an independent Social Impact Assessment (SIA) as part of the SSDA.

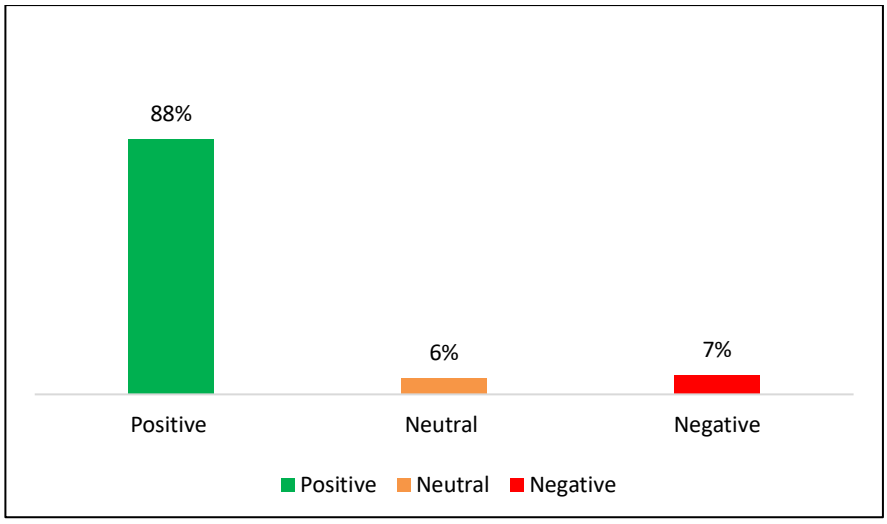
The approach for this independent SIA used a *Five Capitals* framework to understand the impact on natural, financial, human, social and manufactured capital in Newcastle and the Hunter region. It is also based on an assessment of positive and negative impacts for the capitals detailed in the *NSW Government Draft Social Impact Assessment Guideline*.[1]

The methodology followed a good practice approach with reference to the NSW guidelines series for *Community and Stakeholder Engagement* as a core element[2]. The approach included:

- The development of a baseline measure of the five capitals
- Desk top review of the technical studies developed by various consultants as part of the Environmental Impact Assessment (EIA) for the project
- An online survey of residents and staff members
- Interviews with selected survey respondents.

The online survey had a much higher response rate from staff (n=510) and residents (n=431). Overall, respondents perceived that the development at the JHHIP is expected to deliver significant positive outcomes for the local and regional community and staff in terms of upgraded facilities, increased capacity, improved service, improved traffic flow, improved working conditions and employment opportunities. The majority of impacts once the site is fully operational were perceived by stakeholders to have a significantly positive impact. This is shown below.

Assessment of the upgraded facilities based on tone of comment n=981



Free format responses to the survey also indicated a high level of support:

> *The redevelopment is brilliant and has been needed for a long time.*
>
> *I'm really positive about it. I think it will be awesome and really good for the area.*
>
> *I think it's a great asset for Newcastle. So excited to see the progress.*

[1] NSW Government, Department of Planning and Environment 2020. Social Impact Assessment Guideline: State significant projects. Available at: https://shared-drupal-s3fs.s3-ap-southeast-2.amazonaws.com/master-test/fapub_pdf/00+-+Planning+Portal+Exhibitions/SIA/SIA+Publication+for+Publication+Online+20201022.pdf

[2] NSW Government, Department of Planning and Environment 2017. *Community and Stakeholder Engagement: Draft Environmental Impact Assessment Guidance Service June 2017*. Available at: https://www.planning.nsw.gov.au/-/media/Files/DPE/Guidelines/guideline-6-draft-community-and-stakeholder-engagement-2017-06.pdf

SUMMARY OF POTENTIAL IMPACTS

The potential positive and negative impacts against the five capitals (manufactured, financial, social, human, social and natural capital) were identified and assessed in terms of the consequence level for each and the likelihood of the impact occurring.

The assessment indicates:

- **Once the project has been delivered, potential impacts are strongly positive.**

  These are related to the availability of new and upgraded facilities and improved services and capacity which will provide improved health outcomes, employment and working conditions. In addition, based on the current design, improvements to traffic flow and an uplift in parking will have significant positive impacts.

- **Most of the potential negative impacts will occur during the construction phase**.

  These potential impacts include the construction impacts of increased traffic from site works leading to traffic congestion and potential on-site and local resident parking issues. Potential construction noise is also likely to impact intermittently on staff and local residents.

  Ecological impacts of reduced vegetation and biodiversity are likely to be significant as a result of this project.

Table 1: Potential summary of impacts

Capital	Potential impacts in construction		Potential impacts in operation	
Manufactured Development of hospital infrastructure i.e. the ASB, upgrades to existing facilities Construction of internal roads, walkways and paths	Traffic congestion	Staff and visitors– Likely negative	Upgraded and new hospital facilities	Staff and visitors – Likely positive
		Immediate residents – Likely negative		Residents – Likely positive
		Other residents (drivers)– Possible negative	Improved service capacity	Staff and visitors – Likely positive
	Parking for staff, visitors and residents	Staff and visitors – Possible negative		Residents – Likely positive
			Improved connectivity and traffic flow	Staff and visitors – Likely positive
				Residents – Likely positive
			Uplift in parking spaces	Staff and visitors – Likely positive
		Residents – Unlikely neutral		Residents – Likely positive
Financial Employment generated by the project, contribution to the local economy	Employment construction jobs generated	Economy – Likely positive	Long term employment, working conditions and job satisfaction	Staff – Likely positive
		New workers – Likely positive		Residents – Likely positive
Social Improvements in the health and wellbeing of the community, staff job satisfaction	Cycling, walking and connectivity	Staff – likely negative Immediate residents – possible negative	Improved health outcomes and waiting times	Staff and visitors – Likely positive

Capital	Potential impacts in construction		Potential impacts in operation	
		Recreational users – possible negative		Residents – Likely positive
	Noise and vibration	Staff and visitors – Likely negative	Improvements to cycling, walking and connectivity	Staff and visitors – Likely positive
		Immediate residents – possible negative		
		Residents – Unlikely neutral		
	Visual	Staff and visitors – Unlikely neutral		General community – Likely positive
			Noise	Staff and visitors– unlikely neutral
				Residents – unlikely neutral
			Look and feel	Residents – Likely positive Staff and visitors – Likely positive
		Immediate residents – Unlikely neutral		
		Other residents – Unlikely neutral		
Human Talent attraction, increased training opportunities for staff	Talent attraction and retention	Local economy – Likely positive	Talent attraction and retention	Staff – Likely positive
Natural Changes to the natural environment as a result of the project, including tree clearing and impacts to fauna, enhancement of outdoor spaces	Loss of biodiversity due to vegetation clearing	Residents – likely negative	Gain of biodiversity due to planting of native wildlife Creation of green space with landscaping	Staff and visitors– Likely neutral
		Staff – likely negative		Residents – Likely neutral
		Environment – likely negative		Environment – Likely neutral

SUMMARY OF MITIGATION MEASURES

The SIA found that **no mitigation measures are required for the operational phase**. However, we recommend enhancement measures which are detailed in the next section.

The SIA identifies various recommended **mitigation measures for the construction phase**. These are based on good practice and detailed in the relevant technical studies for the EIA.

The recommended mitigation measures for the construction phase are shown in Table 2.

Table 2: Recommended mmitigation measures for the construction phase

Potential impact	Recommended mitigation measures identified
Traffic	• Ensure heavy vehicle movements take place outside peak periods • Ensure construction workers access the site before the weekday morning traffic network peak and leave after the afternoon traffic network peak period • Consider utilising a shuttlebus for staff and service users to minimise traffic and parking impacts
Parking	• Ensure the recommendations in the parking demand study (uplift in parking spaces) are delivered • Use existing fire trails accessed from Jacaranda Drive and Kookaburra Circuit near Lookout Road as primary construction routes to manage the flow of materials and equipment into and out of the construction site • Ensure all construction equipment/machinery storage and parking occurs within the proposed construction site • Communicate regular updates to staff about parking availability
Ecology	• Implement the biodiversity offset strategy (already developed by the Project Team) in consultation with the Biodiversity Conservation Trust and the Department of Planning Industry and Environment during the assessment process. We understand that the credit obligation is currently proposed to be relinquished through either purchasing credits from the market and/or making a contribution to the Biodiversity Conservation Fund • Favour native landscaping during the detailed design phase • Consider opportunities to minimise and avoid potential impact on the ecological value of the proposed site during the detailed design phase
Impacts to way of life – cycling, walking and connectivity	• Ensure walking active transport is encouraged and supported during the detailed design phase. This should include walking and bike paths, bike parking and enhanced connectivity to the existing cycleway along Jesmond bushland to Newcastle Road
Noise/vibration	• Monitor vibrations to ensure the nominated accepted level, stipulated by the Hunter New England Local Health District is not breached • Position major plant away from sensitive receiver boundaries as much as possible • Develop a management plan for piling operations close to existing buildings, particularly those which house sensitive equipment • Establish criteria and protocols for vibration and noise protocols to the surrounding properties and monitor results on an ongoing basis

Further details on recommended mitigation measures are included in the main body of this report. If successfully implemented, these measures should largely mitigate potential negative impacts during the construction phase.

SUMMARY OF ENHANCEMENT MEASURES

The following measures should be considered to be established during the construction phase:

- Leverage the existing community consultative committee based on the NSW Government Community Consultative Committee Guidelines[3]
- Convene the existing committee based on revised terms of reference before construction commences and continue for two years post construction completion
- Appoint an independent chair
- Include representatives from the Newcastle City and Lake Macquarie City LGAs and HNELHD, two/three directly affected neighbours and a JHHIP staff member

[3] NSW Government 2019. *Community Consultative Committee Guideline: State Significant Projects*. Available at: https://www.planning.nsw.gov.au/-/media/Files/DPE/Guidelines/Community-Consultative-Committee-Guideline-31-01-2019.pdf

- Develop and implement a comprehensive stakeholder engagement and communications plan during all stages of the project. This plan should assess, on an ongoing basis, the extent to which potential positive and negative impacts affect relevant stakeholders to ensure that social impacts are adaptively monitored and managed over time.

In addition, in the operational phase, given the significant impact on natural capital in the construction phase, the biodiversity offset strategy (already developed by the Project Team) should be implemented in consultation with the Biodiversity Conservation Trust and the Department of Planning Industry and Environment.

CONCLUSION

This independent SIA has been prepared to assess the potential impacts of the project for SSDA. Based on the existing proposal, the construction phase is likely to negatively impact staff and residents in terms of changes to traffic and parking, ecological and noise impacts. However, providing that the recommended mitigation strategies are implemented, these potentially negative impacts identified can be reduced to an acceptable level.

It is also important to note that the support for the project is high amongst staff and residents and most perceive significant positive benefits will result for Newcastle and the Hunter Region and also for the northern NSW community. The new and upgraded hospital facilities and clinical services and increased support services will provide skilled job opportunities within Newcastle and support improved health outcomes in the NSW community.

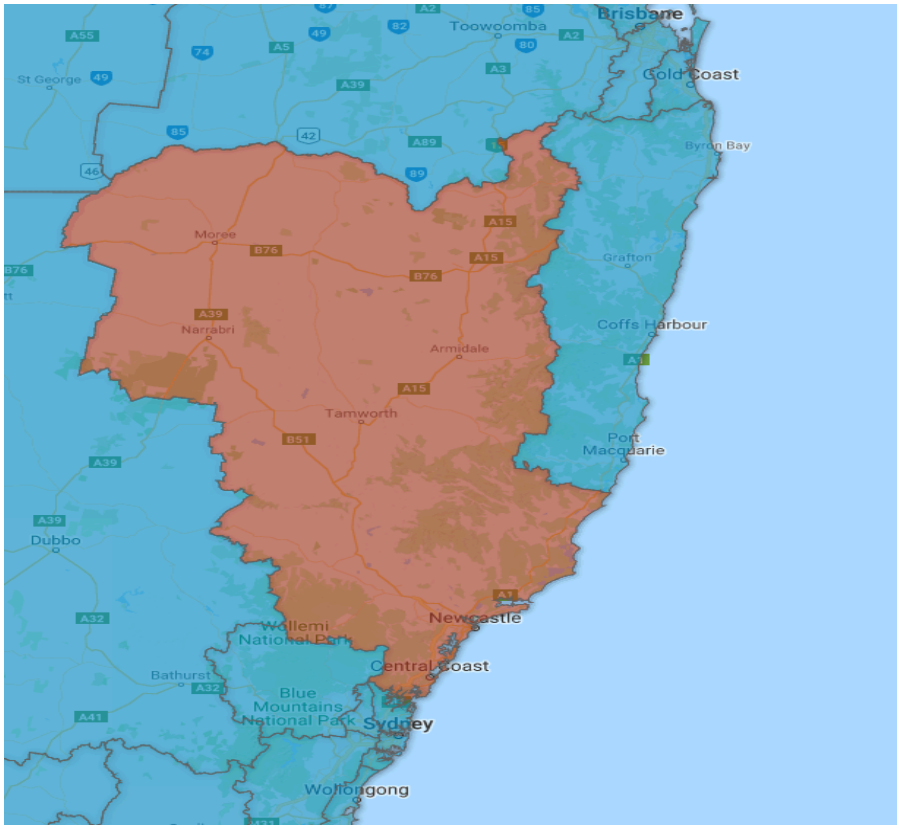
1. Background

1.1 INTRODUCTION

The Hunter New England Local Health District (HNELHD) services a population of over 920,000 people in central and northern NSW, across 25 local government areas (LGA), including Newcastle City, Lake Macquarie City and Port Stephens LGAs[4] close to the JHH. The population figure is expected to increase by about 20 per cent by 2031.

The HNELHD is the only health district in NSW with a major metropolitan hospital (the JHH), seven regional hospitals and smaller regional medical centres. The district stretches almost 700 kilometres from north to south and 500 kilometres east to west and covers an area of 133,812 km^2. This is shown in Figure 1.

Figure 1: Hunter New England Local Health District



The JHH is the largest hospital in the HNEHD and is 8 kilometres from the Newcastle CBD. It is the busiest trauma centre and neurosurgery unit in NSW and is one of the busiest emergency departments. The hospital has approximately 650 beds.

1.2 PROJECT OVERVIEW

In June 2019, the NSW Government announced a significant expansion of the JHH and the JHCH with the $780 million JHHIP project. The proposed development is shown in Figure 2.

[4] NSW Government Health n.d. *Hunter New England Local Heath District. Our district*. Available at: http://www.hnehealth.nsw.gov.au/about/Pages/Our-District.aspx

Figure 2: Proposed development

Approval is being sought for a new ASB and refurbishment of existing hospital facilities at JHH comprising:

- Construction and operation of a new seven-storey ASB (plus four semi-basement levels) to provide:
  - An expanded and enhanced Emergency Department
  - Expanded and enhanced medical imaging services
  - Expanded and enhanced intensive care services – Adult, Paediatric and Neonatal
  - Expanded and enhanced Operating Theatres including Interventional Suites
  - An expanded Clinical Sterilising Department
  - Women's Services including Birthing Unit, Day Assessment Unit and Inpatient Units
  - Integrated flexible education and teaching spaces
  - Expanded support services
  - Associated retail spaces
  - New rooftop helipads
  - New semi-basement car parking
- Refurbishment of existing buildings to provide:
  - Additional Inpatient Units
  - Expanded support services
- A new hospital entry canopy and works to the existing drop off
- Link bridge to the HMRI
- Campus wayfinding and signage
- Landscape works
- Site preparation including bulk earthworks, tree removal, environmental clearing, cut and fill
- Mines grouting remediation works

- Construction of internal roads network and construction access roads and works to existing at-grade carparking
- Connection to the future Newcastle Inner City Bypass
- Inground building services works and utility adjustments.

1.3 REQUIREMENTS FOR A SOCIAL IMPACT ASSESSMENT

The NSW Planning Secretary's reissued SEARs for this development requires the preparation of an SIA which:[5]

- Identifies and analyses the potential social impacts of the development, from the points of view of the affected community/ies and other relevant stakeholders i.e. how they expect to experience the project
- Considers how potential environmental changes in the locality may affect people's way of life; community; access to and use of infrastructure, services, and facilities; culture; health and wellbeing; surroundings; personal and property rights; decision-making systems; and fears and aspirations, as relevant and considering how different groups may be disproportionately affected
- Assesses the significance of positive, negative, and cumulative social impacts considering likelihood, extent, duration, severity/scale, sensitivity/importance and level of concern/interest
- Includes mitigation measures for likely negative social impacts, and any proposed enhancement measures
- Details how social impacts will be adaptively monitored and managed over time.

1.4 THIS SOCIAL IMPACT ASSESSMENT

This SIA is divided into the following sections:

- Executive summary
- Section 1: Background
- Section 2: Assessment approach
- Section 3: Five Capitals baseline
- Section 4: Construction impacts
- Section 5: Operational impacts
- Section 6: Conclusion
- Appendices.

[5] NSW Planning Secretary 2021. *Environmental Assessment Requirements reissued*. p.8. Available at: https://majorprojects.planningportal.nsw.gov.au/prweb/PRRestService/mp/01/getContent?AttachRef=SSD-9351535%2120210201T044157.328%20GMT

2. Assessment approach

2.1 OVERVIEW

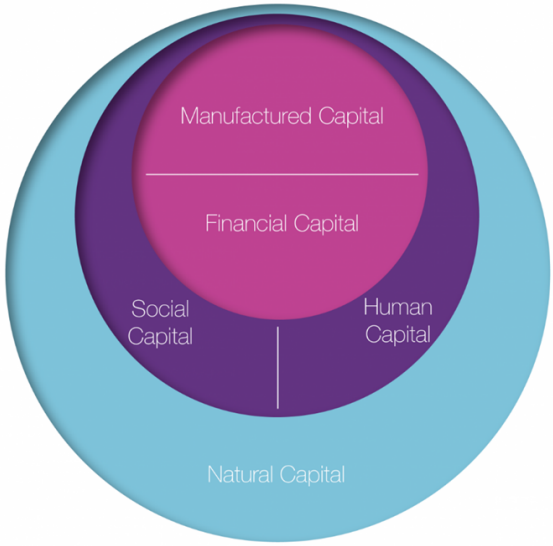
This section details our approach to the SIA. It includes:

- Section 2.1: Overview
- Section 2.2: The Five Capitals framework
- Section 2.3: Assessing social impacts
- Section 2.4: Linking potential impacts to the five capitals
- Section 2.5: Evidence base for this SIA

2.2 FIVE CAPITALS FRAMEWORK

The Five Capitals framework provides a basis for understanding sustainable development in terms of the economic concept of wealth creation or 'capital'.[6] It was first developed by the UK-based Forum for the Future and is used to assess how communities, organisations, products and projects add value. The value added is expressed in terms of contribution to five 'assets' or capitals which include manufactured, financial, social, human and natural capital. This is shown in Figure 3.

Figure 3: The Five Capitals framework



The five capitals consist of:

- **Manufactured capital** is the goods and fixed assets of a geographical area, including buildings and all forms of infrastructure, such as roads, bridges and walkways.
- **Financial capital** is the current production of valued goods and services of an economy.
- **Social capital** is the social relationships and networks of a community.
- **Human capital** is the skill sets and knowledge of residents and business operators.
- **Natural capital** is the environment and natural resources of a location, such as beaches, rivers and forests.

[6] Forum for the future n.d. The Five Capitals – A framework for sustainability. Available at: https://www.forumforthefuture.org/the-five-capitals

The framework can be applied in the context of the JHHIP and this SIA to conceptualise how the potential impact of the development might enhance or detract from existing manufactured, financial, social, human and natural capital.

2.3 ASSESSING SOCIAL IMPACTS

Social impact assessment is the process of assessing, in advance, the social consequences which are likely to arise from specific policy actions or project development.[7] These consequences may be both positive and negative. As identified in the *NSW Government Draft Social Impact Assessment Guideline*[8], the aim of an SIA is to:

- Predict and analyse the extent and nature of potential social impacts against baseline conditions using accepted social science methods
- Evaluate, draw attention to and prioritise the social impacts that are important to people
- Develop appropriate and justified responses i.e. mitigation and enhancement measures to social impacts, and identify and explain residual social impacts
- Propose arrangements to monitor and manage residual social impacts, including unanticipated impacts, over the life of the project.

The potential positive and negative impacts against the five capitals were identified and assessed in terms of the consequence level for each and the likelihood of the impact occurring. The assessment is graded as shown in Figure 4.

Figure 4: Impact assessment matric

Likelihood of impact		Consequence of impact		
		Positive	Neutral	Negative
	Likely			
	Possible			
	Unlikely			

2.4 LINKING POTENTIAL IMPACTS TO THE FIVE CAPITALS

This SIA considered how the potential impacts of the development of the JHHIP might affect the value of the capitals. The links between the five capitals to potential impacts is shown in Table 3.

[7] Burdge, J. & Vanclay, F. 1996. *Social Impact Assessment: A contribution to the state of the art series*. Available at: https://www.researchgate.net/profile/Frank_Vanclay/publication/242315752_Social_Impact_Assessment_A_Contribution_to_the_State_of_the_Art_Series/links/0c96053cd481f1631e000000/Social-Impact-Assessment-A-Contribution-to-the-State-of-the-Art-Series.pdf

[8] NSW Government, Department of Planning, Industry and Environment 2020. Social Impact Assessment Guideline. October 2020. p.15. Available at: https://shared-drupal-s3fs.s3-ap-southeast-2.amazonaws.com/master-test/fapub_pdf/00+-+Planning+Portal+Exhibitions/SIA/SIA+Publication+for+Publication+Online+20201022.pdf

Table 3: Potential impacts on the five capitals of the development of the JHHIP

Capital	Relationship to the project	Potential impacts in construction	Potential impacts in operation
Manufactured	Development of hospital infrastructure i.e. the ASB, upgrades to existing facilities Construction of internal roads, walkways and paths	Traffic congestion as a result of the construction phase as experienced by staff and residents	Upgraded and new hospital facilities
		Parking for staff, visitors and residents	Improved service capacity
			Improved connectivity and traffic flow
			Improved parking
Financial	Employment generated by the project, contribution to the local economy.	Employment construction jobs generated	Increased hospital capacity for jobs in health, retail and support services
Social	Improvements in the health and wellbeing of the community, staff job satisfaction	Cycling, walking and connectivity	Reduced waiting times
		Noise and vibration	Improved health outcomes for the HNELHD region
		Visual	Improvements to active transport
			Noise
			Look and feel
Human	Talent attraction, increased training opportunities for staff	Talent attraction and retention	Talent attraction and retention
Natural	Changes to the natural environment as a result of the project, including tree clearing and impacts to fauna, enhancement of outdoor spaces	Loss of biodiversity due to vegetation clearing	Biodiversity offset plan Biodiversity due to planting of native wildlife

2.5 EVIDENCE BASE FOR THIS SOCIAL IMPACT ASSESSMENT

The evidence base for this SIA included:

- The development of a baseline measure of five capitals for the Newcastle City and Lake Macquarie City LGAs. The profile was created via an analysis of ABS Census data and a desktop review

  It is important to note that the ABS Census data is five years' old, and may not adequately reflect the true nature of these LGAs

- Desk top review of the technical studies developed by various consultants as part of the EIA for the project to understand the extent of potential impacts and proposed mitigation strategies. See Appendix A for details of the studies reviewed

- An online survey of residents and staff members n=1,001, conducted between 15 February and 15 March 2021 to understand perceptions of the potential impacts. The potential impacts selected for assessment in the survey were developed through a combination of review of the technical studies and consultation with HI. See Appendix B for the summary of the respondents, details of the sample size, survey promotion and distribution and the survey instrument

- Interviews n=15, with randomly selected survey respondents to gather further detail regarding the potential impacts of the project.

3. Five Capitals baseline

3.1 OVERVIEW

A baseline for the five capitals was compiled as part of this SIA. The baseline used ABS Census and other data sources to document the current situation and trends relevant to each of the five capitals. The baseline provides an important benchmark for future comparisons which can be used to track potential project impacts.

Since the JHHIP is located in the Newcastle City LGA and on the border of the Lake Macquarie City LGA it is appropriate that both LGAs are the focus of this SIA. This data used is available at the SA4 level from the ABS 2016 Census.

This section details the baseline. It includes:

- Section 3.1: Overview
- Section 3.2: Manufactured capital
- Section 3.3: Financial capital
- Section 3.4: Social capital
- Section 3.5 Human capital
- Section 3.6 Natural capital.

3.2 MANUFACTURED CAPITAL

The Newcastle CBD has numerous heritage listed buildings of significance and also relics of Newcastle's convict history including the lumber yard and the convict-built sea bath known as the 'bogey hole'. The completion of the light rail in the Newcastle CBD in February 2019 has increased connectivity within the CBD and has the potential to be extended outside the CBD, including to the Callaghan Campus of the University of Newcastle and the JHHIP.

The Newcastle area has two NSW TrainLink intercity lines terminating at the Newcastle Interchange. The Central Coast and Newcastle Line has twice-hourly train services to Sydney and the Central Coast, whilst the Hunter Line has twice-hourly services to Maitland and less frequently to Scone and Dungog. Newcastle Airport is located 15km north of the Newcastle CBD within the RAAF base at Williamtown. The Williamtown base is home to F/A18 Hornet Jets and is an aerospace precinct.

The Pacific Highway is the major element of road infrastructure which connects Newcastle with Sydney and Queensland. The Inner City Bypass provides connectivity across the Newcastle City and Lake Macquarie City LGAs.

Aside from the JHH, there are other hospitals across Newcastle and Lake Macquarie, including the Calvary Mater in Waratah, Newcastle Private Hospital (located at the JHHIP site), Lingard Private at Merewether, Lake Macquarie Private at Gateshead and Belmont Hospital at Belmont.

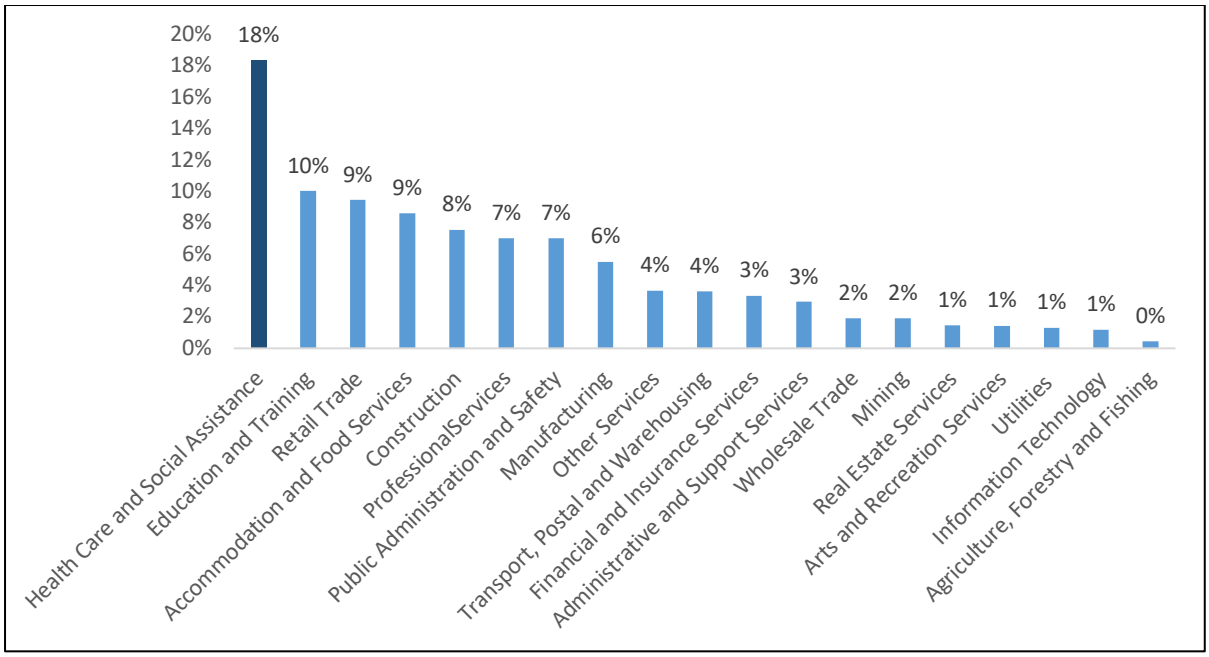
The proposed development of the JHHIP will result in the construction and enhancement of a major health infrastructure precinct for the region and northern NSW. In addition, the concurrent extension of the Inner City Bypass and JHHIP internal road network will support access to the site. All of these will contribute to the manufactured capital of the Newcastle City and Lake Macquarie City LGAs.

3.3 FINANCIAL CAPITAL

In 2016, 18 per cent of employment in the Newcastle City and Lake Macquarie City LGAs was in the health care and social assistance sector. Based on employment numbers, this is the region's largest industry sector and has the greatest share of its total employment in this sector of any SA4 in NSW.

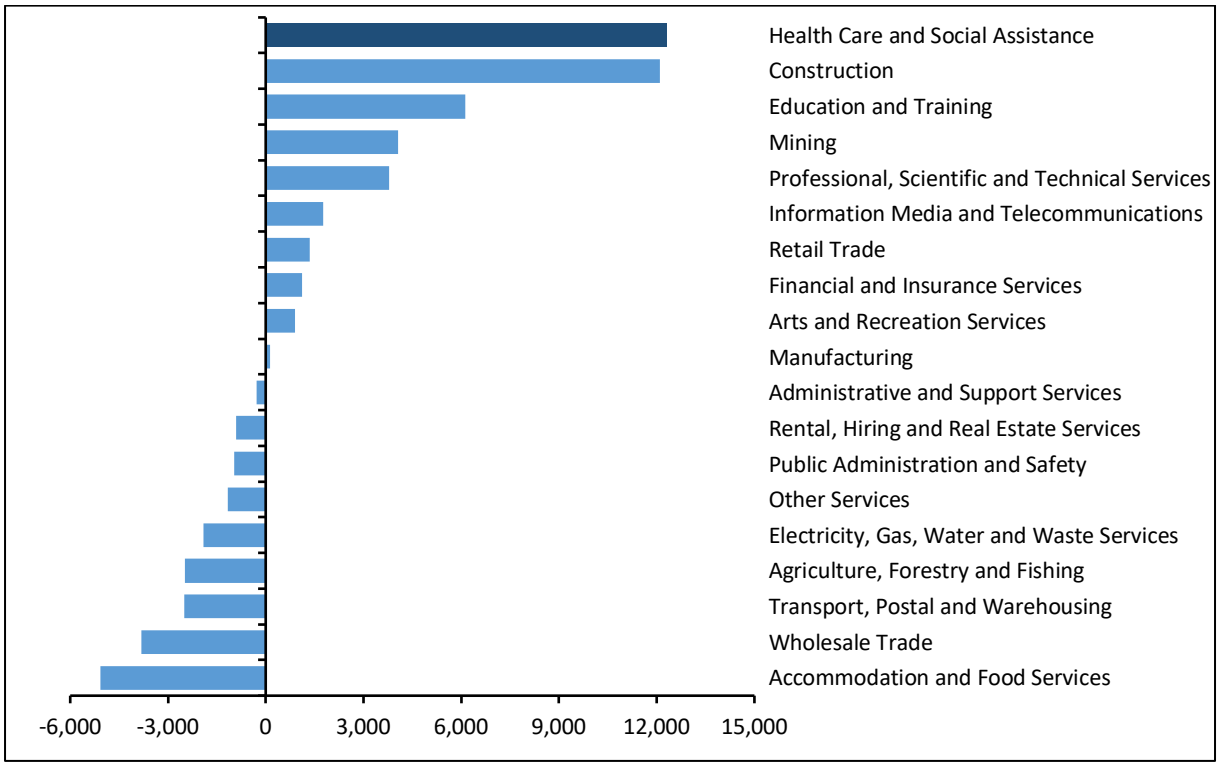
Education and training has 10 per cent, followed by retail trade and accommodation and food services (both at 9 per cent) and construction at 8 per cent. This is shown in Figure 5.

Figure 5: 2016 Employment sectors in the two LGAs



Data from the ABS *Labour Force Survey* for the Hunter region from 2013 to 2018 shows that the health care and social assistance sector added 12,300 jobs, closely followed by construction (a sector supported by the region's housing boom). The growth in jobs for the health care and social assistance sector was above that of education and training (6,000 jobs added) and mining (4,000 jobs added). This is shown in Figure 6.

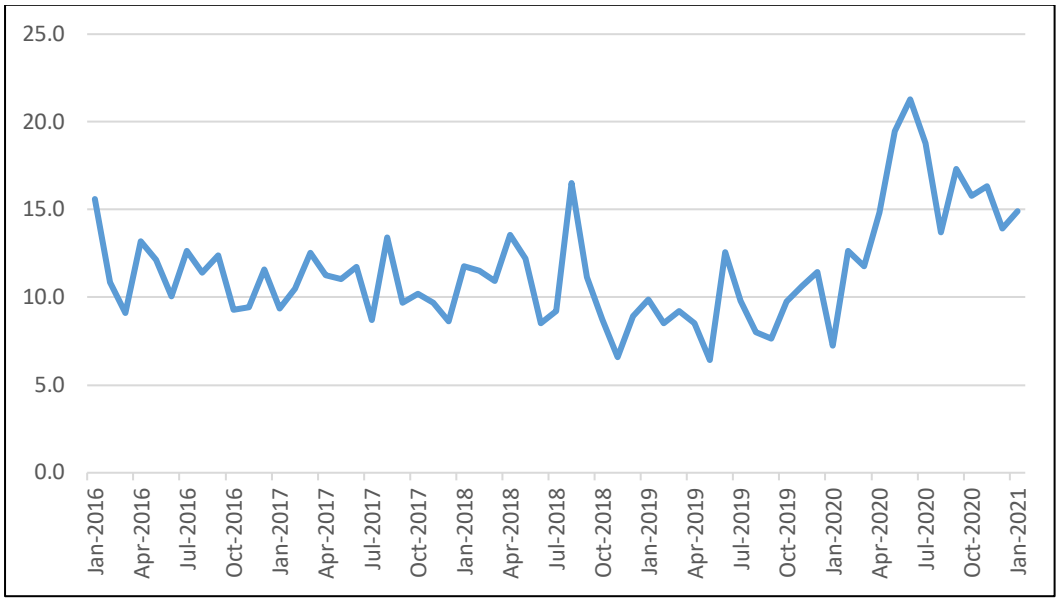
Figure 6: Hunter Region employment change (August 2013 to August 2018)



Source: Australian Bureau of Statistics, Labour Force Survey (4-quarter moving average).

At January 2021, the employment rate for Newcastle City and Lake Macquarie City LGAs was 14.9 per cent. Unemployment peaked at 21.3 per cent during the COVID-19 pandemic. Figure 7 shows the unemployment rate over a five year period.

Figure 7: Unemployment rates 2016 to 2021

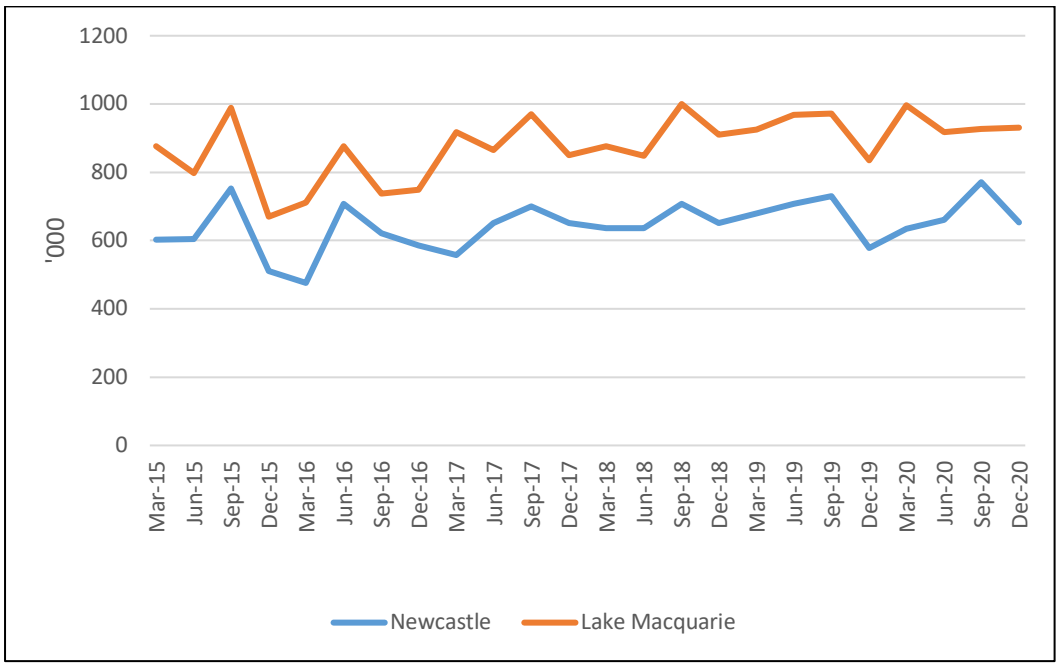


Source: Australian Bureau of Statistics 2021.

In addition, 5.9 per cent of the population in Newcastle City and 5.4 per cent in Lake Macquarie City receive unemployment benefit which is higher than the state average of 4.5 per cent.[9]

Analysis of housing price data over the last five years has indicated that there has been steady growth since the first quarter of 2017 aside from a dip in late 2019. It is expected that house prices will continue the upward trajectory in the first quarter of 2021. This is shown in Figure 8.

Figure 8: Median house prices in Newcastle City and Lake Macquarie City LGAs



Source: Price Finder 2021.

[9] PHIDU Social Health Atlas 2020. Available at: https://phidu.torrens.edu.au/social-health-atlases/data#social-health-atlases-of-australia-local-government-areas

The JHHIP is currently one of the region's largest employers. The development provides an opportunity to increase financial capital in the region via:

- **During construction**: An estimated 3,000 jobs will be supported[10]
- **When operational**: An increase of 7-8 per cent in the operational workforce to support increased capacity delivered by the JHHIP by 2031/32.

This additional workforce has the potential to significantly increase the financial capital of the Newcastle City and Lake Macquarie City LGAs. This will create a flow-on effect in consumer spending within these economies. However, it could also add to the upwards pressure on house prices and impact on affordable rental accommodation unless housing stock is available to support the likely additional demand.

3.4 SOCIAL CAPITAL

Existing available data on the health and wellbeing of Newcastle City and Lake Macquarie City LGAs residents shows:

- Mobility (as measured by per cent with a different address five years ago) is comparable to the NSW state average (38 per cent compared to 39 per cent for NSW)
- There is considerably less cultural diversity when compared to the NSW state average with only 17 per cent born overseas, compared to 35 per cent in NSW
- The Aboriginal and Torres Strait Islander population is slightly higher than the NSW population (4 per cent compared to 3 per cent in NSW)
- In terms of crime:
    - The Newcastle LGA ranks 2 out of 120 (NSW LGAs) for theft from a person, 8 out 120 in terms of robbery and 12 out of 120 in terms of non-domestic violence, and 20 out of 120 for break and enter in a dwelling
    - The Lake Macquarie LGA, by comparison, rarely features in the top 50 of any offences[11]
- In terms of resident satisfaction with council, the City of Newcastle had a 74 per cent approval rating (met or exceeded expectations)[12] and Lake Macquarie City Council had a 91 per cent satisfaction rating on service delivery to the community and the city
- Volunteering rates were comparable to the NSW average (18 per cent)
- In terms of health-related statistics:
    - Self-assessed health levels were comparable with the NSW average with 14.2 ASR per 100 for Newcastle City LGA and 13.5 ASR per 100 for Lake Macquarie City LGA rating their health as fair or poor compared to 14.1 ASR per 100 for NSW
    - The estimated rates of those with high or very high psychological distress is slightly higher in Newcastle City LGA and Lake Macquarie City LGA when compared to the NSW average (13.2 ASR per 100 for Newcastle City LGA and 13.5 ASR for Lake Macquarie City LGA compared to 12.4 ASR per 100 for NSW).

[10] NSW Government Department of the Premier 2020. *Plans for the new $780 million John Hunter Hospital building unveiled*. Available at: https://www.nsw.gov.au/media-releases/plans-for-new-780-million-john-hunter-hospital-building-unveiled

[11] NSW Bureau of Crime Statistics and Research 2021. Available at: https://www.bocsar.nsw.gov.au/Pages/bocsar_crime_stats/bocsar_crime_stats.aspx

[12] City of Newcastle 2020. *Community survey*. Available at: https://www.newcastle.nsw.gov.au/quarterly-community-survey

- There is a slightly higher incidence of current smokers in both Newcastle City LGA (15.9 ASR per 100) and Lake Macquarie City LGA (16.4 ASR per 100) compared to the NSW average (14.1 ASR per 100).

The new and enhanced hospital facilities are likely to have a positive effect on social capital in both the Newcastle City and Lake Macquarie City LGAs as well as the HNELHD in terms of improved access to health services which will result in better health outcomes. In addition, including active transportation within and to the JHHIP will also have benefits for staff and local residents.

3.5 HUMAN CAPITAL

Almost 19 per cent of the population of Newcastle City and Lake Macquarie City LGAs has a bachelor degree or higher educational attainment. This is slightly lower than the NSW average of 23 per cent. Almost a quarter of the population are employed as professionals (23 per cent), followed by technicians and trades workers (15 per cent), clerical and administration workers (14 per cent), community and personal service workers (12 per cent) and managers (10 per cent).

The JHH is the main teaching hospital of the University of Newcastle UON. With almost 8,000 students in the faculty of Health and Medicine, the JHHPI enables students to undertake training at the JHH, building human capital generally and increasing individuals' skill sets.

In addition, the JHHIP will increase the activities of the Hunter Medical Research Institute (located at the JHH) which currently has 1,500 medical researchers, students and support staff.

Overall, it is likely that the JHHIP development will contribute to human capital talent attraction which will bring increased educational attainment levels.

3.6 NATURAL CAPITAL

The JHHIP is surrounded by bushland which is, as detailed in the *Biodiversity Development Assessment Report*, home to a wide variety of native fauna and flora. The bushland also features walking and cycling tracks which are used recreationally by staff and local residents.

The two LGAs also boast wetlands, lagoons, parks and forests including Blackbutt Reserve, Glenrock State Forest and the Lake Macquarie State Conservation Area.

Any construction in the JHHIP will have an impact on the natural capital due to vegetation clearing. It will be important to assess this impact and ensure that overall the biodiversity of the immediate and surrounding bushland is retained either through native planting or through biodiversity offsets.

4. Construction impacts

4.1 OVERVIEW

This section considers the potential impacts associated with the construction phase of the project. The findings on potential construction impact arise from the technical studies and from the survey.

This section includes:

- Section 4.1: Overview
- Section 4.2: Manufactured capital
- Section 4.3: Financial capital
- Section 4.4: Social capital
- Section 4.5: Human capital
- Section 4.6: Natural capital
- Section 4.7: Summary.

4.2 MANUFACTURED CAPITAL

4.2.1 Traffic impacts

Given the scale of the development at the JHHIP, there will likely be significant traffic impacts during the construction phase. According to the *Traffic Impact Assessment* prepared by GTA Consultants[13]:

> *During the early works, it is expected a total of 15 to 20 heavy vehicles could access the site, with peak activity potentially increasing to 30 to 40 heavy vehicles per day. This would increase during the main works stage, with up to 120 heavy vehicles per day expected. These movements would likely be spread across the day and would include vehicles such as a concrete, articulated haul or delivery trucks.*
>
> *Light vehicle traffic generation would be largely generated by construction worker traffic movements to and from the site. As mentioned previously, the number of construction workers for both stages is currently unknown. Notwithstanding, limited parking will be provided on-site, with workers to be encouraged to use public transport to access the site. As such, light vehicle traffic generation associated with construction workers will be minor. Further to this, any construction worker traffic movements will generally be outside of peak periods.*

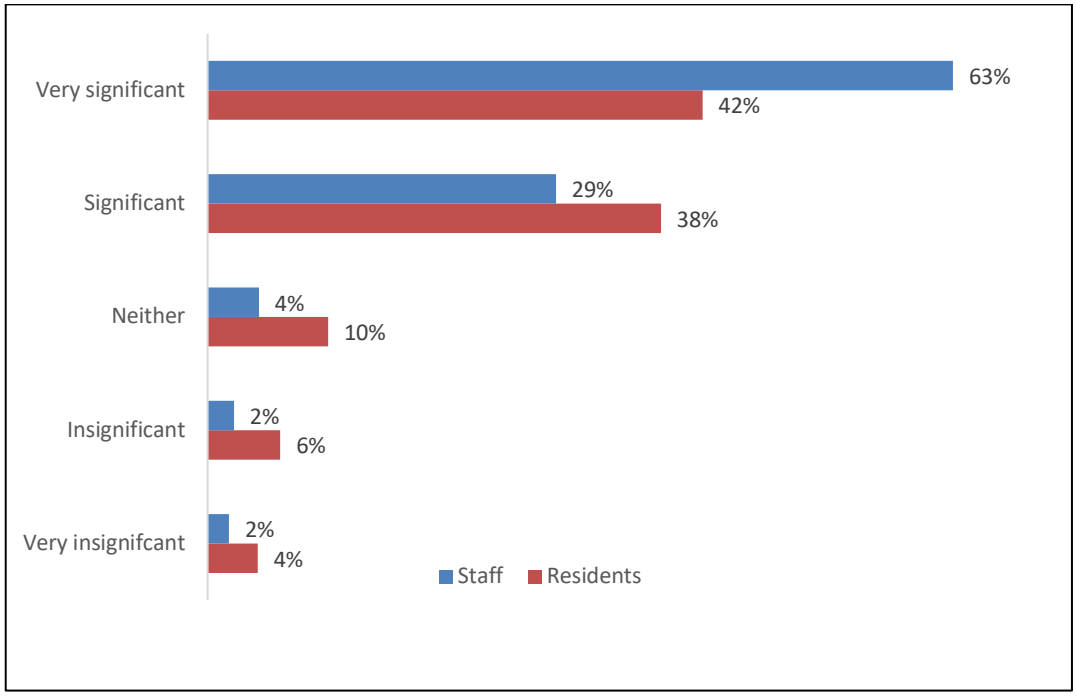
Traffic congestion during the construction phase of the project was considered to be the most significant potential impact by stakeholders, particularly by staff members (63 per cent rated traffic as very significant, compared to 42 per cent of residents).

> *Flow of traffic is horrific already. Construction could make it worse.*
>
> *Anything that makes this worse is a significant impact.*

Staff are more likely to rate potential traffic congestion as very significant. This is not surprising given that staff access the site more frequently that the general community and therefore would potentially be more affected by any changed traffic conditions. This is shown in Figure 9.

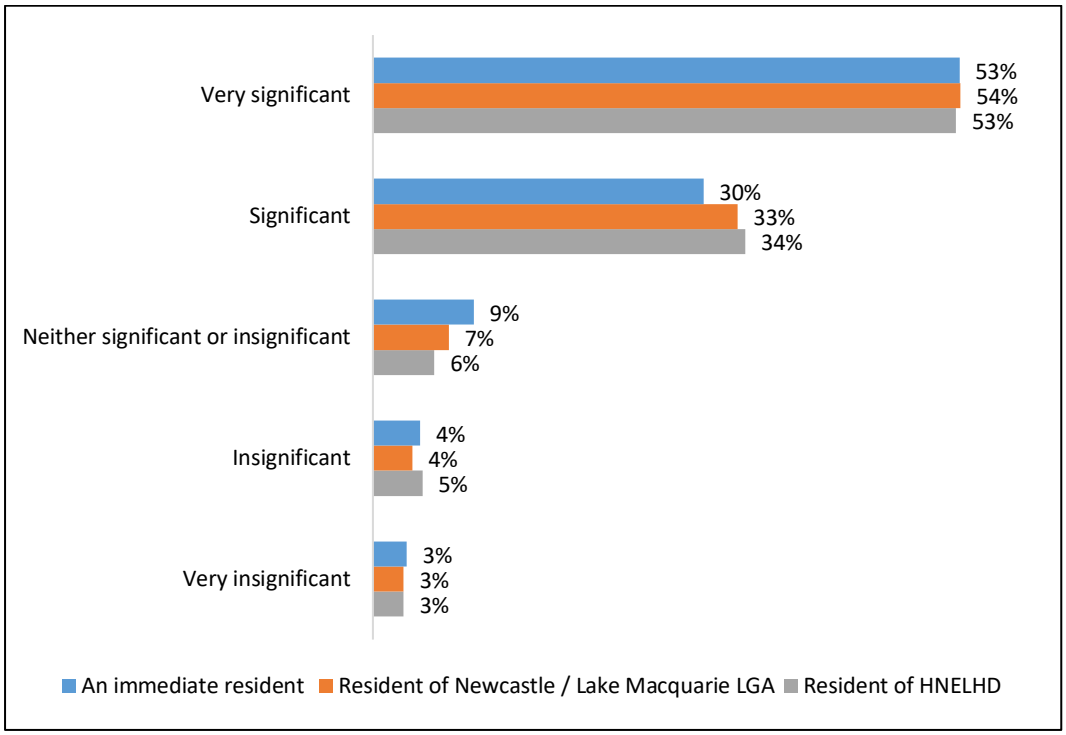
[13] GTA Consultants 2021. *Transport Impact Assessment*. pp.69-70.

Figure 9: Potential impact of construction traffic n=932



As shown in Figure 10, there were no significant differences in rated impact by resident type.

Figure 10: Potential impact of construction traffic by resident type n=932



When asked about potential mitigation strategies, 5 per cent of survey respondents, unprompted, suggested utilising a shuttlebus for hospital staff and visitors to minimise traffic and parking impacts.

The *Traffic Impact Assessment* concludes that, provided the majority of construction vehicle movements occur outside of the current peak network periods, the JHHIP works will have an acceptable impact on the capacity of the surrounding road network. These movements will also be assisted due to the accessibility offered by the new extension of the Newcastle Inner City Bypass. However, changes to traffic flow and increased congestion are likely to affect residents using Lookout Road or accessing the hospital site. The *Traffic Impact Assessment* notes that Lookout Road

along the site frontage currently experiences notable queuing and delays. Therefore, the impact to residents is assessed as negative and possible.

Staff and immediate residents are most likely to be most affected by traffic congestion as a result of accessing Lookout Road and the hospital site on a daily basis. Therefore, the impact to staff and immediate residents is assessed as negative and likely.

Traffic impacts	
Stakeholder	Impact
Staff, visitors and immediate residents	Likely negative
Other residents (drivers)	Possible negative

Construction for the bypass connection is expected to commence late 2021 and be completed by mid-2025.[14] The *Traffic Impact Assessment* assumes that the bypass extension will be completed prior to JHHIP's completion of construction which means there will be direct access to the JHHIP from the bypass (54 per cent of inbound traffic to JHHIP will be via the bypass), alleviating traffic impacts on Lookout Road.

In addition, given the current constraints of the road network, the *Traffic Impact Assessment* recommends that:

- Heavy vehicle movements should generally take place outside peak periods until the bypass is operational
- The existing fire trail located on the northern edge of Jacaranda Drive near car park 9 is upgraded to provide a dedicated construction vehicle access road to/from the northern aspect of the works site, where the main site compound is proposed to be located
- Construction workers will not be allowed to park within the JHHC or associated road network
- Opportunities should be investigated to provide an offsite parking facility for construction workers and utilising a shuttle bus to access the site.

These mitigation measures should also be supplemented by regular monitoring of traffic impact during construction and enforcement of heavy vehicle movement off-peak. In addition, it will be important to ensure that this monitoring and any appropriate adjustment is communicated to construction workers, staff, local residents and the broader community on a regular basis.

4.2.2 Parking impacts

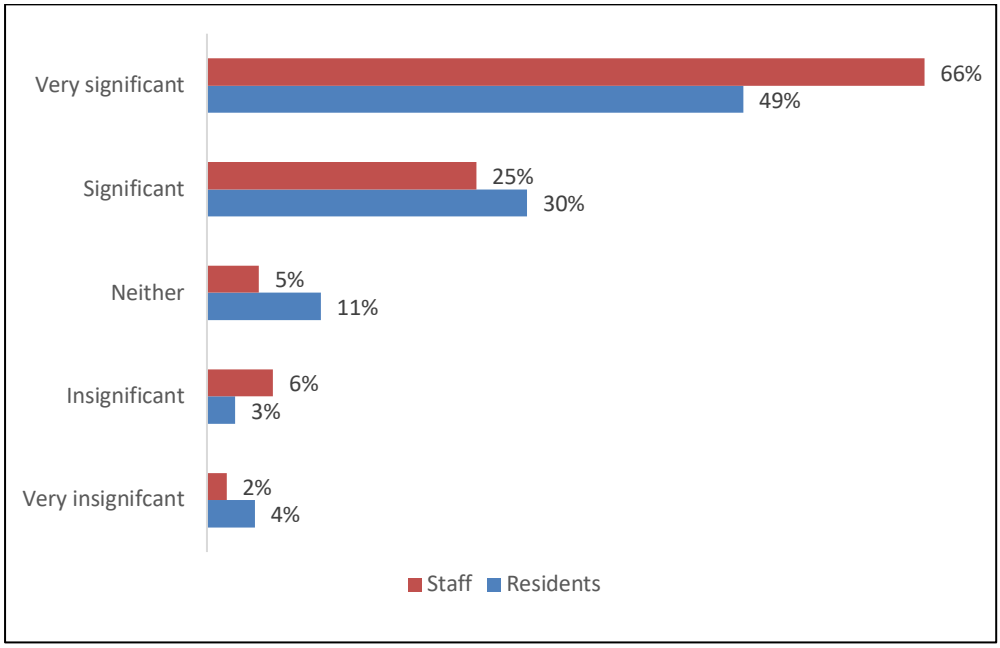
Most staff and visitors drive to the JHHIP and changes to the location and availability of on-site parking may occur during the construction phase. We understand that the successful contractor will be required to develop a detailed staging and decanting strategy to ensure there is no net loss of parking spaces during construction. Potential strategies will be investigated to achieve this, for example, temporary car parking spaces.

Parking was rated as the second most significant potential impact of the construction period. Staff were more likely to rate impacts to parking as 'very significant' than residents. This is shown in Figure 11.

> *It needs to be clear that NO parking can be spared during construction.*
>
> *Please do not block or remove any existing parking as parking is already very insufficient.*

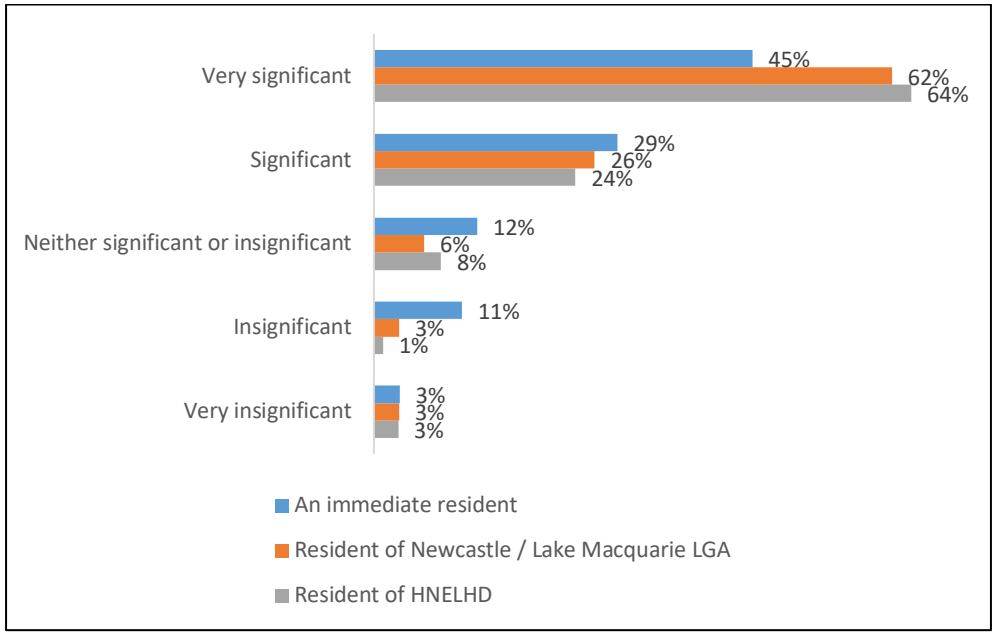
[14] Australian & New Zealand Infrastructure Pipeline 2021. *Newcastle Inner City Bypass – Rankin Park to Jesmond*. Available at: https://infrastructurepipeline.org/project/newcastle-inner-city-bypass---rankin-park-to-jesmond/

Figure 11: Potential impact on parking to staff and residents n=932



Immediate residents were less likely than other residents to rate impacts to parking as 'very significant'. This is shown in Figure 12.

Figure 12: Potential impact on parking by resident type n=928



Assuming that the proposed mitigation strategies are implemented, there will be no net loss of parking spaces during the construction phase of the project. Therefore, the impact of the construction phase on parking for residents who do not access the site on a regular basis is rated as unlikely and neutral.

However, the response to the survey and interviews conducted with staff as part of this SIA highlighted concern about the provision of parking during the construction phase. Therefore, the impact of the construction period for staff is rated as possible and negative.

Parking	
Stakeholder	Impact
Staff and visitors	Possible negative
Residents	Unlikely neutral

In addition, to manage the flow of materials and equipment into and out of the construction site, existing fire trails accessed from Jacaranda Drive and Kookaburra Circuit near Lookout Road are intended to be used as primary construction routes. All construction equipment/machinery storage and parking will also occur within the proposed construction site. As such, the *Traffic Impact Assessment* notes that a *Construction Traffic Management Plan* will need to be prepared by the contractor prior to works commencing.

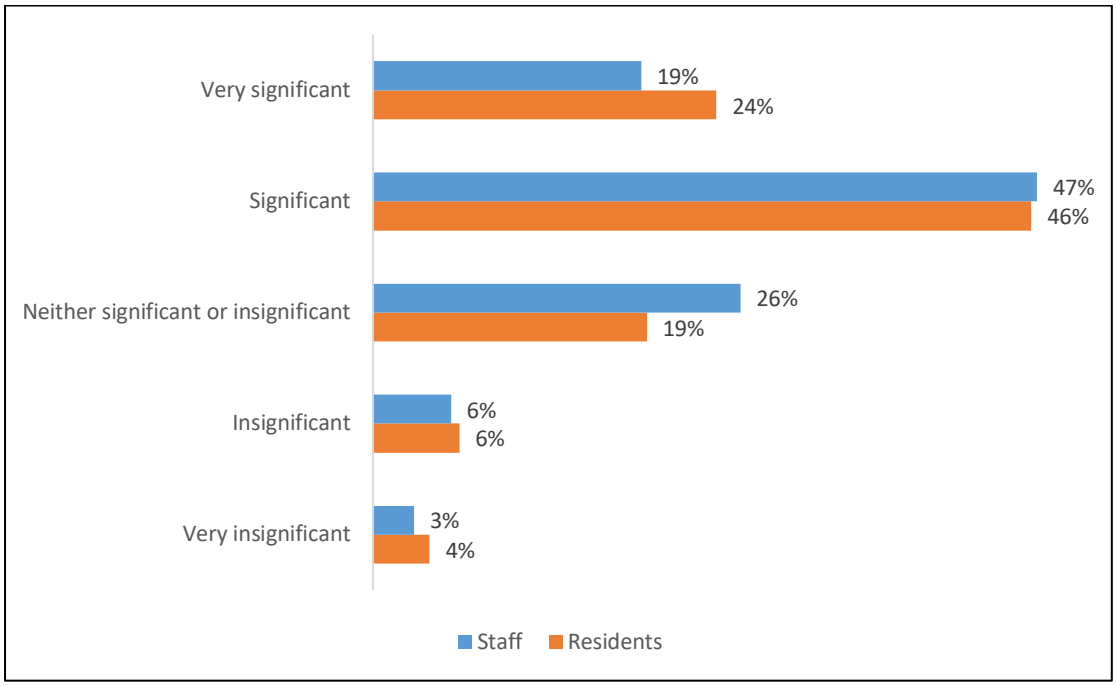
These mitigation measures should also be supplemented by regular monitoring of parking impact during construction. In addition, it will be important to ensure that this monitoring and any appropriate adjustment is communicated to staff, local residents and the broader community on a regular basis.

4.3 FINANCIAL CAPITAL

4.3.1 Employment impacts

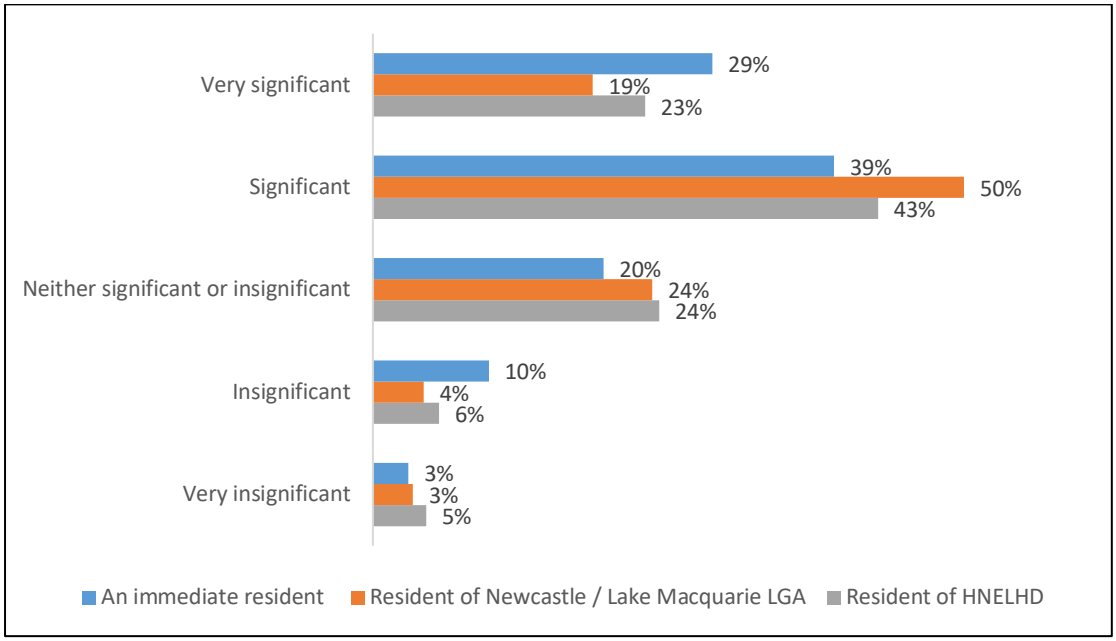
As noted in Section 3.3, the construction phase of the project is estimated to support 3,000 jobs. 67 per cent of staff and resident rated the impact of the short-term uplift in employment associated with the construction phase as 'significant'. Staff were more likely to rate the impact as neutral and residents were more likely to rate the impact as 'very significant'. This is shown in Figure 13.

Figure 13: Potential impact on employment by staff and residents n=938



Immediate residents are more likely to rate the impact of construction employment as 'very significant' and residents of the Newcastle and Lake Macquarie LGAs were more likely to rate the impact as 'significant'. This is shown in Figure 14.

Figure 14: Potential impact on employment by resident type n=938



Due to the likely increased in direct and indirect FTEs over the construction period, the impact on financial capital has been rated as likely and positive for the local economy.

Employment	
Stakeholder	Impact
Local economy	Likely positive

A potential enhancement measure could be to consider a local procurement policy to maximise the economic benefit of the project construction phase to the Hunter Region. In addition, it will be important to ensure there is an appropriate supply of skilled construction, professional scientific and technical services labour within the Hunter Region to keep wages within the region. This could include assessing the training supply for trades at local TAFEs prior to the construction phase.

4.4 SOCIAL CAPITAL

4.4.1 Cycling, walking and connectivity impacts

According to the *Biodiversity Development Assessment Report* prepared by Umwelt, the development footprint for the project is approximately 13.5 hectares in size. Some of this footprint is used by recreational users, including staff.

During the construction phase there will be temporary and permanent impacts on recreational users of the current walking trails and cycling paths.

Staff and residents indicated unprompted concern about changes to the use of/losses to walking trails and cycling paths in the bushland surrounding the JHHIP site. As a result, the impact to this stakeholder group has been assessed as possible and negative.

Impacts to way of life – cycling, walking and connectivity	
Stakeholder	Impact
Immediate residents and recreational users	Possible negative

As noted in Section 5.4.3 some impacts may be positive due to changes in connectivity flow and some will be positive with gains in walkability and active transport as noted in the *Traffic Impact Assessment*. The bypass extension may also change how the site is used recreationally, in a positive way.

However, during construction it will be important to ensure regular appropriate communication with immediate residents and recreational users to ensure they access the overall site safely and understand the extent to which walking and cycling paths are out of use.

4.4.2 Noise and vibration

Noise and vibration are likely impacts due to the construction of the ASB, internal road connections and facility upgrades. As the JHHIP will be operational during the construction phase, there is a higher likelihood that staff, in particular, and residents, including hospital visitors, are affected by noise and vibration.

The *Noise and Vibration Impact Assessment* prepared by Acoustic Studio indicates the following impacts regarding noise:

- Construction works noise will have the greatest impacts on campus noise receivers at the JHH and HMRI. Noise is expected to be above Noise Management Levels (NMLs) due to the proximity to works. This will be most acute for excavators using hammers with noise levels predicted to be above the NMLs by up to 20 dB at closest position to the receivers
- Construction noise impacts to residents are highest to the west and north. Once again, this will be most acute for excavators using hammers which are up to 16 dB above NMLS. However, noise impact to residents is not expected to be significant due to pre-existing ambient noise levels in these locations and noise absorption from surrounding bushland
- For all other receivers, the construction noise generated from individual equipment operating is below the Highly Noise Affected Level

With regard to vibration impacts, the *Noise and Vibration Impact Assessment* states:

- Given the scope of works, the acoustic report has found that some human perception vibration impacts are expected and there is potential for minor cosmetic impacts to some structures
- There is also potential for vibration to impact sensitive hospital equipment.

The proposed construction hours are as follows:[15]

- Monday to Friday:
    - 6:00am to 7:00am
    - 7:00am to 6:00pm
- Saturday – 8:00am to 1:00pm
    - 7:00am to 8:00am
    - 8:00am to 1:00pm
    - 1:00pm to 5:00pm
- Sunday and Public Holidays – No works.

The report also recommends that the extended hours be proposed for normal construction activities to:[16]

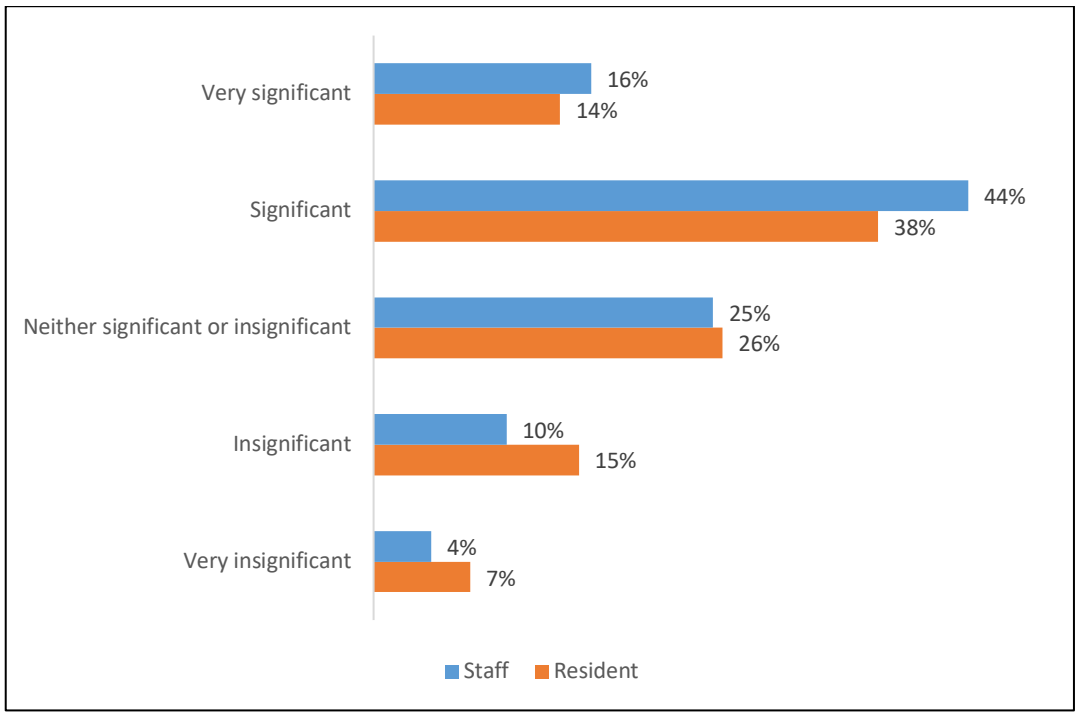
- Reduce the length of the project in order to meet the critical project delivery timeframes…
- Allow construction vehicles to avoid peak road network times and shift changeover times to reduce the impact on the surrounding road network

[15] Acoustic Studio 2021. *Noise and Vibration Impact Assessment for SSDA*. p.47.
[16] Ibid.

- Minimise the impact on hospital operations during core business hours such as planned surgery and outpatient clinics.

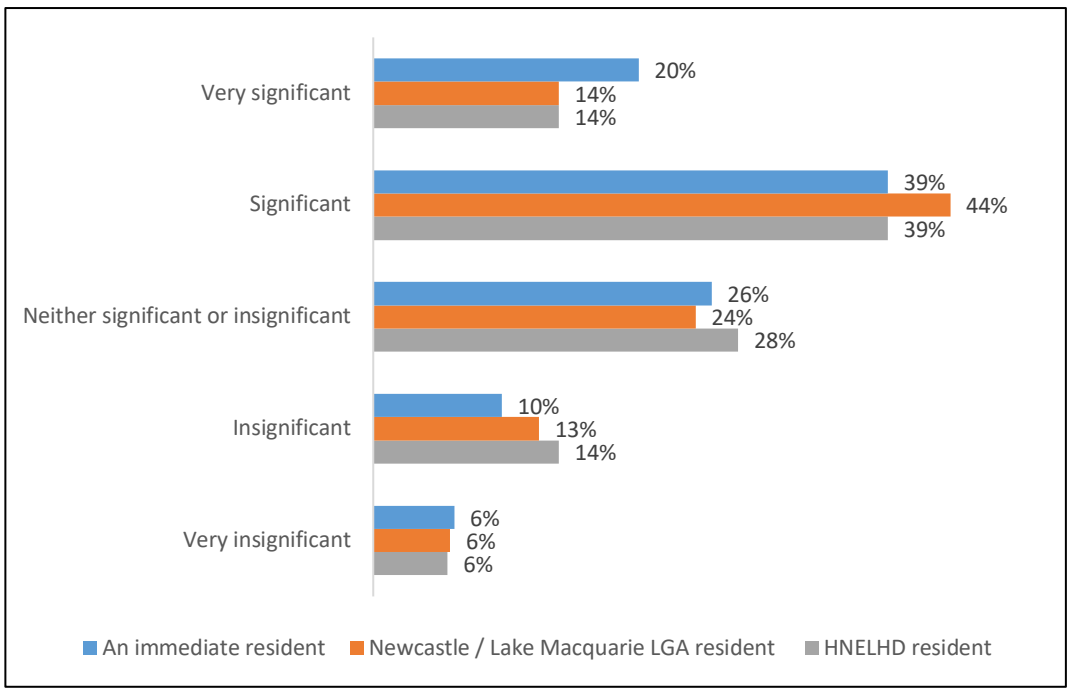
Over 50 per cent of staff and residents rated the impacts of noise and vibration as 'very significant' or 'significant', with staff more likely to rate the impact higher. This is shown in Figure 15.

Figure 15: Potential impact of noise and vibration for staff and residents n=937



Immediate residents were more likely to rate the impact of construction noise and vibration as 'very significant' compared to other residents. This is shown in Figure 16.

Figure 16: Potential impact of noise and vibration by resident type n=937



The impact of noise and vibration associated with the construction phase of the project is most likely to affect staff given the proximity to construction. Given that staff will be located at the construction site for lengthy periods, the impact has been rated as negative and likely.

For immediate residents, the impact has been assessed as possible and negative. For all other residents noise and vibration impacts have been assessed as unlikely and neutral.

Noise and vibration	
Stakeholder	Impact
Staff and visitors	Likely negative
Immediate residents	Possible negative
Other residents	Possible neutral

The *Noise and Vibration Impact Assessment* details the following planned mitigation measures for construction noise:

- Including Respite Periods where activities are found to exceed the 75 dB(A) Highly Affected Noise Level at receivers, such as three hours on, one hour off.[17]

In addition, the following considerations with regard to vibration have been identified:

- Modifications to construction equipment and methods of construction
- Rescheduling of activities to less sensitive times.

In addition, the engaged contractor will be required to prepare a *Construction Noise and Vibration Management Plan*.

The *Preliminary Construction Management Plan* also details the following proposed mitigation measures:[18]

- The necessary vibration monitoring and back to base alarm monitoring to ensure the nominated accepted level stipulated by the HNELHD and associated buildings is not breached.
- Positioning major plant away from sensitive receiver boundaries as much as possible. Where possible concrete pumping zones, cranage, and loading zones are to be positioned away from operational existing facilities. Where applicable treating plant with mufflers and noise mitigating filters.
- A management plan shall be developed for all noise generating activities, as outlined in the noise and vibration report, required to be undertaken close to existing buildings, particularly those housing sensitive equipment.

Construction noise and vibration will undoubtedly have a significant impact over a few years during site preparation and building. The *Construction Noise and Vibration Management Plan* will need to be comprehensive in nature and address staff and resident concerns. In addition, regular communication with these stakeholders will be required to ensure any concerns are addressed on a timely basis and respite is provided where noise and/or vibration occurs over a significant number of hours or days.

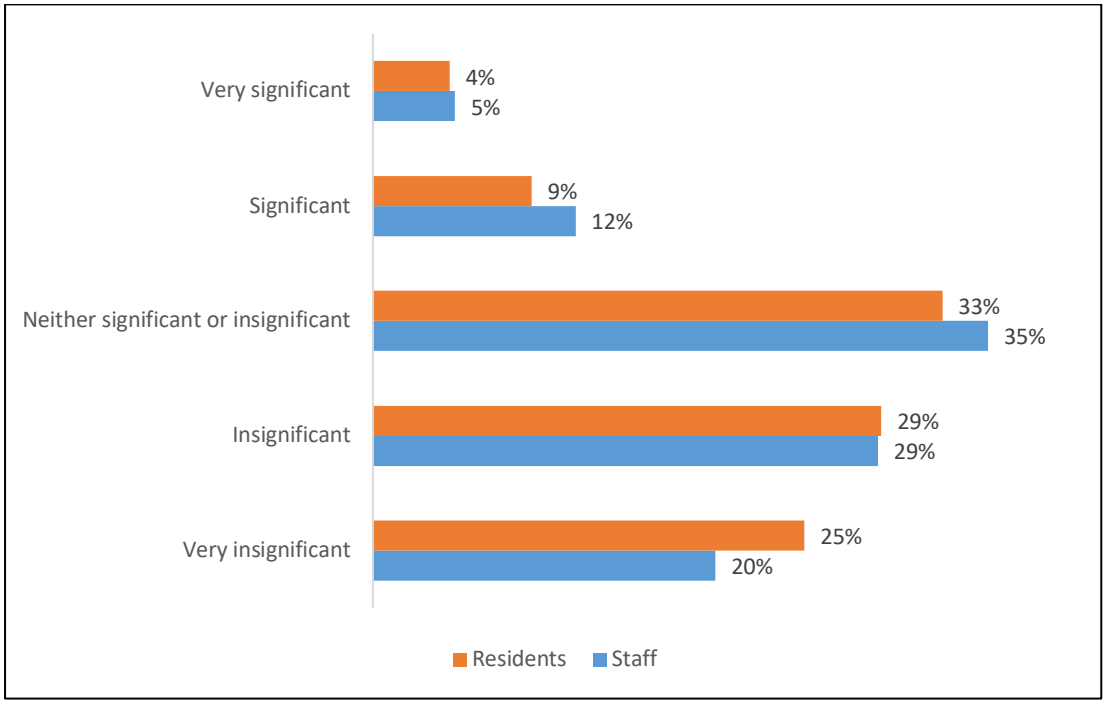
4.4.3 Visual impacts

Visual impacts relate change in the skyline due to the presence of cranes, scaffolding and mechanical equipment, for example, piling equipment and also due to additional signage and fencing due to safety requirements.

Only 17 per cent of staff and felt that visual impacts would be 'very significant' or 'significant' and there were no significant differences between the responses from staff and residents. This is shown in Figure 17.

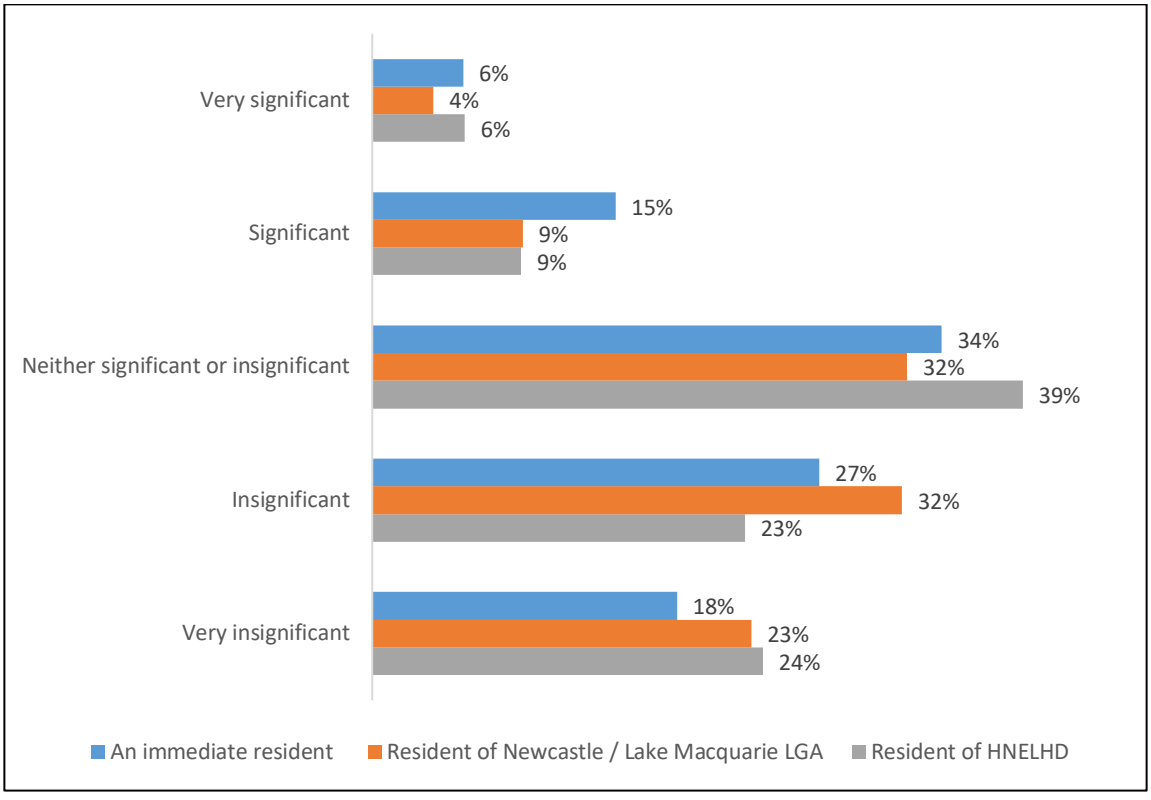
[17] Acoustic Studio 2021. *Noise and Vibration Impact Assessment for SSDA*. p.9.
[18] TSA 2020. Preliminary Construction Management Plan. p.12.

Figure 17: Potential visual impact for staff and residents n=939



Residents of the HNELHD were more likely to be neutral about the visual impacts of construction and residents of Newcastle and Lake Macquarie LGAs were more likely to rate visual impacts as insignificant. This is shown in Figure 18.

Figure 18: Potential visual impact by resident type n=939



As such, visual impacts are rated as unlikely and neutral.

Visual	
Stakeholder	Impact
Staff and visitors	Unlikely neutral
Immediate residents	Unlikely neutral
Other residents	Unlikely neutral

4.5 HUMAN CAPITAL

4.5.1 Talent and skills impacts

With the increased requirement for skilled workers during the construction phase the impacts on human capital are likely to be positive due to the attraction of talent to the Hunter Region during the construction phase.

Due to the likely increased in direct and indirect FTEs over the construction period, the impact on human capital has been rated as likely and positive for the local economy.

Employment	
Stakeholder	Impact
Local economy	Likely positive

4.6 NATURAL CAPITAL

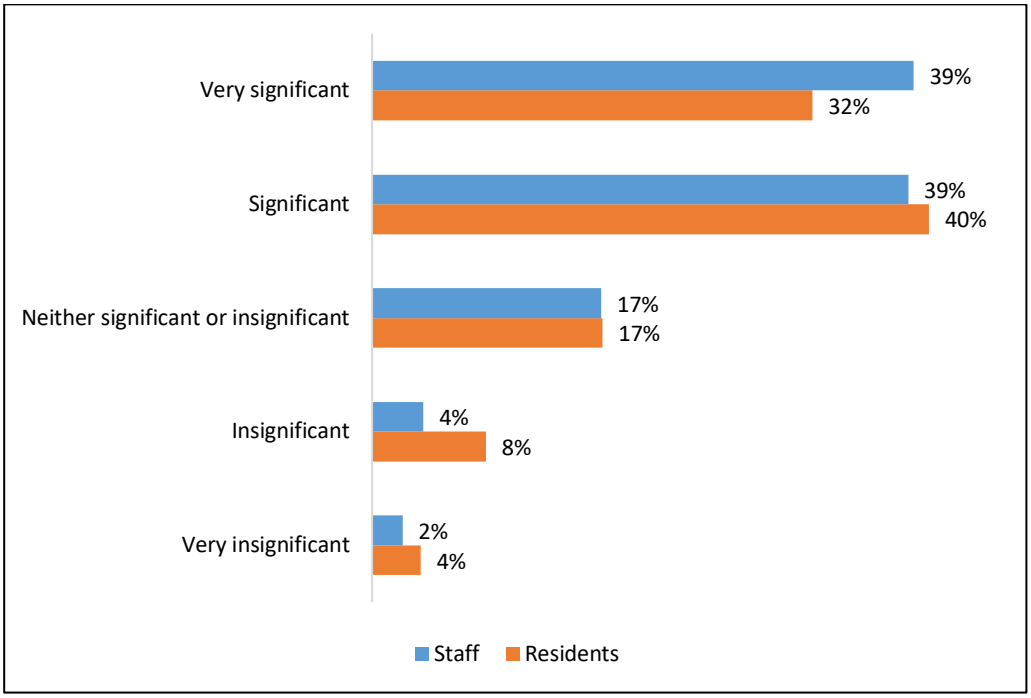
4.5.1 Biodiversity impacts

A development of this size within a bushland setting will have biodiversity impacts due to the clearing of trees and other vegetation and the likely loss of fauna as a result. The *Biodiversity Development Assessment Report* notes that the development footprint is approximately 13.5 hectares in size and has 38 per cent native vegetation cover in moderate to good condition.[19] The report noted that direct impacts on biodiversity values will occur due to the loss of native vegetation and fauna habitats as a result of clearance works.

Over 75 per cent of staff and residents are concerned about impacts to wildlife as a result of the construction phase of the project. Staff were more likely to rate the potential impact to wildlife as 'very significant' (39 per cent compared to 32 per cent respectively). This is shown in Figure 19.

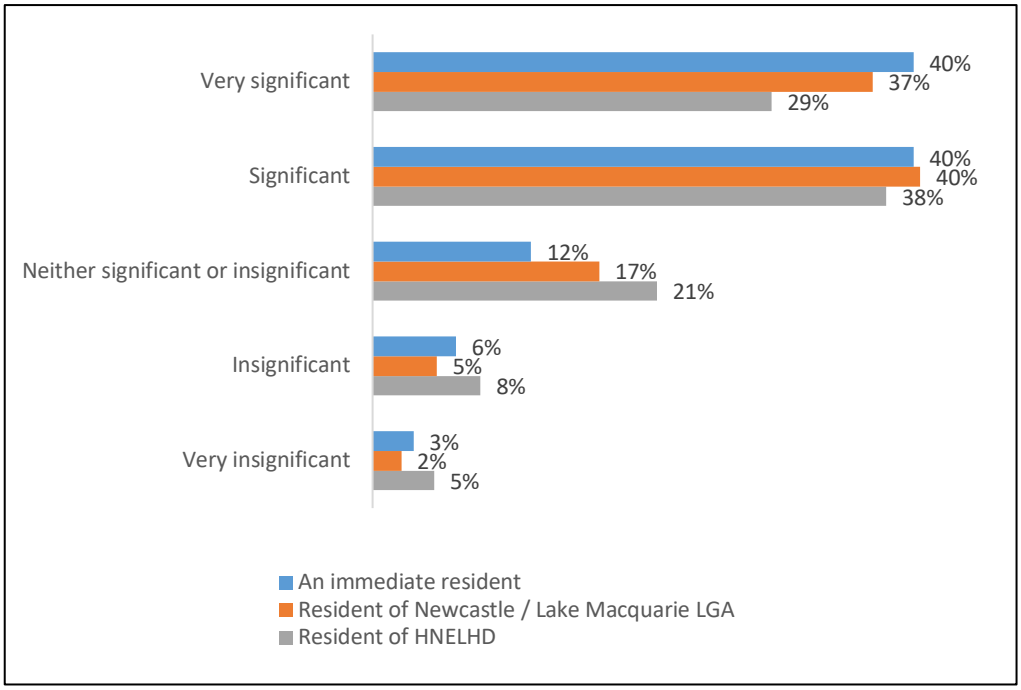
[19] Umwelt 2021. *Biodiversity Development Assessment Report.* p.8.

Figure 19: Potential impact on local wildlife for staff and residents n=937



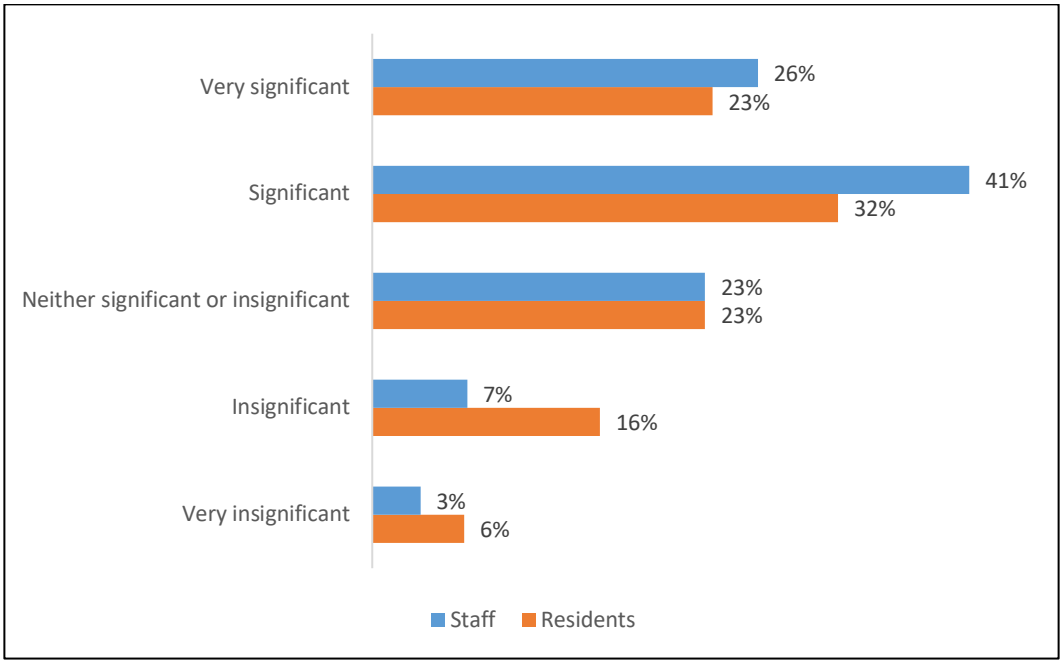
Immediate residents and Newcastle City/Lake Macquarie City LGA residents were more likely to rate impacts to wildlife as 'very significant'. See Figure 20 below.

Figure 20: Potential impact on local wildlife by resident type n=937



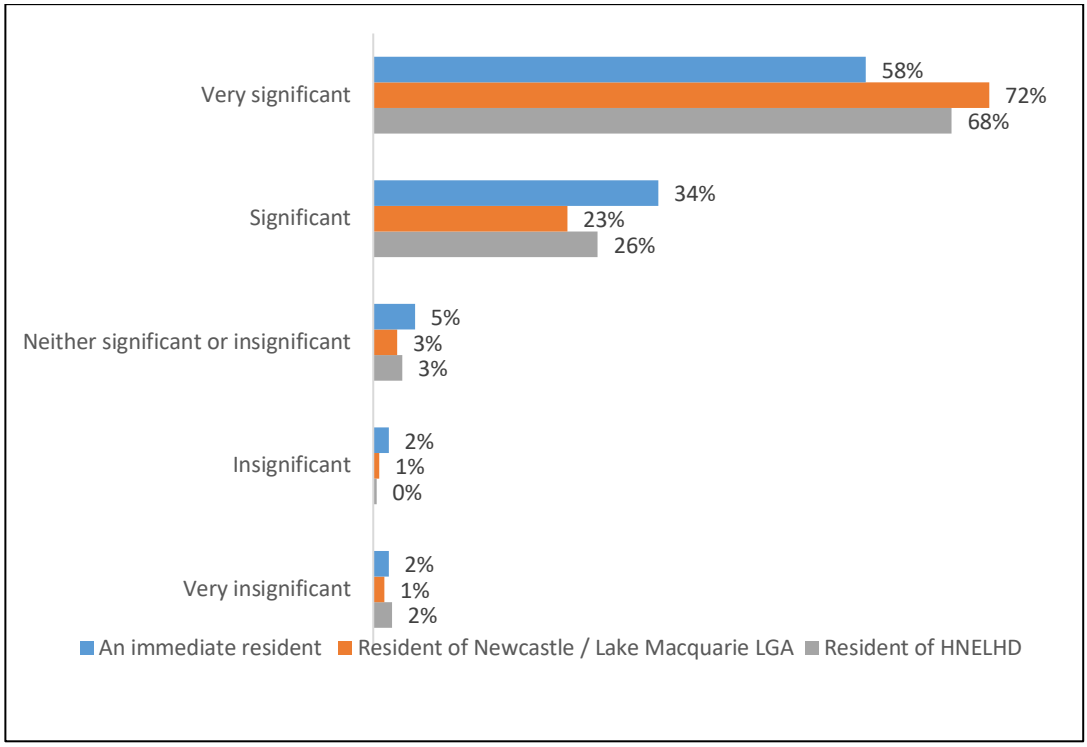
The impact of tree clearing as a result of the project was rated as 'very significant' or 'significant' by 67 per cent of staff and 55 per cent of residents. This is shown in Figure 21.

Figure 21: Potential impact of tree clearing for staff and residents n=937



Newcastle City/Lake Macquarie City LGA residents and the HNELHD residents were more likely to rate the impact of tree clearing as 'very significant' compared to immediate residents. However, nearly all resident types rated tree clearing as 'very significant' or 'significant'. This is shown in Figure 22.

Figure 22: Potential impact of tree clearing by resident type n=940



I'm extremely worried about the impact of clearing the bushland on patient outcomes. Providing more concrete/man-made areas is hardly conducive to holistic health.

It's a great time for the government to take leadership on this issue and to acknowledge the wildlife and old forest in the area. There is a need to acknowledge the beautiful, rich environment that the hospital is sitting on.

In addition, when asked about potential mitigation measures, 6 per cent of survey respondents unprompted identified preservation of wildlife.

> *Keep as many trees as possible and protect the wildlife.*
>
> *Wildlife corridors need to be kept intact and maintaining as much natural/existing vegetation as possible. Environmental impacts need to be a priority.*
>
> *Protection of wildlife especially the cockatoos, lorikeets, black cockatoos and galahs. Also protection of as many trees as possible. The landscaping in immediate vicinity around buildings should be local Australian Native species – except keep the jacarandas please!*

Given the existing site features and the size of the development there will be a loss of flora and fauna habitat, combined with a high level of perceived negative impact. As such, ecological impacts during construction and (potentially longer term) have been assessed as likely and negative.

Biodiversity impacts	
Stakeholder	Impact
Residents	Likely negative
Staff	Likely negative
Environment	Likely negative

It will be important to minimise and avoid potential impact on the ecological value of the proposed site with any new planting specified based on native flora to maximise the potential return of fauna to the site. This is confirmed in the report on the ESD initiatives, conducted by EMF Griffiths which acknowledges the healthy and diverse natural environment surrounding the JHHIP and notes that native landscaping should be favoured during the detailed design stages.

The development is committed to delivering a biodiversity offset strategy which appropriately compensates for the unavoidable loss of ecological values. As noted in the *Biodiversity Development Assessment Report*, offset can used to meet an offset obligation under the Biodiversity Offsets Scheme, including like for like offsets, for:[20]

- PCT 1592 – Spotted Gum - Red Ironbark - Grey Gum shrub – grass open forest of the Lower Hunter – 69 credits
- PCT 1619 – Smooth-barked Apple – Red Bloodwood – Brown Stringybark – Hairpin Banksia heathy open forest of coastal lowlands – 49 credits
- PCT 1627 – Smooth-barked Apple – Turpentine – Sydney Peppermint heathy woodland on sandstone ranges of the Central Coast – 45 credits
- Black-eyed Susan (Tetratheca juncea) – 59 credits
- Squirrel glider (Petaurus norfolcensis) – 194 credits.

The biodiversity offset strategy (already developed by the Project Team) should be implemented in consultation with the Biodiversity Conservation Trust and the Department of Planning Industry and Environment. At this stage, the credit obligation will be relinquished through either:

- Purchasing credits from the market (if they are available during the timeframe conditioned in the consent) and/or
- Making a contribution into the *Biodiversity Conservation Fund*.

Given the high level of staff and resident concern over the impacts on biodiversity, it will be important to ensure that any vegetation clearing is communicated appropriately and in advance and mitigation measures promoted where applicable.

[20] Umwelt 2021. *Biodiversity Development Assessment Report.* p.i.

4.7 SUMMARY

Overall, the impacts in the construction phase are seen as being negative for manufactured, social and natural capital. There is significant concern on the traffic, parking and accessibility impacts and even more significant for biodiversity.

The impacts in the construction phase for financial and human capital as seen as positive as the size of the development and the time period for construction will require an increase in construction workers who will bring technical skills and spend their wages in the Hunter Region.

Generally, the mitigation of impacts as planned/specified in the various technical studies is adequate, however we consider that the following measures are needed during the construction phase:

- Leverage the existing community consultative committee based on the NSW Government Community Consultative Committee Guidelines[21]
- Convene the existing committee based on revised terms of reference before construction commences and continue for two years post construction completion
- Appoint an independent chair
- Include representatives from the Newcastle City and Lake Macquarie City LGAs and HNELHD, two/three directly affected neighbours and a JHHIP staff member
- Develop and implement a comprehensive stakeholder engagement and communications plan during all stages of the project. This plan should assess, on an ongoing basis, the extent to which potential positive and negative impacts affect relevant stakeholders to ensure that social impacts are adaptively monitored and managed over time..

[21] NSW Government 2019. *Community Consultative Committee Guideline: State Significant Projects*. Available at: https://www.planning.nsw.gov.au/-/media/Files/DPE/Guidelines/Community-Consultative-Committee-Guideline-31-01-2019.pdf

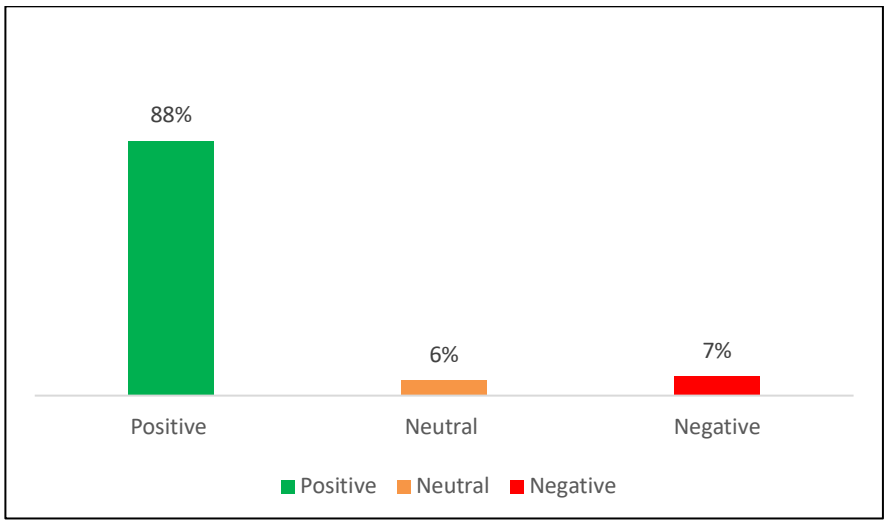
5. Operational impacts

5.1 OVERVIEW

This section considers the potential impacts associated with the operational phase of the project. The findings on potential operational impact arise from the technical studies and from the survey.

The development at the JHHIP is expected to deliver significant positive outcomes for the local and regional community and staff in terms of upgraded facilities, increased capacity, improved service, improved traffic flow, improved working conditions and employment opportunities. The majority of impacts once the site is fully operational were perceived by stakeholders to have a significantly positive impact. This is shown in Figure 23.

Figure 23: Assessment of the upgraded facilities based on tone of comment n=981

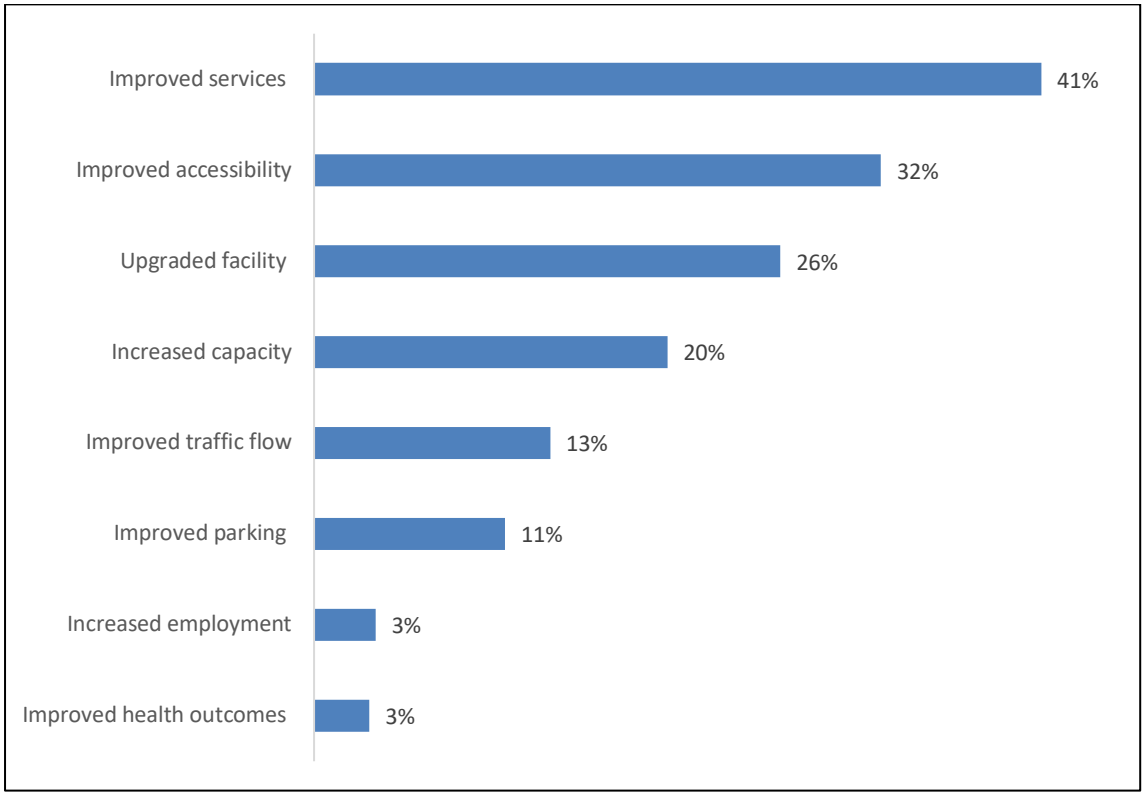


Free format responses to the survey also indicated a high level of support:

> *The redevelopment is brilliant and has been needed for a long time. Putting both theatres together is a great idea.*
>
> *I'm really positive about it. I think it will be awesome and really good for the area.*
>
> *I think it's a great asset for Newcastle. So excited to see the progress.*

The perceived positive outcomes identified by respondents were improved services, improved accessibility, facility upgrades and increased capacity. This is shown in Figure 24.

Figure 24: Perceived positive outcomes of the upgraded facilities n=962



Note: Multiple comments per respondent have been included, so figures do not add up to 100 per cent.

In terms of the perceived negative outcomes of the development, the most commonly identified negative outcome was traffic congestion (n=51) owing to a busier operational site, followed by impacts to parking (n=24), working conditions (n=11) and impacts to wildlife (n=11). This is not a significant number when compared to the total number of all respondents (n=1,001). All of these concerns were also addressed as separate survey questions (see responses in Section 3).

This section includes:

- Section 5.1: Overview
- Section 5.2: Manufactured capital
- Section 5.3: Financial capital
- Section 5.4: Social capital
- Section 5.5: Human capital
- Section 5.6: Natural capital
- Section 5.7: Summary.

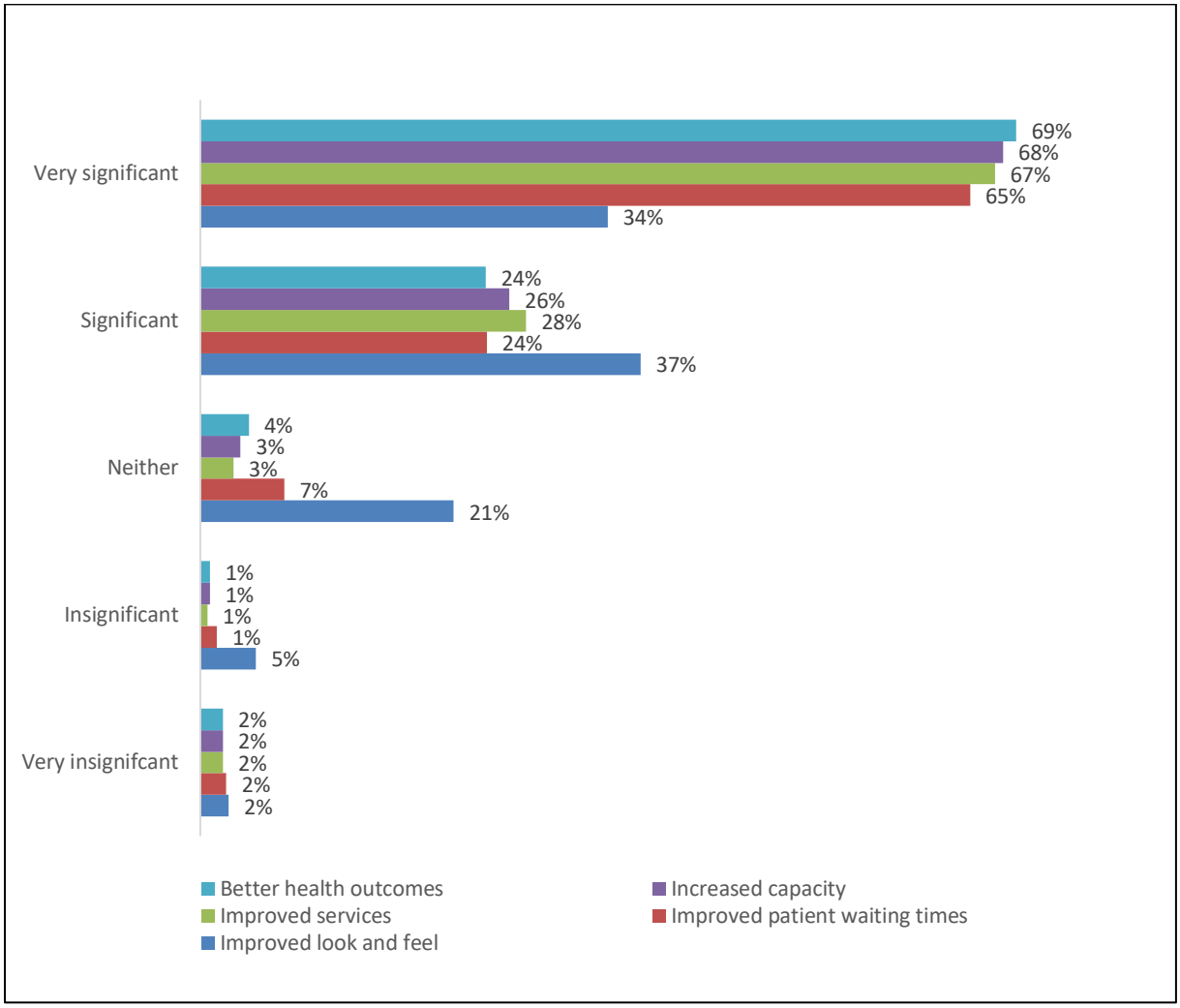
5.2 MANUFACTURED CAPITAL

5.2.1 Health facilities provision impact

The development will deliver improved infrastructure at the JHHIP, particularly with regard to the new seven-story ASB which will deliver expanded and enhanced facilities including an emergency department, intensive care services, operating theatres, women's services, education and teaching spaces and support services. The site will also see improvements in retail spaces, pharmacy and food services. This $780 million investment will provide significant manufactured capital to the Newcastle City and Lake Macquarie City LGAs.

Staff and residents perceive there will be a significant positive impact in terms of upgraded facilities and service capacity. This is shown in Figure 25.

Figure 25: Potential impact on service provision health outcomes for all respondents n=966

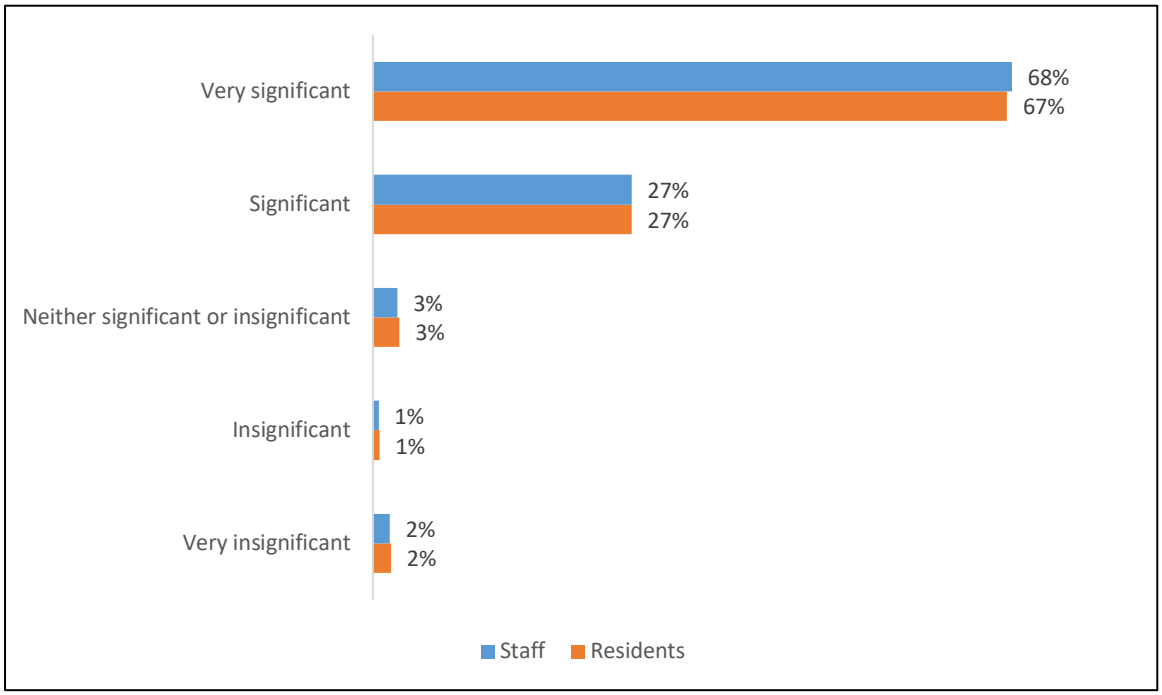


Improved hospital services (95 per cent), increased capacity (94 per cent) and better health outcomes for the region (93 per cent) were considered the most significant positive outcomes, followed by improved waiting times for patients (89 per cent). This, combined with the unprompted identification of benefits (see Figure 24) such as improved services, accessibility and upgraded facilities, demonstrates that the project is perceived as having the potential to deliver a range of significantly positive outcomes for manufactured capital. There were no significant differences between the responses from staff and residents.

Improved look and feel of the site was rated as significant by 72 per cent of staff and residents. Staff were more likely to rate the impact of the improved look and feel of the site as significant (76 per cent compared to 68 per cent).

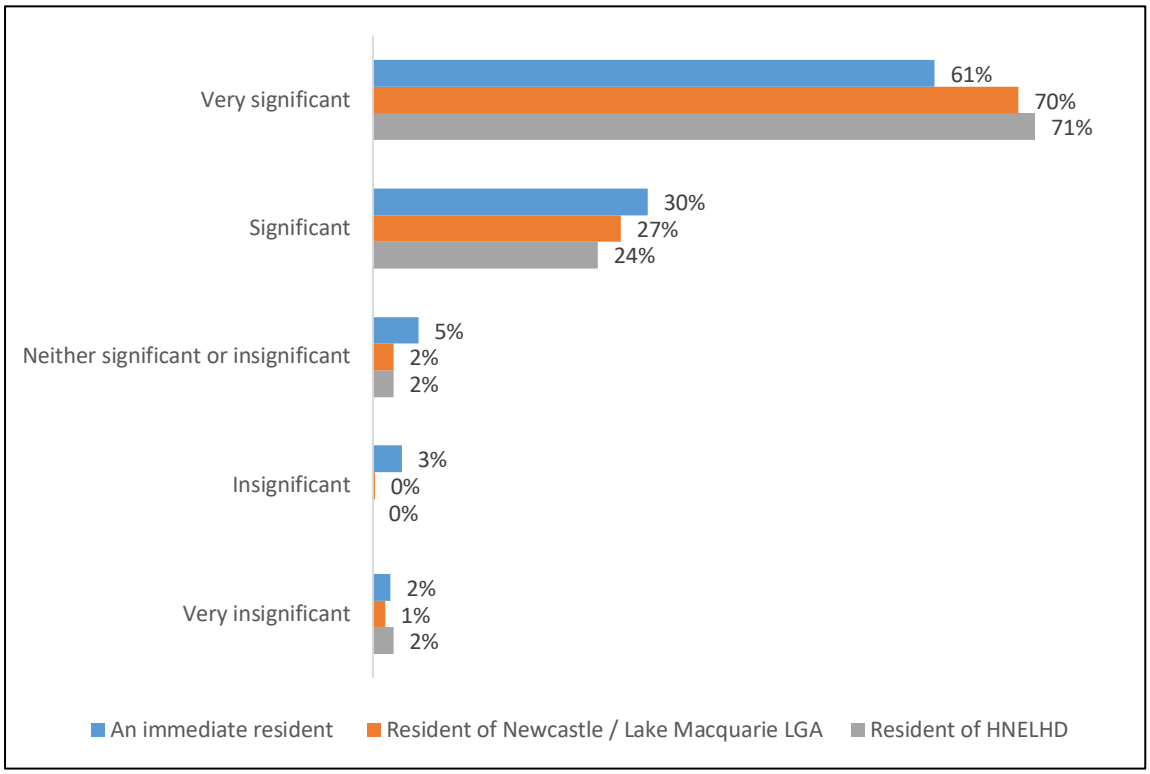
There were no significant differences in terms of rated impact of improved hospital services between staff and residents; over 94 per cent of both staff and residents perceive impacts positively 'very significant' or 'significant'. This is shown in Figure 26.

Figure 26: Potential impact on improved services for staff and residents n=934



Newcastle City and Lake Macquarie City LGA residents and residents in the HNELHD were more likely to rate the impact on hospital services as 'very significant' than immediate residents. This is shown in Figure 27.

Figure 27: Potential impact on improved services by resident type n=934



The impact on the provision of health facilities is rated likely and positive.

Upgraded and new hospital facilities	
Stakeholder	Impact
Staff and visitors	Likely positive
Residents	Likely positive

However, it will be important to measure and monitor the extent to which the development provides the new and upgraded facilities and whether they are delivered on time and within budget. As such, a performance evaluation framework should be established to demonstrate to all stakeholders, and the NSW Government, the value created in terms of manufactured capital. We recommended this should be developed based on the NSW Government guidelines.[22]

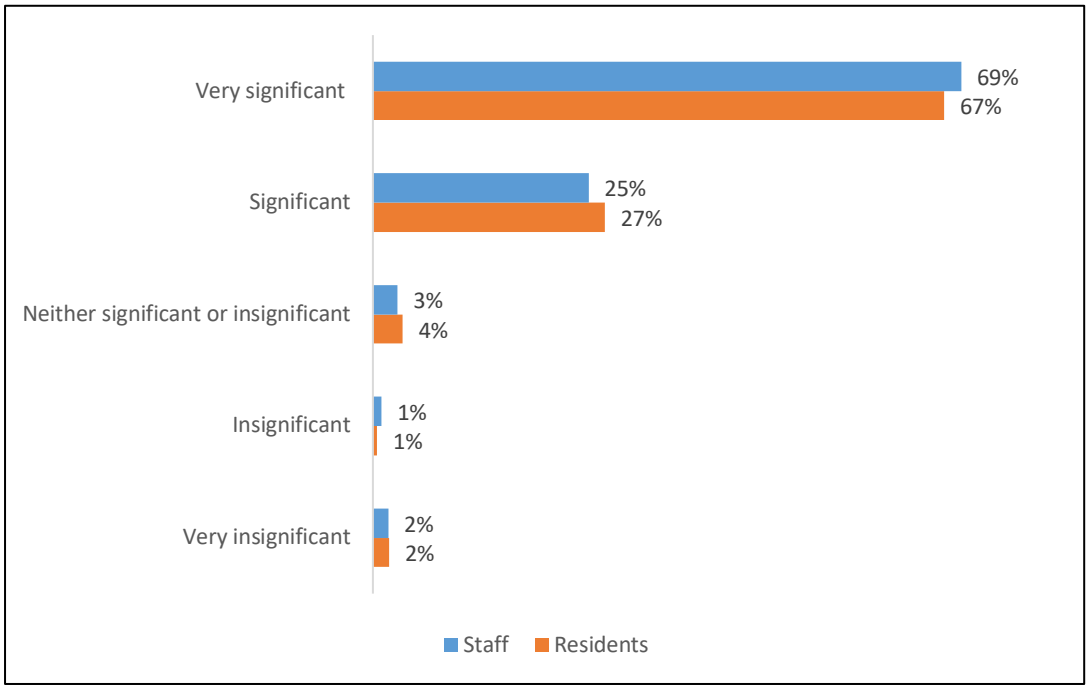
5.2.2 Health services capacity impact

The JHHC regularly operates at 98 per cent occupancy, with the inpatient bed base, operating theatres and ED treatment spaces working beyond capacity. NSW Health data modelling for 2031 anticipates a projected growth in demand in intensive care services by 49 per cent, ED admissions by 39 per cent and theatre and procedural activities by 38 per cent beyond current capacity.

As such there will be capacity issues with a growing population and associated health needs (see also Section 3.4) in the future unless the development is realised.

There were no significant differences in the rated significance of increased hospital capacity by residents and staff. This is shown in Figure 28.

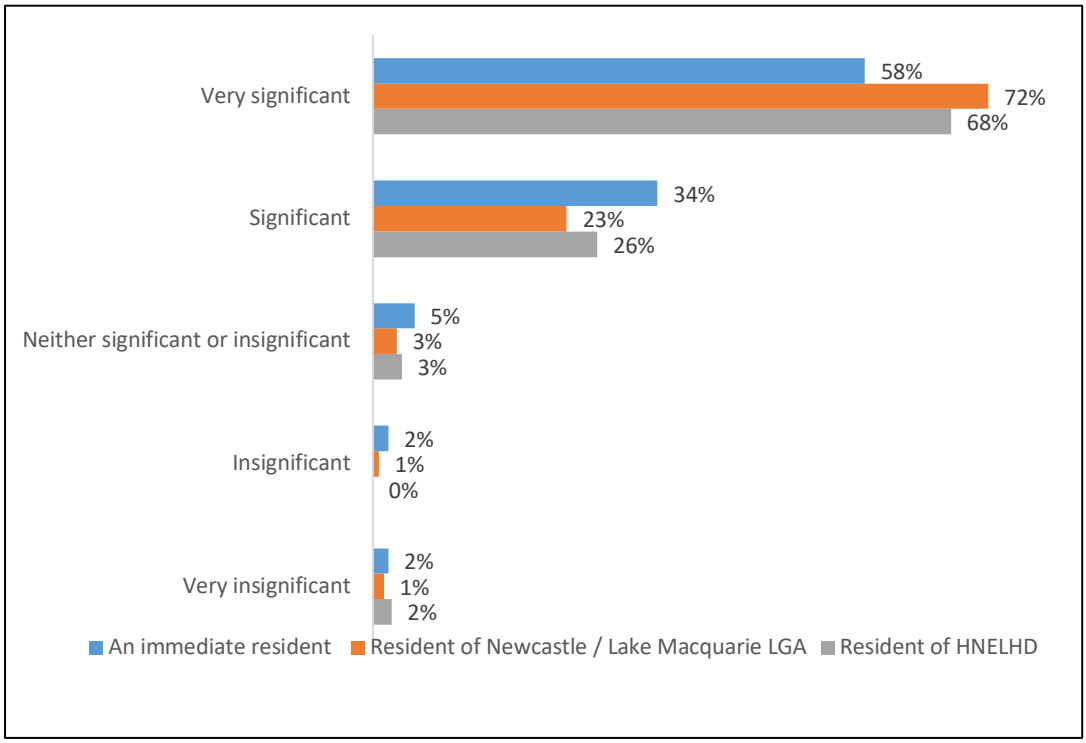
Figure 28: Potential impact on increased hospital capacity by staff and residents n=940



Newcastle City and Lake Macquarie City LGA residents and residents in the HNELHD were more likely to rate increased hospital capacity as 'very significant'. This is shown in Figure 29.

[22] NSW Government Department of Treasury 2021. *Guidelines – Program* Evaluation. Available at: https://www.treasury.nsw.gov.au/finance-resource/guidelines-program-evaluation

Figure 29: Potential impact on increased hospital capacity resident type n=940



The impact on the health services capacity is rated likely and positive.

Improved services and capacity	
Stakeholder	Impact
Staff and visitors	Likely positive
Residents	Likely positive

As noted in Section 5.2.1, it will be important to measure and monitor the extent to which the development provides the capacity as required over time and whether this capacity is delivered on time and within budget. As such, we recommended a performance evaluation framework should be established to demonstrate to all stakeholders, and the NSW Government, the value created in terms of manufactured capital.

5.2.3 Connectivity and traffic flow impacts

Although a separate project and not specifically linked to the development of the JHHIP, the Newcastle Inner City Bypass project will yield improved access to the JHHIP, better connectivity to the University of Newcastle and easier access from staff and visitors accessing the JHHIP facilities from places such as Maitland, Cessnock and Taree.

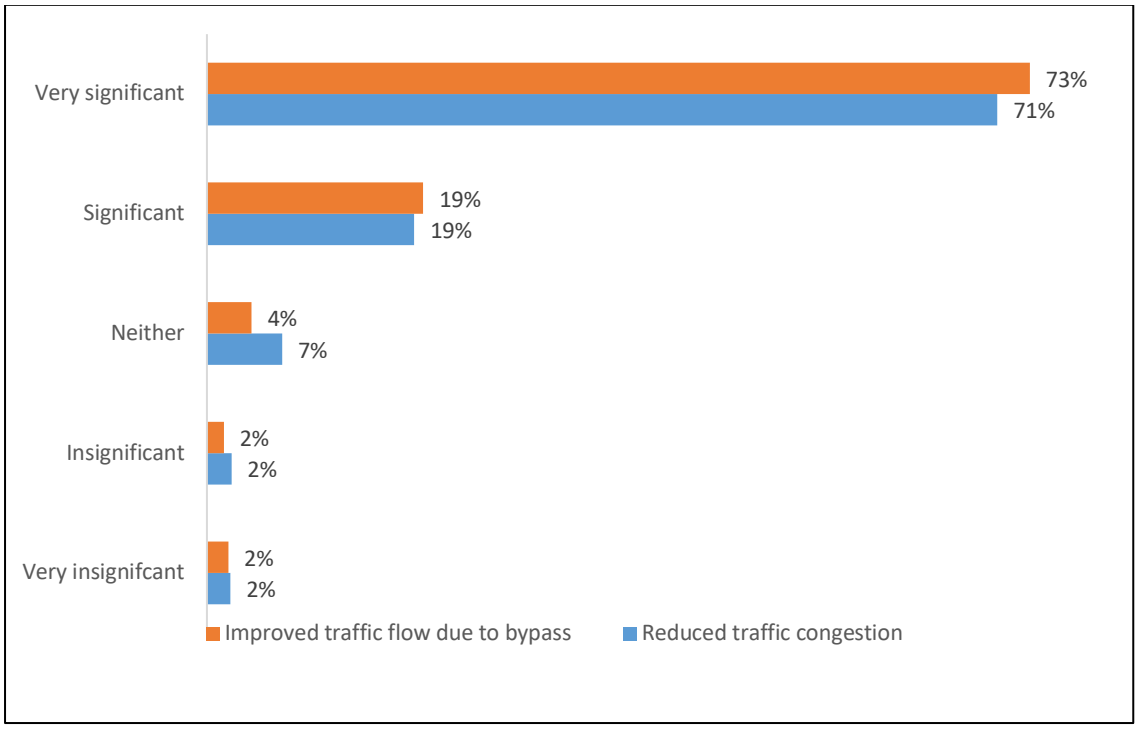
The *Transport Impact Assessment* noted that following construction of the bypass, the performance of intersections along Lookout Road will significantly improve. Specifically, following completed development by 2036, overall intersection delay for Lookout Road/Kookaburra Circuit is expected to reduce by up to 16 and 27 seconds respectively in the AM and PM peak periods compared to existing waiting time.

In addition, once the bypass is in place and the upgraded internal road network associated with Enabling Works is complete, modelling indicates that key intersections within the hospital internal road network will operate with significant spare capacity.

Over 90 per cent of staff and residents perceive the impact of the project on traffic improvements as significant in terms of improved traffic flow as a result of the bypass (92 per cent) and reduced traffic congestion (90 per cent). Staff were more likely to rate the impacts to traffic as 'very significant'

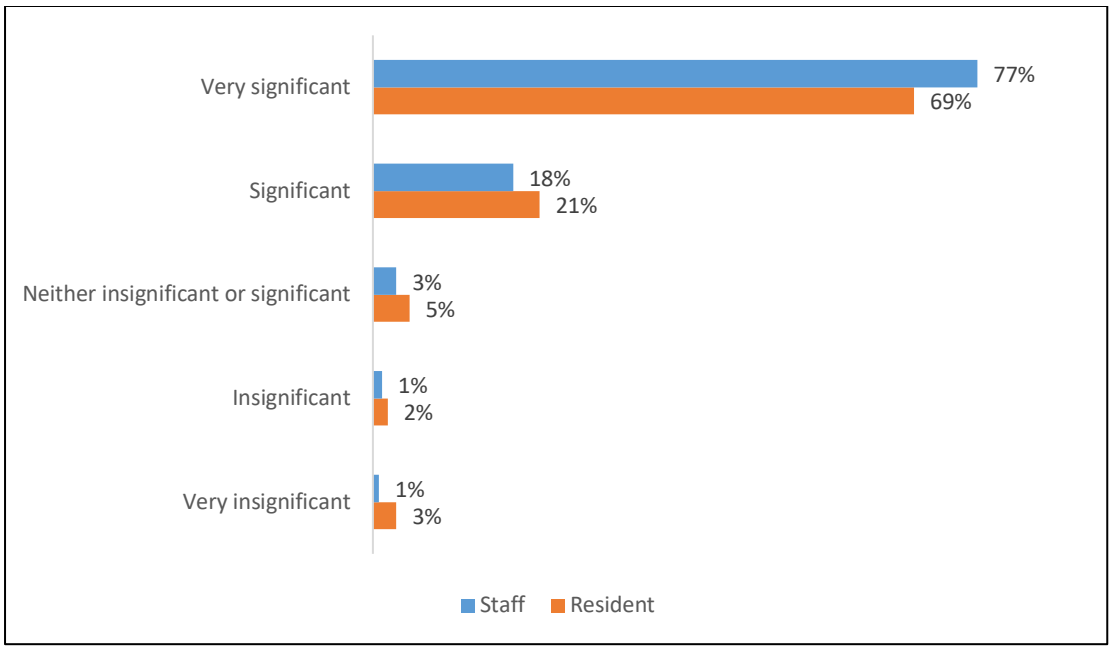
than residents (improved traffic flow due to bypass 77 per cent compared to 69 per cent respectively and reduced traffic congestion 74 per cent compared to 67 per cent respectively). This is shown in Figure 30.

Figure 30: Potential impact of traffic improvement by all respondents n=965



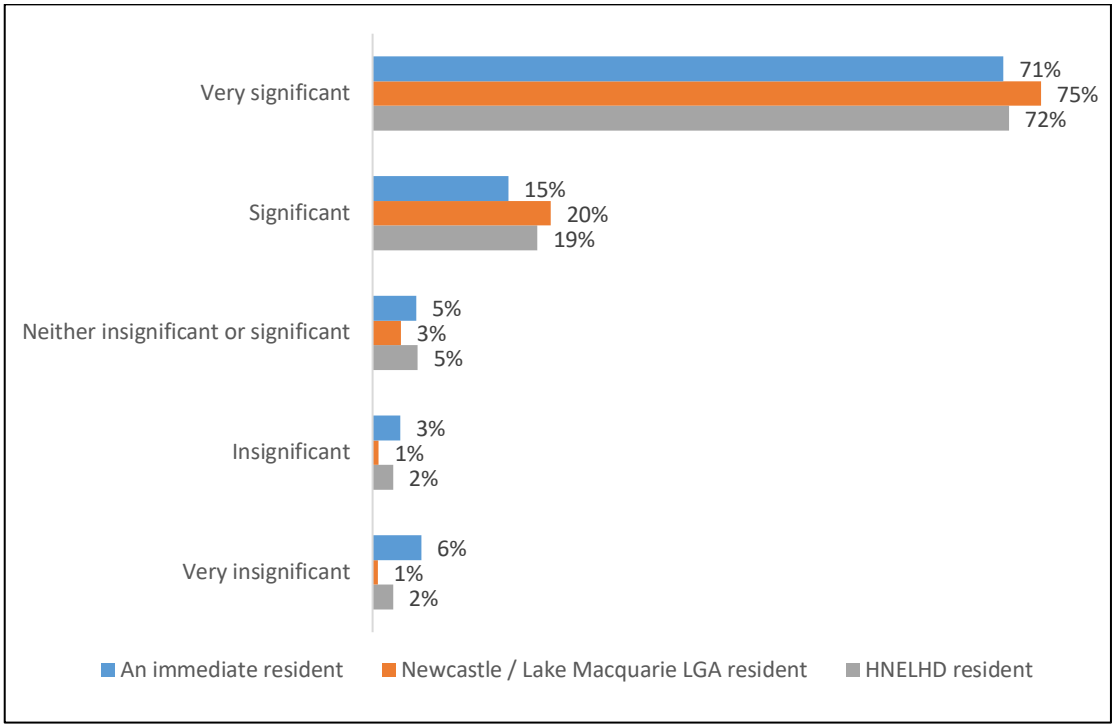
Staff were more likely to rate the impact of the bypass on improved traffic flow as 'very significant' than residents. This is shown in Figure 31.

Figure 31: Potential impact of traffic flow by staff and residents n=935



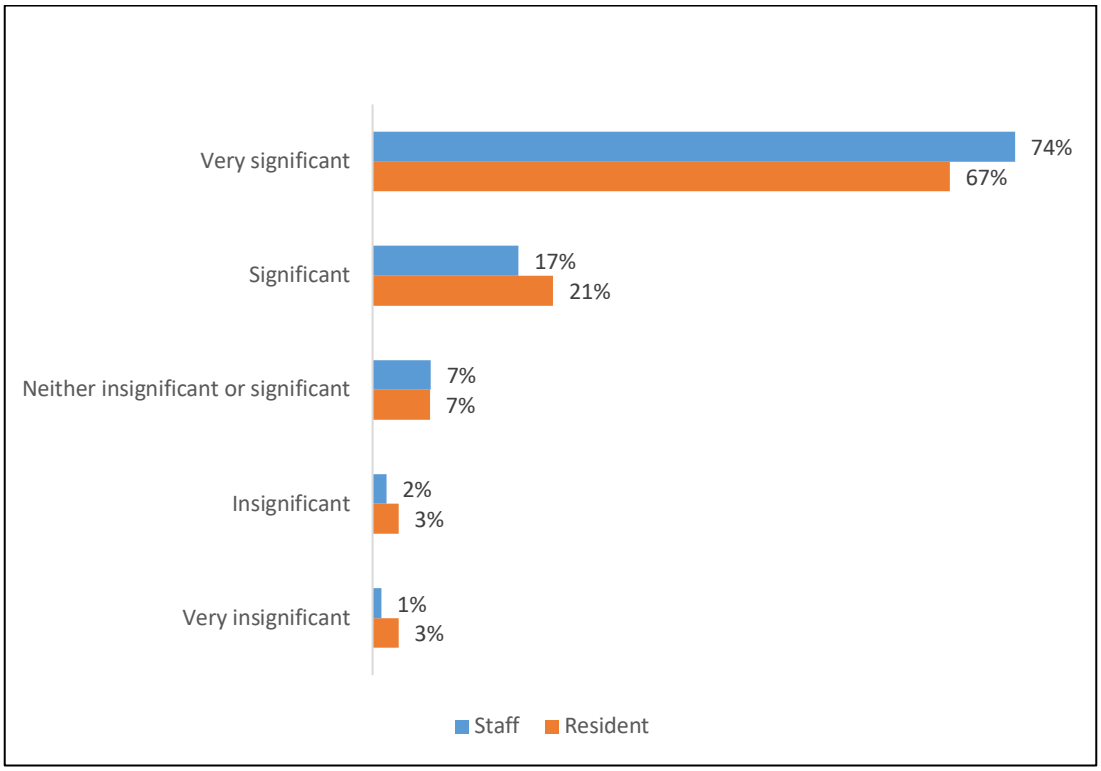
Newcastle and Lake Macquarie LGA residents were more likely to rate the impact of the bypass on improved traffic flow as significant. This is shown in Figure 32.

Figure 32: Potential impact of traffic flow by resident type n=935



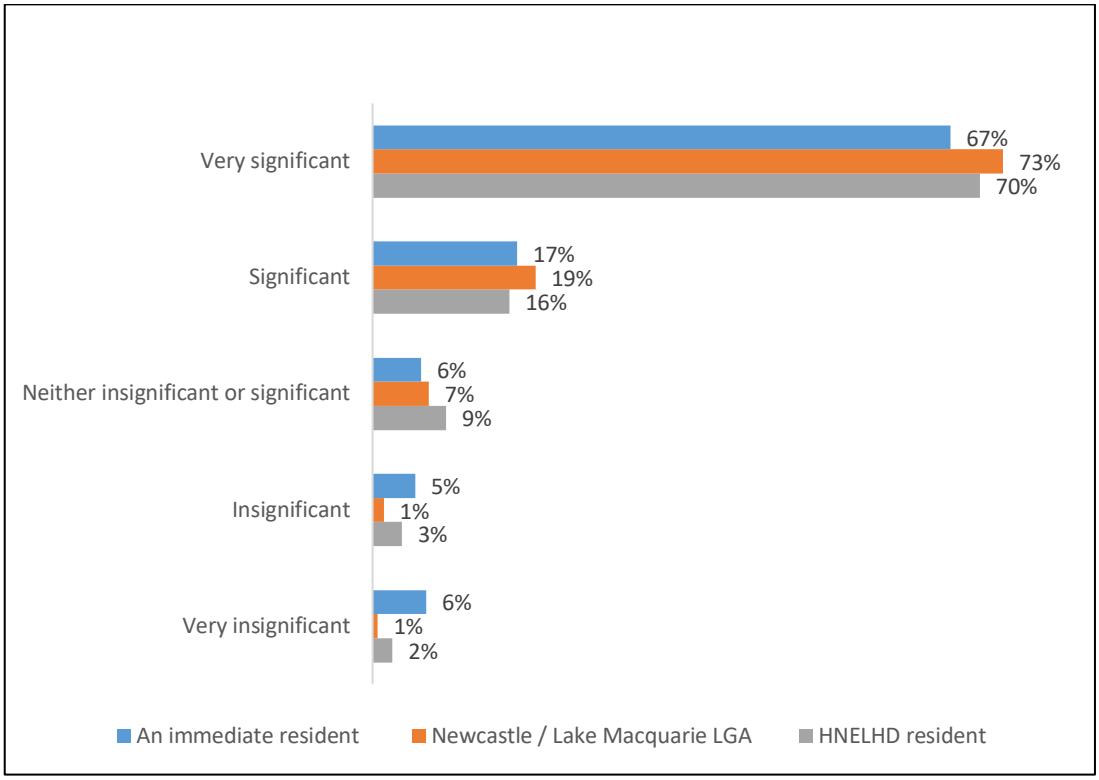
Staff were also more likely to rate the impact of the project on reduced traffic congestion as 'very significant'. This is shown in Figure 33.

Figure 33: Potential impact of traffic congestion for staff and residents n=934



Again, residents of the Newcastle City and Lake Macquarie City LGAs were more likely to rate the impact on reduced traffic congestion as significant when compared to other residents. This is shown in Figure 34.

Figure 34: Potential impact of traffic congestion by resident type n=934



According to the *Traffic Impact Assessment*, the extension of the bypass and construction of internal roads is expected to substantially reduce traffic on Lookout Road north of McCaffrey Drive by 39 per cent in 2020 and Kookaburra Circuit by 62 per cent in 2020. Further, traffic on Croudace Street north of Elder St is expected to reduce by 43 per cent in 2020.[23] Staff and residents surveyed for the SIA rated the impact of the project on improved traffic conditions as significant. As such, the assessment of the impact to traffic improvements is likely and positive.

Impact on improved traffic conditions	
Stakeholder	Impact
Staff and visitors	Likely positive
Residents	Likely positive

The *Transport Impact Assessment* recommends that 'key routes to and from future development zones be linked through the bypass to discourage further traffic circulating through the hospital frontage to/from Lookout Road'.[24] It will be important to ensure this occurs for all future developments on the site. In addition, 27 survey respondents (n=1,001) identified unprompted that improved public transport options to the hospital site could enhance traffic improvements, including the reinstatement of a shuttle bus which used to service the site.

Communication of key milestones to staff and community stakeholders with regard to the bypass and internal road connections development and delivery will be important.

[23] GTA Consultants 2021. *Transport Impact Assessment*. p.31.
[24] GTA Consultants 2021. *Transport Impact Assessment*. p.59.

5.2.4 Parking impacts

On-site parking is an existing issue for visitors and, particularly, for staff, given that currently 92 per cent of staff travel to the JHHIP by private vehicle.[25] The *Car Parking Demand Study* in the *Transport Impact Assessment* states:[26]

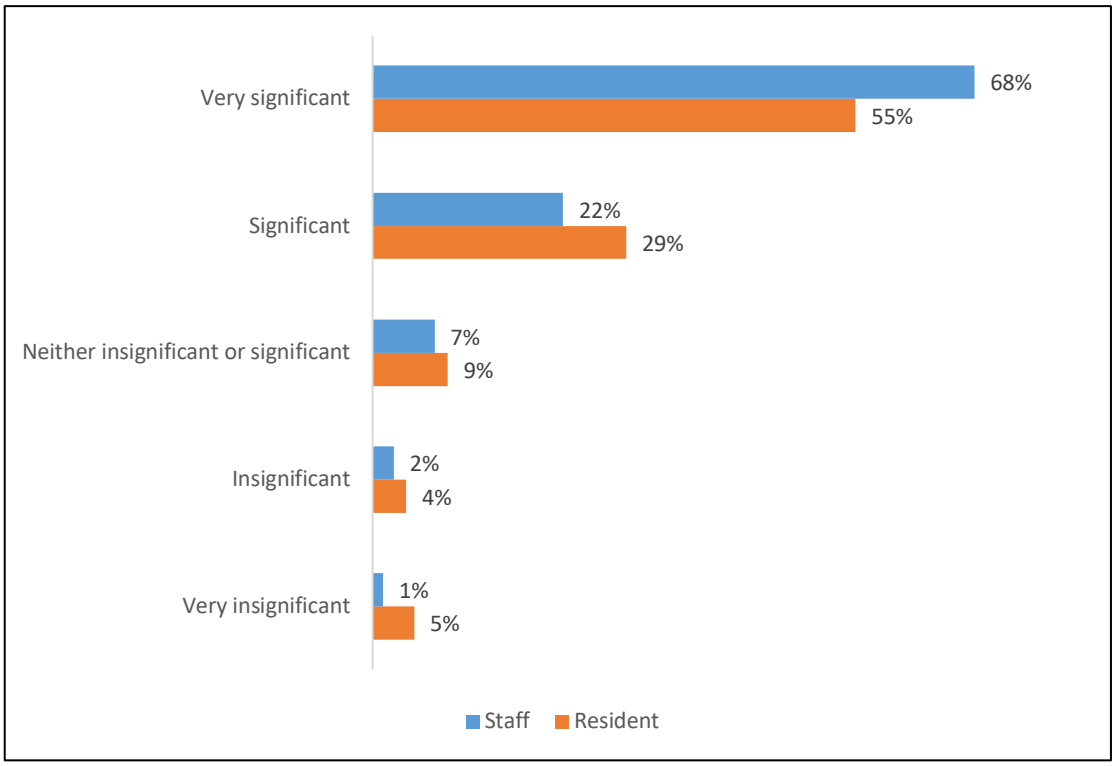
> *Parking occupancy surveys were completed for the hospital campus in August 2019. The surveys indicate there is currently approximately 3,500 parking spaces for the John Hunter Health Campus, while a further 285 spaces are provided for HMRI and 360 spaces are provided for Newcastle Private Hospital. Parking demand for the John Hunter Health Campus was observed to be high, with peak parking demand for all campus users (including loading, emergency and fleet vehicles) around 3,026 spaces (87 per cent occupied).*

The *Transport Impact Assessment* conducted also suggests that a high number of outpatients and inpatients (90 per cent) and visitors (84 per cent) also travel to the JHHIP by private vehicle.

The *Transport Impact Assessment* recommends that an additional on-site parking supply of 754 spaces be provided for the development to service future staff (517), visiting medical officers (9), fleet vehicles (25) and patient/visitor demand (203), in addition to the existing on-site parking supply.[27] In response to this demand, 900 spaces is proposed.[28]

Overall, 86 per cent of staff and resident rated the impact of the project on improved parking as 'significant', with staff more likely to rate the impact as 'very significant' compared to residents (68 per cent compared to 55 per cent respectively). This is shown in Figure 35.

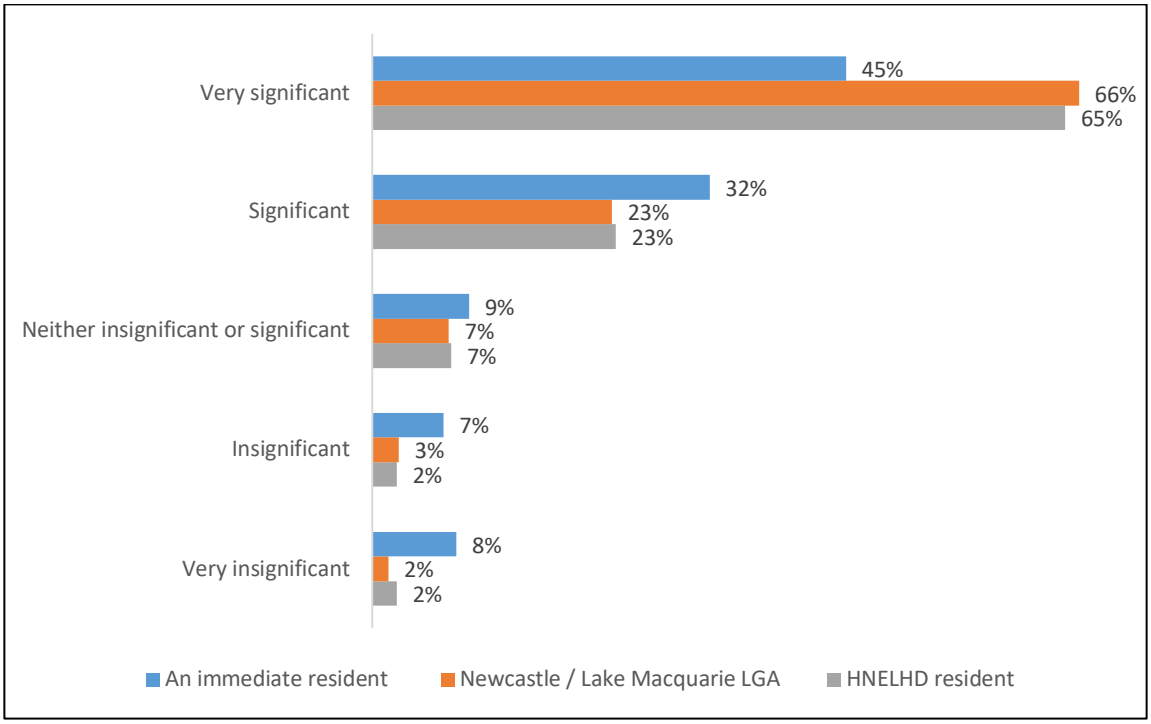
Figure 35: Potential impact of improved parking for staff and residents n=924



Newcastle City and Lake Macquarie City LGA residents and residents in the HNELHD were considerably more likely to rate the impact of the project on improved parking as 'very significant' than immediate residents. This is shown in Figure 36.

[25] Transport for NSW 2016. *Transport Performance and Analytics from 2016 Census data*. Available at: https://opendata.transport.nsw.gov.au/
[26] GTA Consultants 2021. *Transport Impact Assessment*. p.ii.
[27] Ibid. p.37.
[28] Ibid. p.37.

Figure 36: Potential impact of improved parking by resident type n=924



The 900 vehicle spaces at the JHHIP site, combined with a perception from residents and staff that improved parking will have a significant positive impact to manufactured capital, provides an assessment of likely and positive.

Impact on parking	
Stakeholder	Impact
Staff, visitors and residents	Likely positive

Once the final design of parking is confirmed, this should be communicated to staff and visitors to the JHHIP. Parking capacity should continue to be monitored for the first two years at least after development.

5.3 FINANCIAL CAPITAL

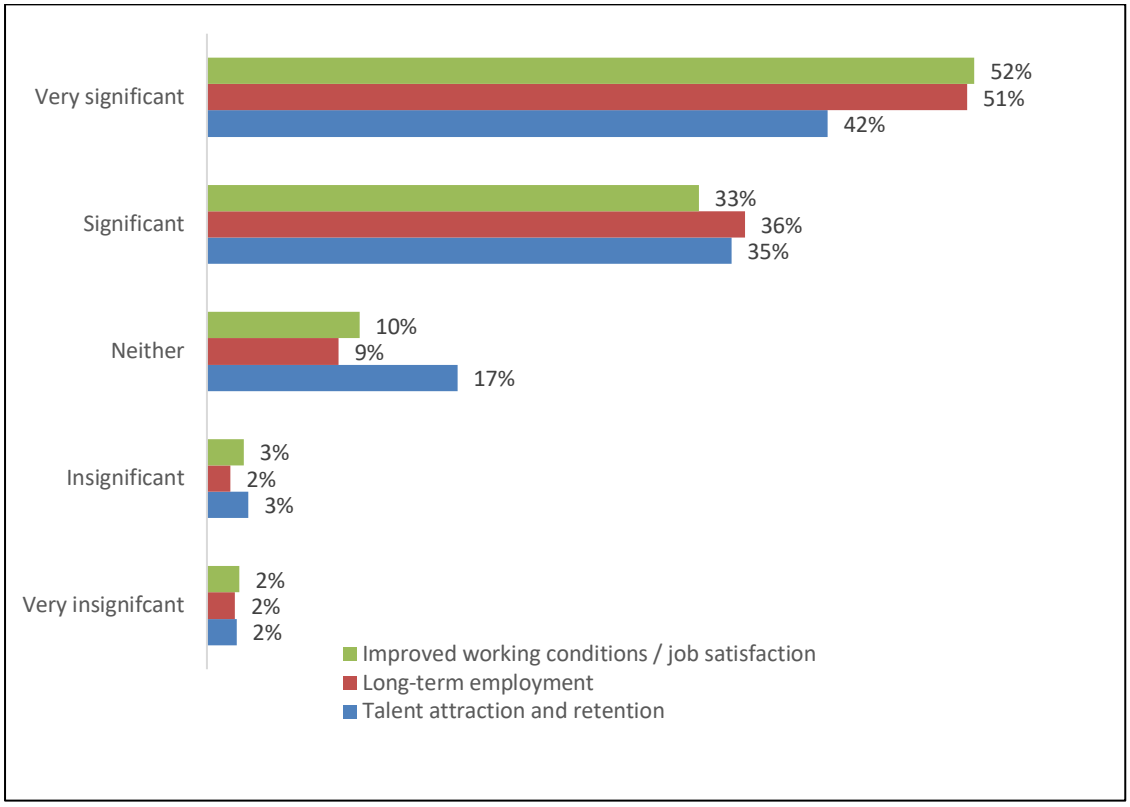
5.3.1 Workforce and employment impacts

It is envisaged that the project will offer long-term skilled employment opportunities and have a role in the attraction and retention of talent (see talent consideration in Section 5.5). In addition, upgraded and new facilities (Section 5.2.1) and increased service capacity (Section 5.2.2) are likely to positive flow-on effects in terms of improved working conditions and job satisfaction for current staff.

Forecast modelling developed by NSW Health estimates an increase of 7-8 per cent in the operational workforce to support the increased capacity delivered by the JHHIP by 2031/32. This does not include any workers in the research, retail or support facilities of the JHHIP.

The perceived impact of the project on the current workforce and future employment was rated as significantly positive, particularly in terms of long-term employment (87 per cent) and improved working conditions and job satisfaction for current staff (85 per cent). Staff were more likely to rate the impact on working conditions and job satisfaction as 'very significant' than residents (56 per cent compared to 46 per cent respectively). This is shown in Figure 37.

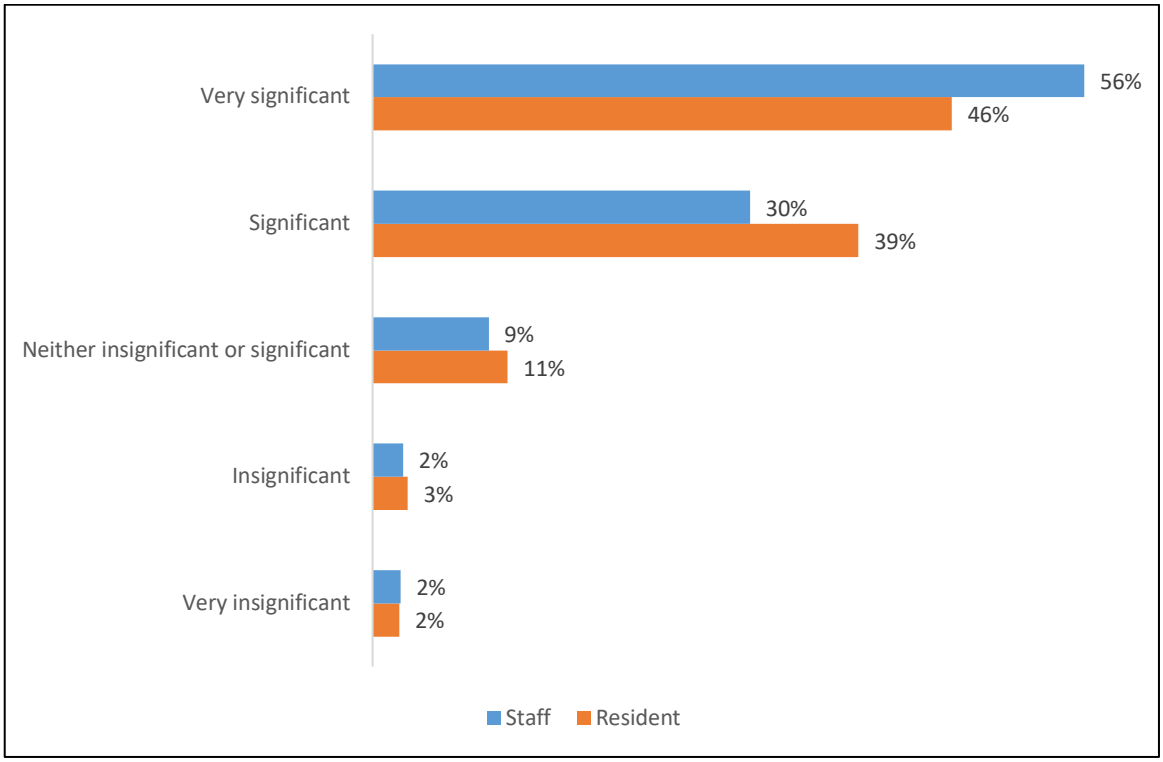
Figure 37: Potential impact on workforce and employment by staff and residents n=967



Talent attraction and retention is considered in Section 5.5.

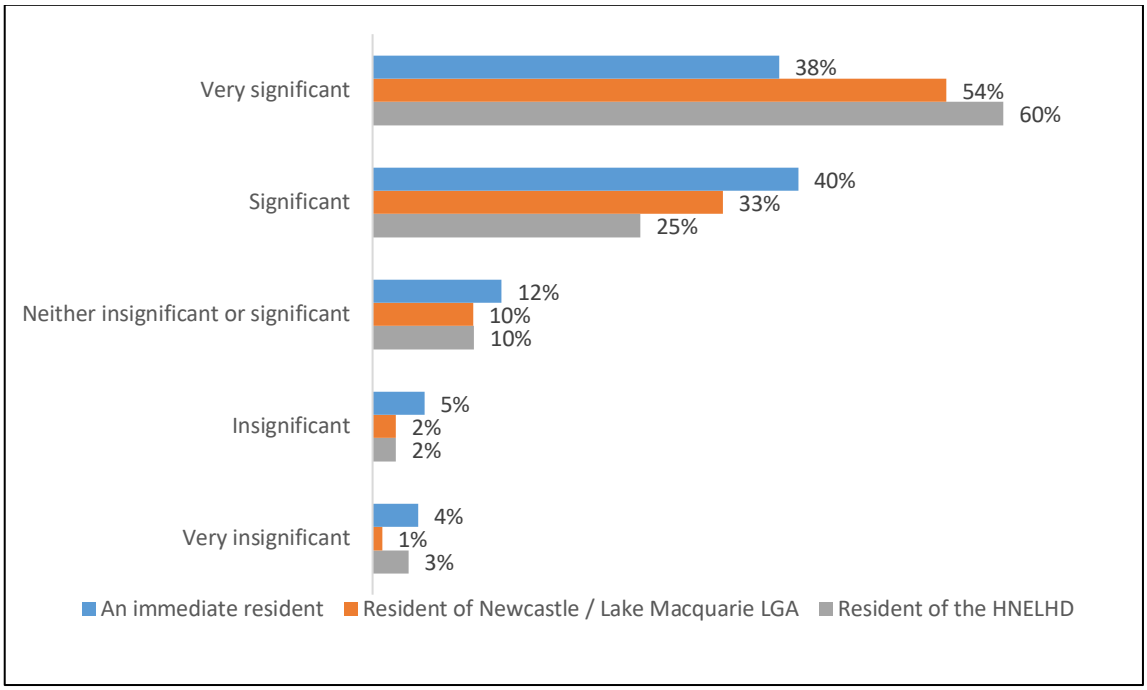
Staff were more likely to rate the impact on improved working conditions and job satisfaction as 'very significant' than residents. This is shown in Figure 38.

Figure 38: Potential impacts on improved working conditions and job satisfaction for staff and residents n=938



Newcastle City and Lake Macquarie City LGA residents and residents in the HNELHD were more likely to improved working conditions and job satisfaction as 'very significant' than immediate residents. This is shown in Figure 39.

Figure 39: Potential impacts on improved working conditions and job satisfaction by resident type n=938



The employment outcomes, if delivered as planned have the potential to deliver new long-term jobs and jobs have good working conditions which lead to job satisfaction. As such the impact on employment is likely positive.

Impact on working conditions and job satisfaction	
Stakeholder	Impact
Staff	Likely positive
Residents	Likely positive

The enhancement provision would be to ensure that the workforce plan for the JHHIP is at a sufficiently detailed level to deliver the right jobs required at the right time. This will also require a pipeline of potential staff, hopefully from within the Hunter Region. To achieve this, the appropriate number of training places (at The University of Newcastle, local TAFEs and even high schools) will need to be designed to ensure investment in the right courses is made. Potentially, the talent could also be selected from within the Hunter Region to keep the financial capital within the region.

5.4 SOCIAL CAPITAL

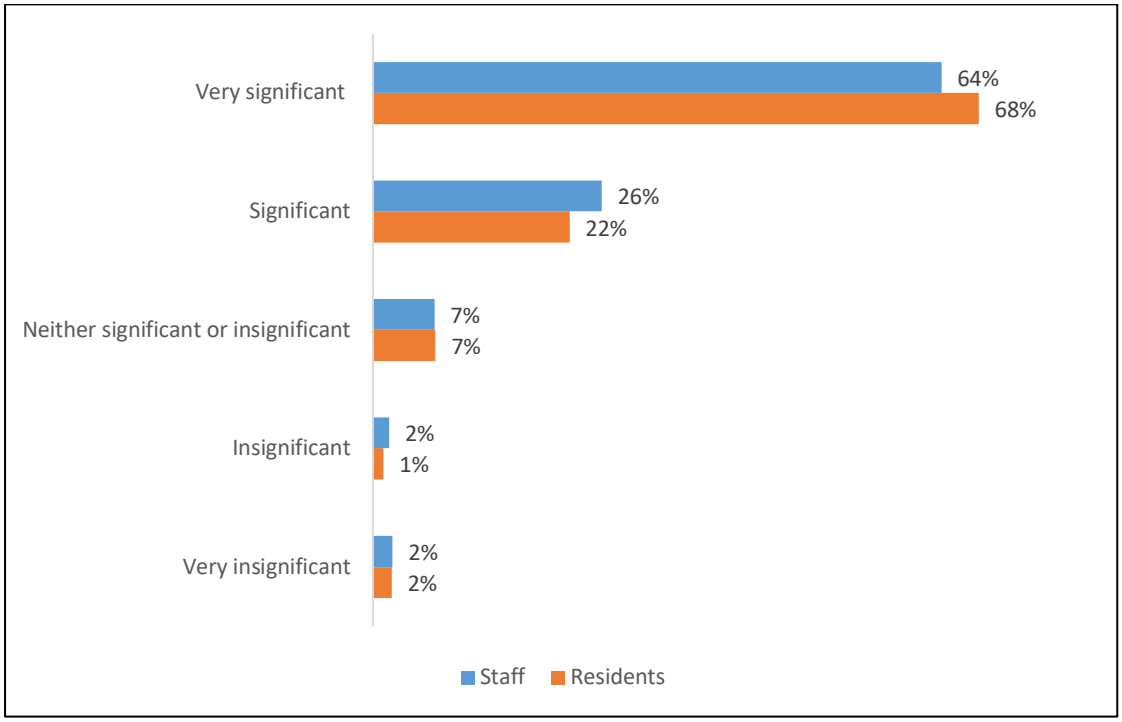
5.4.1 Waiting times impact

Forecast benefits identified by the project team in consultation with John Hunter and John Hunter Children's Hospitals' stakeholders include

- Implementation of new models of care which will improve access, patient experience, throughput of patients and treatment times
- Reduced fragmentation of services (Women's Services, Operating Theatres and Interventional Labs) to improve patient flow, reduce waiting times and increase efficiency.

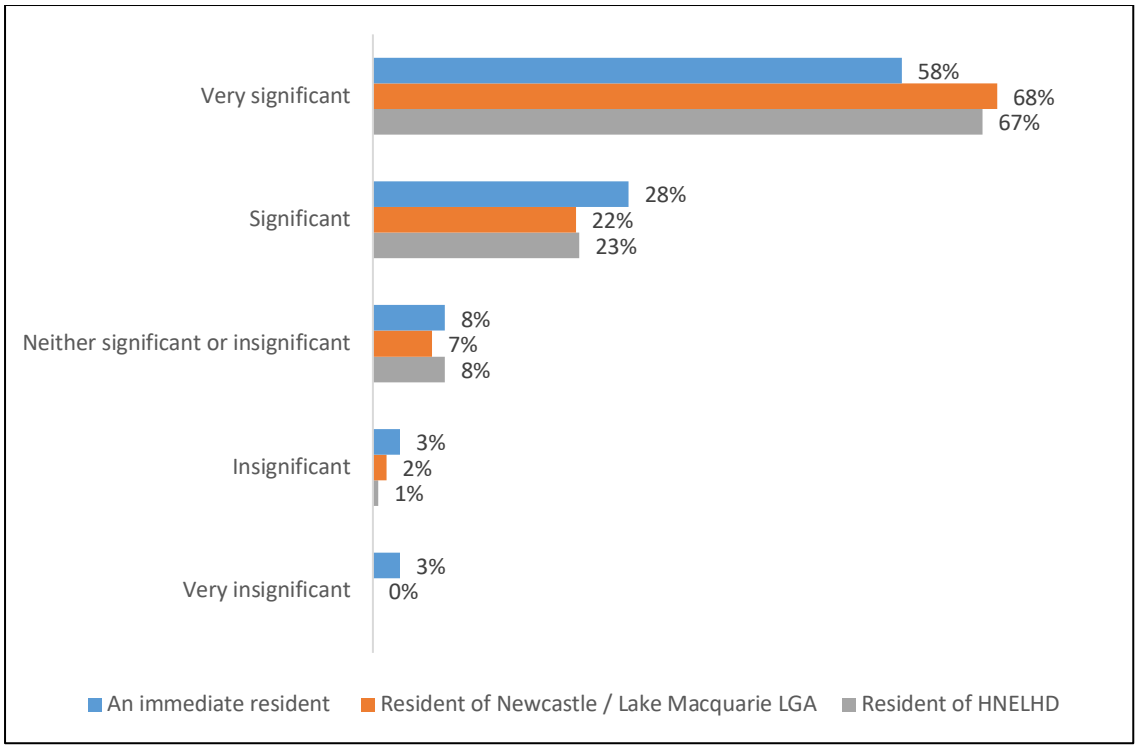
There were no significant differences in the rated impact of improved patient waiting times between staff and residents. This is shown in Figure 40.

Figure 40: Potential impact on improved waiting times for staff and residents n=937



Newcastle City and Lake Macquarie City LGA residents and residents in the HNELHD were more likely to rate improved patient waiting times as 'very significant' than immediate residents. This is shown in Figure 41.

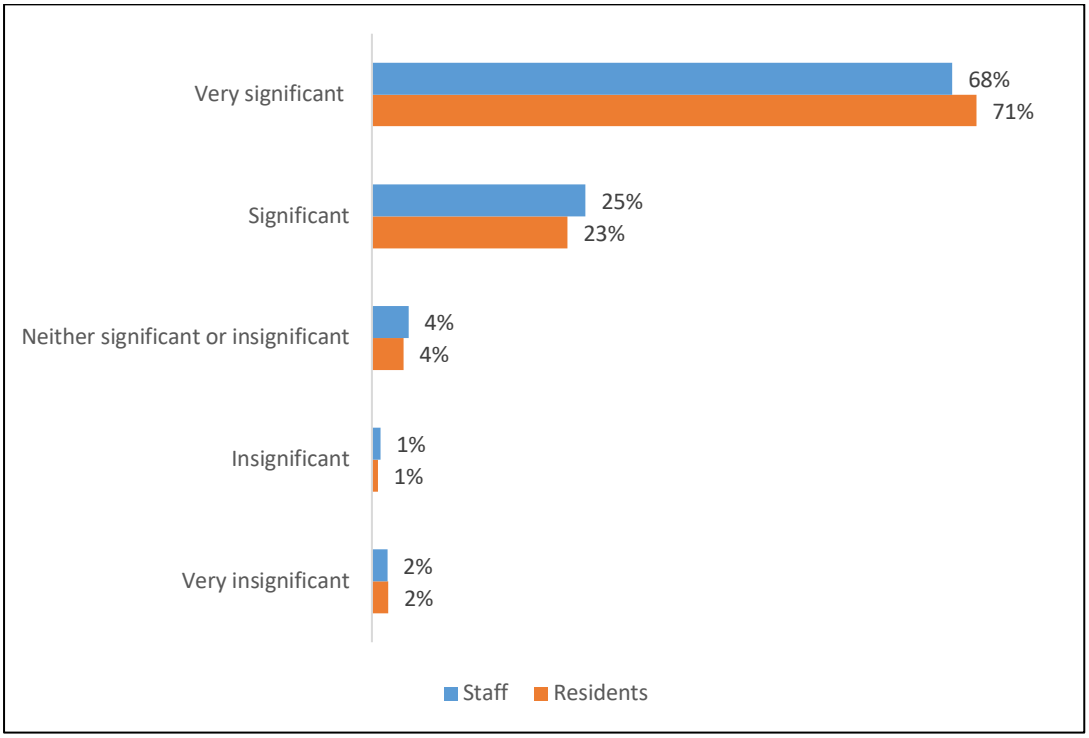
Figure 41: Potential impact on improved waiting times by resident type n=937



5.4.2 Health outcomes impact

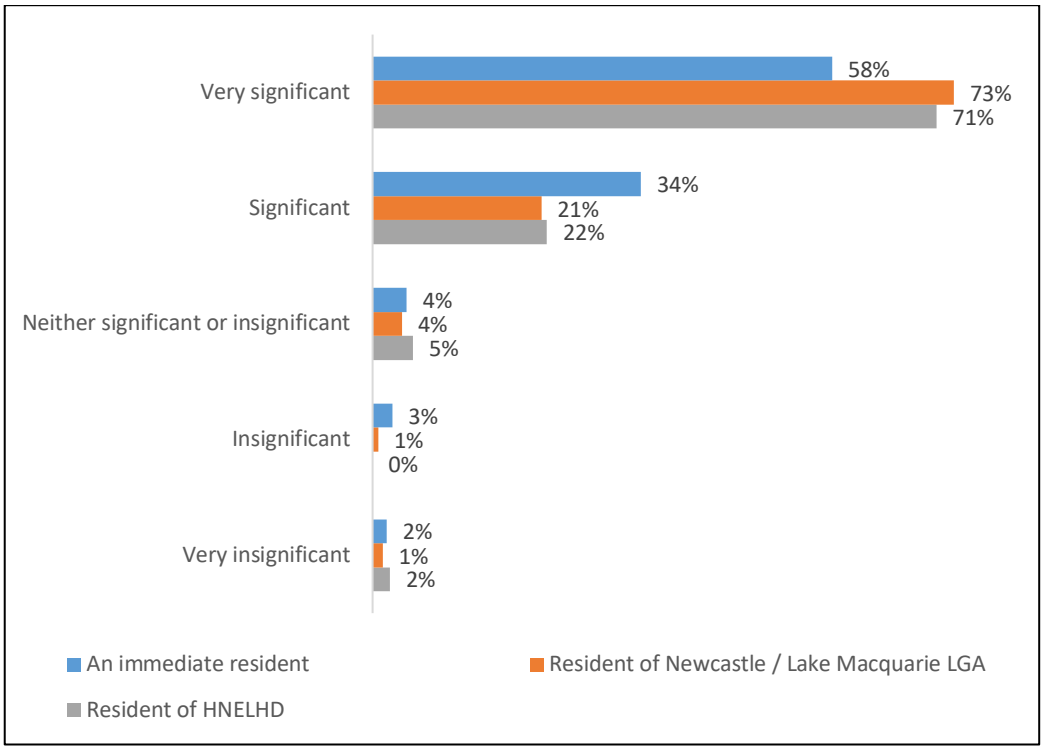
The development of the JHHIP has the potential to significantly improve health outcomes in Newcastle and Lake Macquarie, the Hunter Region and in the north of NSW. Over 94 per cent of staff and residents perceive that the development will bring better health outcomes for the region. This is shown in Figure 42.

Figure 42: Potential impact on better health outcomes for staff and residents n=937



Newcastle City and Lake Macquarie City LGA residents and residents in the HNELHD were more likely to rate better health outcomes as 'very significant'. This is shown in Figure 43.

Figure 43: Potential impact on better health outcomes by resident type n=937



Overall, given the investment in the JHHIP, it would be expected that social capital is increased through better health outcomes. The outcomes are assessed as likely positive.

Impact on health outcomes	
Stakeholder	Impact
Staff and visitors	Likely positive
Residents	Likely positive

It will be important for the HNELHD to create baseline metrics for the performance of the JHHIP in terms of health outcomes for the local, regional and northern NSW and for the results to be publicly available to demonstrate the value in the investment.

5.4.3 Cycling, walking and connectivity impacts

As noted in Section 4.4.1, the JHHIP is utilised for recreation by staff and residents who used walking and cycle paths within the site. During the construction phase there will be changes to cycling walking and connectivity which will impact on the trails and paths and some of these may be unlikely to be replaced due to the scale of the development.

However, the *Traffic Impact Assessment*, has ensured consideration of pedestrians and cyclists, including bicycle parking with the proposed design anticipated to be highly walkable and encourage active transport. Specifically, the report mentions enhancing connectivity to the existing cycleway along Jesmond bushland to Newcastle Road.[29]

Although difficult to assess until the design stage it is anticipated that the development will offer enhanced opportunity for walkability and active transport options, so the impact for these stakeholders has been assessed as likely and positive.

Impacts to way of life – cycling, walking and connectivity	
Stakeholder	Impact
Staff and visitors	Likely positive
General community	Likely positive

It will be important to ensure that active transport is included as a priority in the design phase.

5.4.4 Noise impacts

The potential noise impacts of the JHHIP once operational includes changes to traffic noise (both on-site and entry roads), as well as machinery and transport (ambulances, helicopters) noise impacts.

The *Noise and Vibration Impact Assessment* notes the following with regard to noise impacts once the site is fully operational:[30]

- Off campus: General traffic noise due to an increase of traffic along Lookout Road, Kookaburra Circuit and Jacaranda Drive as a result of the new ASB is unlikely to have adverse noise impacts on receivers surrounding the site
- On campus: A quantitative assessment has been carried out to assess traffic noise generation on campus from proposed ambulance bays, Emergency Department drop off, ASB carpark and new campus roads. The assessment has determined that on campus traffic noise generation will be below the relevant operational noise emission criteria. .

In addition, helicopter facilities used exclusively for emergency aeromedical evacuation, retrieval or rescue are not deemed 'Designated Development' under the *NSW Environmental Planning and Assessment Regulation (2000) – Schedule 3*. Such facilities are, therefore, exempt from the

[29] GTA Consultants 2021. *Transport Impact Assessment*. p.63.
[30] Acoustic Studio 2021. *Noise and Vibration Impact Assessment for SSDA*. p.11.

requirement for an EIA for Designated Development which would include a detailed assessment of noise impacts in the surrounding community.

Five survey respondents (n=1,001) expressed concern about noise impacts associated with the bypass once it is operational. This is outside the scope of this project and has been addressed in the *2016 Environmental Assessment* for the bypass extension.

No other concerns about the impact of noise once the site is operational were noted. As such, operational noise impacts have been assessed as unlikely and neutral.

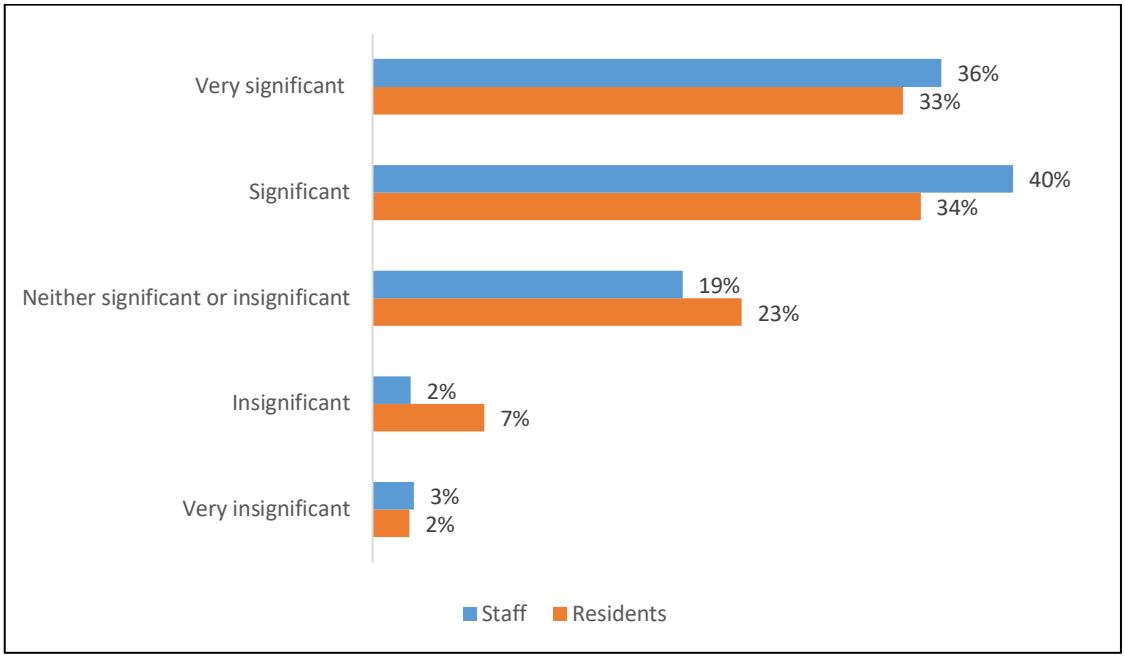
Operational noise impacts	
Stakeholder	Impact
Staff and visitors	Unlikely neutral
Residents	Unlikely neutral

Based on the *Noise and Vibration Impact Assessment*, mitigation measures for noise once the development is operational are not required. However, it will be important to understand any operational noise impacts on staff and the community on an ongoing basis.

5.4.5 Look and feel impacts

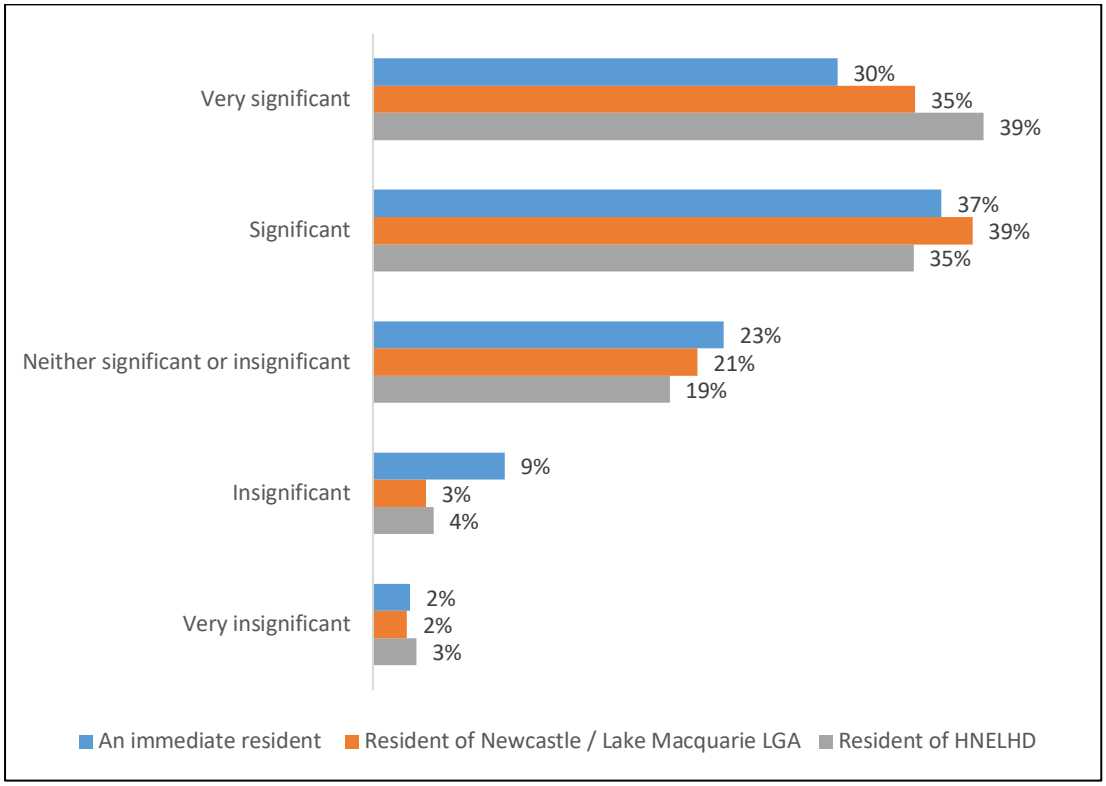
The look and feel of the site relates mainly to the built form and the impacts on the bushland. Staff were more likely to rate their perception of the impact of the improved look and feel of the site as 'very significant' and 'significant'. This is shown in Figure 44.

Figure 44: Potential impact on improved look and feel for staff and residents n=937



HNELHD residents were more likely to rate the improved look and feel of the site as 'very significant' and immediate residents were less likely to rate this as 'very significant'. This is shown in Figure 45.

Figure 45: Potential impact on look and feel by resident type n=937



The perception by staff and residents that the impacts of the development will result in improved look and feel are significant. As such, improved look and feel impacts have been assessed as likely and positive.

Improved look and feel of the site	
Stakeholder	Impact
Staff, visitors and residents	Likely positive

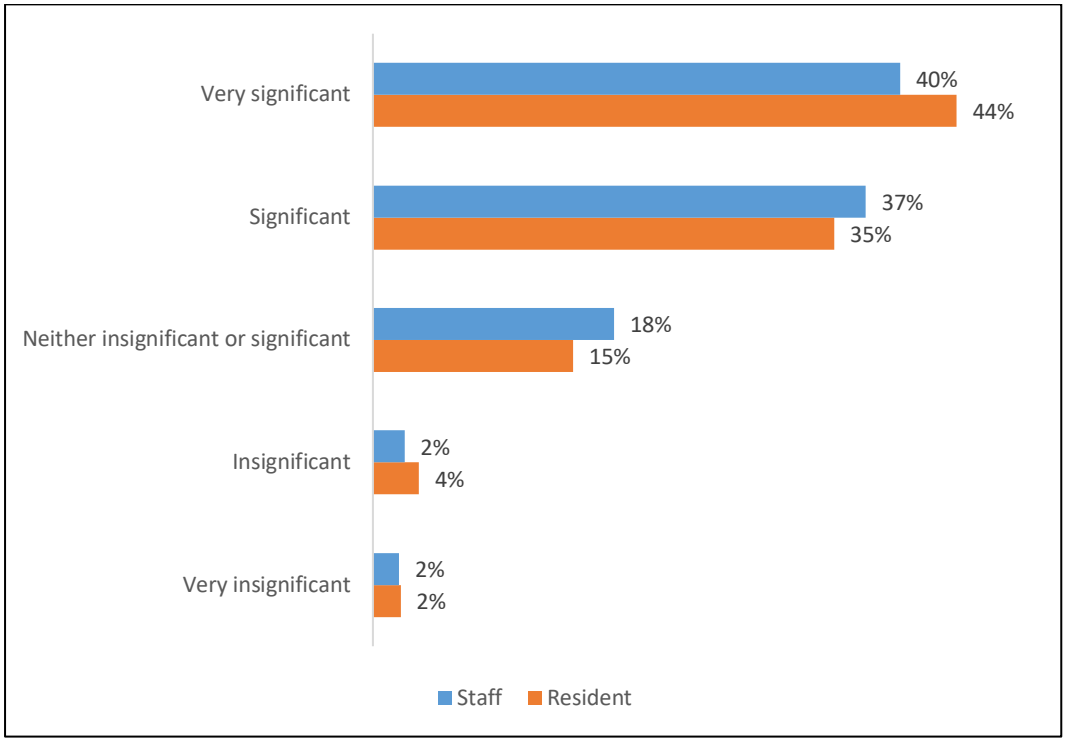
Given the high level of perception (and possibly expectation) that the development will lead to positive impacts, will be important to involve staff and resident stakeholders in the design stage in order to ensure their perceptions to increase social capital are met.

5.5 HUMAN CAPITAL

5.5.1 Talent attraction and retention impact

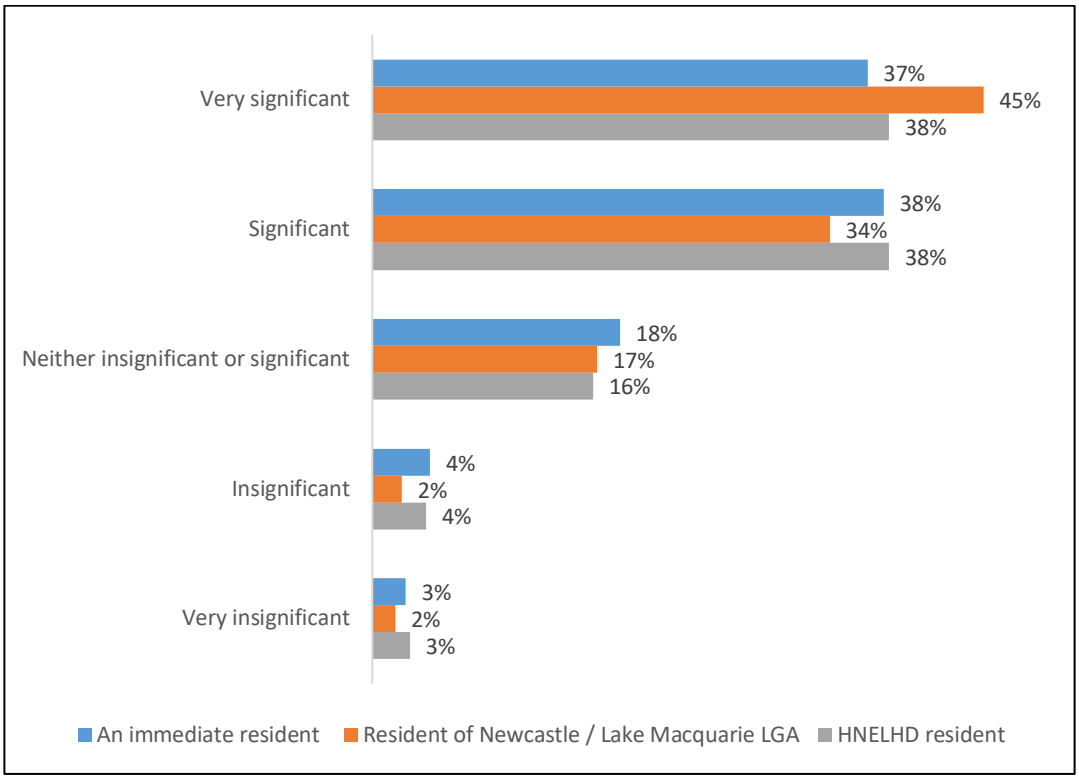
This significant development has the opportunity to be a significant attractor of talent to Newcastle and the Hunter Region, both in terms of medical staff but also in terms of researchers and innovators. The impact on talent attraction and retention was rated as significant by over three-quarters (77 per cent) of staff and residents. This is shown in Figure 46.

Figure 46: Potential impact on talent attraction and retention for staff and residents n=937



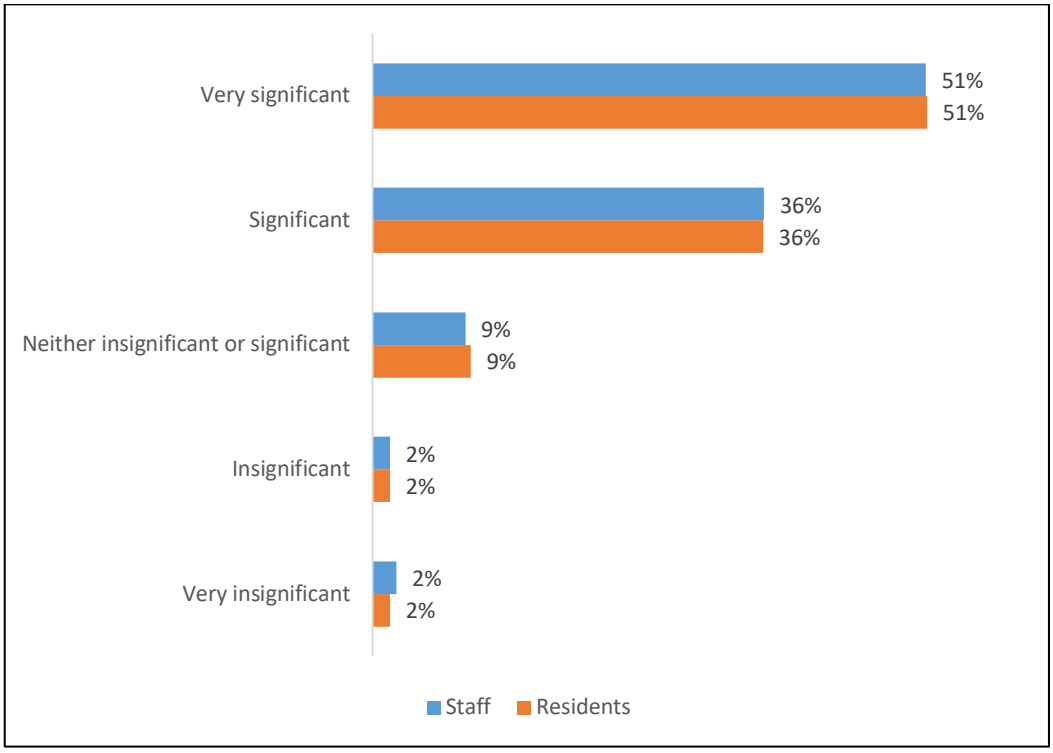
Newcastle City and Lake Macquarie City LGA residents were more likely to rate the impact of the development on talent attraction and retention as 'very significant' compared to other residents. This is shown in Figure 47.

Figure 47: Potential impact on talent attraction and retention by resident type n=937



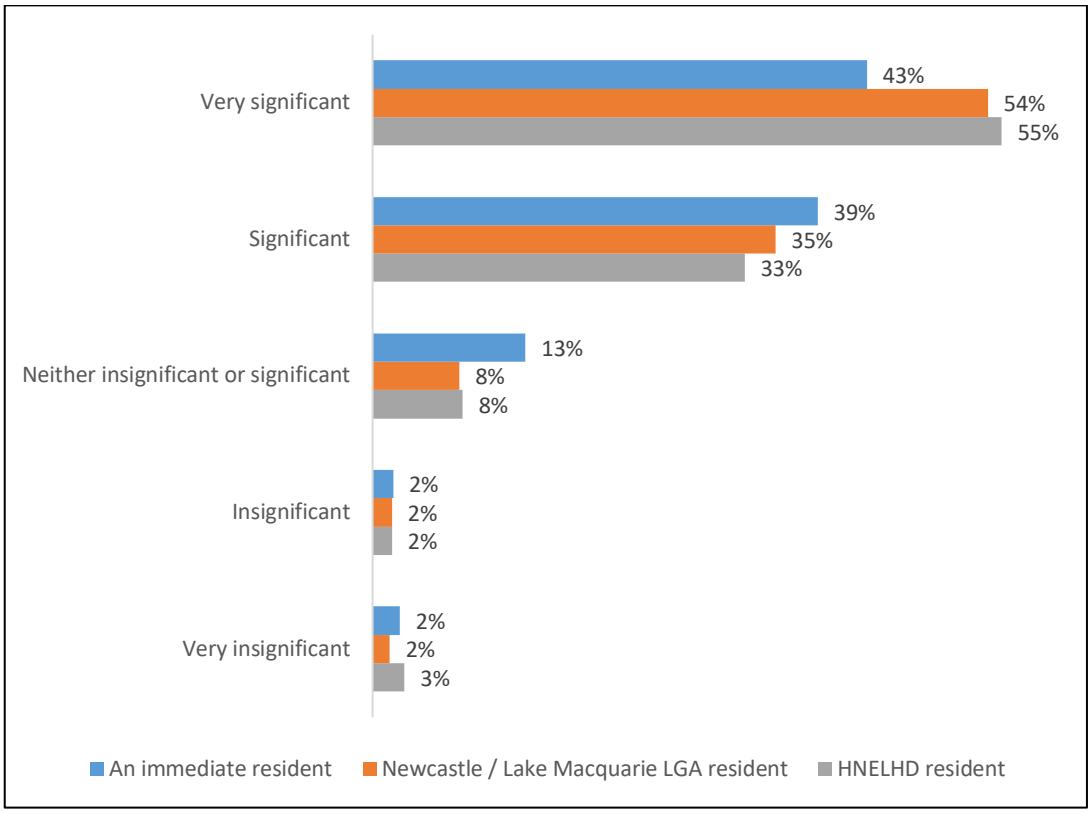
There were no significant differences between staff and residents in terms of rated significance of the development on future employment. This is shown in Figure 48.

Figure 48: Potential impact on future employment for staff and residents n=937



Like with talent, Newcastle City and Lake Macquarie City LGA residents and residents in the HNELHD were more likely to rate the impact of the development on future employment opportunities as 'very significant' compared to other residents. This is shown in Figure 49.

Figure 49: Potential impact on future employment by resident type n=937



In addition, when asked about potential enhancement measures for the project, 4 per cent of respondents unprompted suggested recruitment of staff once the site is fully operational.

Given the expected size and composition of the workforce, the impact on talent attraction and retention has been assessed as likely and positive.

Impact on workforce and employment	
Stakeholder	Impact
Staff	Likely positive

As noted in Section 5.3.1, most workforce impacts are expected to be positive. However, this will require ongoing monitoring and reporting. Any recruitment and talent plans also need to include staff retention as a key element with the understanding that this may be dependent on other factors such as housing/rental property prices, access to social infrastructure and liveability benefits.

5.6 NATURAL CAPITAL

5.6.1 Biodiversity impacts

The biodiversity offset strategy will aim to offset the impacts on flora and fauna (notably the squirrel glider), in addition to native vegetation planting towards the end of construction. However, neither of these will be able to balance the loss of native vegetation of the type and quality on the JHHIP site. At best the natural capital outcomes are likely neutral but any additional efforts to either retain or revegetate the site will improve the negative overall site specific impact.

Biodiversity impacts	
Stakeholder	Impact
Staff and visitors	Likely neutral
Residents	Likely neutral
Environment	Likely neutral

As noted in Section 4.5.1, given the high level of staff and resident concern over the impacts on biodiversity, it will be important to ensure that any vegetation clearing is communicated appropriately and in advance and mitigation measures promoted where applicable.

5.7 SUMMARY

As one of the chief aims of the development is the construction of expanded and enhanced hospital infrastructure, it is very likely that investment will result in major positive impacts for manufactured financial, social and human capital. Staff, residents of the Newcastle City and Lake Macquarie City LGAs and other residents of the Hunter New England Health District (HNEHD) will benefit significantly from health outcomes associated with expanded services. The construction of new and improved facilities at the JHHIP is likely to have flow-on effects in terms of increased capacity such as reduced waiting times for patients, less time spent in the emergency department and a greater number of hospital beds.

However, there is likely to be impact on natural capital on the JHHIP, due to the size of the site (13.5 hectares) and the existing levels of native vegetation coverage which will need to be cleared for the development. Although a biodiversity offset scheme will be implemented and, where possible, new native vegetation planted towards the end of the construction phase, there is likely to be negative impacts for natural capital.

6. Conclusion

This independent assessment indicates that the majority of potentially negative impacts will occur during the construction phase. These will be to the manufactured, social and natural capital in the form of traffic congestion, parking impact and biodiversity impacts. In addition, construction noise is likely to impact at intermittently due to proximity to construction.

Once the site is operational, impacts are likely to be positive for manufactured, financial, social and human capital where the outcomes such as availability of new and upgraded facilities, improved services and capacity, improved health outcomes, employment and improved working conditions will be delivered. However, there will be significant impacts to natural capital in the form of biodiversity which, although potentially offset through the Biodiversity Conservation Trust, will be a negative on-site outcome.

This SIA concludes that the proposed mitigation activities will to a large extent reduce the impact of to the five capitals during construction and operations, however, there are some enhancement affects which should also be implemented. Specifically, we consider that the following measures are required during the construction phase:

- Leverage the existing community consultative committee based on the NSW Government Community Consultative Committee Guidelines[31]
- Convene the existing committee based on revised terms of reference before construction commences and continue for two years post construction completion
- Appoint an independent chair
- Include representatives from the Newcastle City and Lake Macquarie City LGAs and HNELHD, two/three directly affected neighbours and a JHHIP staff member
- Develop and implement a comprehensive stakeholder engagement and communications plan during all stages of the project. This plan should assess, on an ongoing basis, the extent to which potential positive and negative impacts affect relevant stakeholders to ensure that social impacts are adaptively monitored and managed over time.

In addition, in the operational phase, given the significant impact on natural capital in the construction phase, the biodiversity offset strategy (already developed by the Project Team) should be implemented in consultation with the Biodiversity Conservation Trust and the Department of Planning Industry and Environment.

[31] NSW Government 2019. *Community Consultative Committee Guideline: State Significant Projects*. Available at: https://www.planning.nsw.gov.au/-/media/Files/DPE/Guidelines/Community-Consultative-Committee-Guideline-31-01-2019.pdf

Appendix A: Details of technical studies reviewed

A review of the technical reports developed as part of the Environmental Assessment was undertaken, where relevant to impacts identified in this SIA. Specifically, the technical reports reviewed include:

- *Traffic Impact Assessment* prepared by GTA Consultants
- *Biodiversity Development Assessment* developed by Umwelt
- *Noise and Vibration Impact Assessment* prepared by Acoustic Studio
- *ESD Report* prepared by EMF Griffiths
- *Preliminary Construction Management Plan* prepared by TSA.

Appendix B: Details of the online survey

B.1 RESPONDENT DETAILS AND CONFIDENCE LEVELS

The online survey aimed to gather feedback from the community, including residents of Newcastle City and Lake Macquarie City LGAs, residents of the HNELHD and staff. A total sample size of n=1,001 was achieved, including 510 staff and 431 residents.

704 respondents indicated that they are residents of either Newcastle City or Lake Macquarie City LGA. Based on a total population of 359,106, this provides a confidence interval of +/-3.69 per cent at a 95 per cent confidence level.

This means that for the general population, we can assume that the response to the survey questions would be within a range of +/-3.69 per cent. For example, if 80 per cent of the sample answered 'yes' to a question, the true percentage of the population that would answer yes is between 76.3 per cent and 83.7 per cent. This represents a high degree of reliability.

B.2 SURVEY PROMOTION AND DISTRIBUTION

A range of methods were utilised to promote and distribute the survey. They are summarised in Table B2.

Table B1: Survey promotion and distribution methods

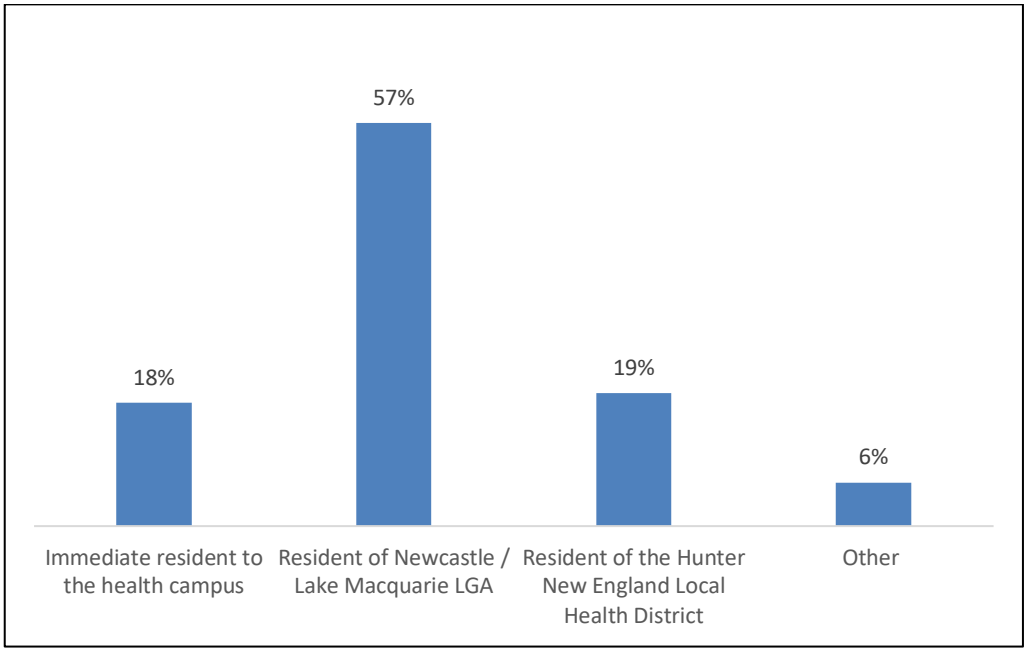
Promotion/distribution method	Dates	Details
Project and LHD website	8 February 2021	Project details updated
Letterbox drop of a postcard to residences in a 1.5km radius of the JHHIP	12 February 2021	3,400 postcards delivered
HNELHD social media	From 15 February 2021	Three bursts
Newcastle Herald advertisement	w/c 15 February 2021	Advertisement
Staff and community newsletters	From 15 February 2021	Newsletter
Image displays at the JHH and JHCH	8 February 2021	Displays
Information stall at the Newcastle Farmer's market	14 February 2021	Members of the HI NSW team and a representative from the HRFC at the University of Newcastle in attendance
Information session at the newly established Comms Hub	12 March 2021	Members of the HI NSW team and a representative from the HRFC at the University of Newcastle in attendance
Media interview	12 March 2021	NBN Newcastle interview

The large response to the survey (n=1,001) can be attributed to a combination of a high level of engagement and interest in the project by residents and staff, proactive communication and engagement activities undertaken by the HI Communications Team and the utilisation of a QR code for the survey which took respondents directly to the survey.

B.3 SURVEY DEMOGRAPHICS

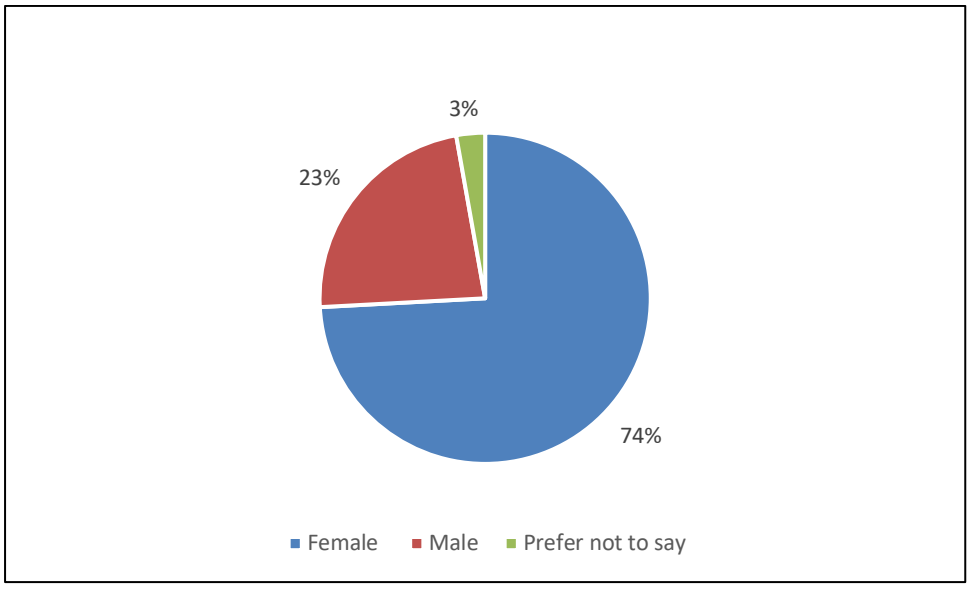
Over half of the sample were residents of the Newcastle City or Lake Macquarie City LGAs. This is shown in Figure B.1.

Figure B.1: Location of survey respondents n=1,001



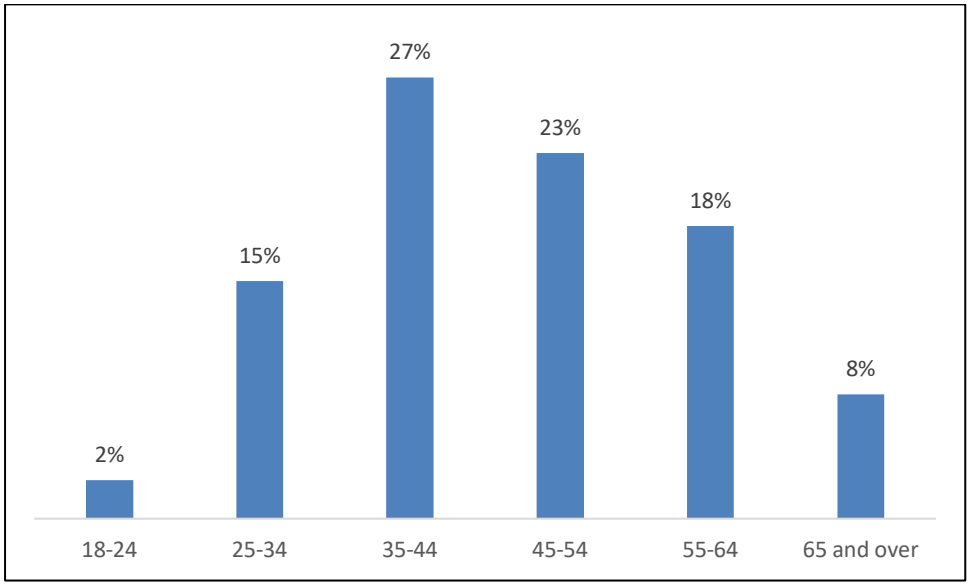
In addition, 54 per cent of the respondents were staff in the Hunter New England Health District and 74 per cent were females, as shown in Figure B.2.

Figure B.2: Gender of survey respondents n=1,001



The age profile of the respondents is shown in Figure B.3 and was highest from those in the 35-54 age category.

Figure B.3: Age profile of survey respondents n=1,001



B.4 SURVEY INSTRUMENT

John Hunter Health and Innovation Precinct (JHHIP)
Site Redevelopment – Social Impact Assessment
ONLINE SURVEY

The John Hunter Health and Innovation Precinct project will deliver enhanced and expanded facilities in the form of:

- A new seven-storey Acute Services Building at the John Hunter and John Hunter Children's Hospitals;
- Connectivity between the existing facility and new Acute Services Building;
- Refurbishment of areas within the existing John Hunter and John Hunter Children's Hospitals; and
- Development of the internal road network and connection to the new Inner City bypass.

Help us understand potential impacts and outcomes

The John Hunter Health and Innovation Precinct project is State Significant Development (SSD). State Significant projects can impact people in many ways, both positive and negative, and the development approval process requires the completion of a Social Impact Assessment. 'Social impacts' are the outcomes people experience when a new project brings change. By identifying and understanding these, the project can create the right responses to manage or enhance the impacts and ensure the development is more socially sustainable.

The Social Impact Assessment for the John Hunter Health and Innovation Precinct is being undertaken independently by the Hunter Research Foundation Centre, University of Newcastle to achieve the following:

- Identify and analyse potential social impacts and outcomes;
- Assess the significance of social impacts and outcomes;
- Consider how potential environmental changes may affect people's way of life; and
- Include possible strategies to manage social impacts and outcomes.

The survey should take 5-10 minutes to complete. You must be 18 years of age or older to complete the survey.

---

1. In your opinion, what will be the main outcomes of the upgraded health facility for you? (Open ended)

2. How do you rate the significance of the following impacts, which may occur during **construction** of the project? (Construction will be undertaken while the health campus continues to provide health services to the community.) Please rate each potential impact (Scale – Very insignificant, insignificant, neutral, significant and very significant impact)

    a. Noise or vibration
    b. Traffic
    c. Parking
    d. Visual impacts (i.e. machinery, scaffolding)
    e. Increased employment in the short-term (i.e. construction)
    f. Clearing of vegetation or trees
    g. Impacts to local wildlife
    h. Other. Please specify_____ (Open ended)

3. How do you rate the significance of the following potential outcomes once the project is complete and **operational**? Please rate each potential outcome. (Scale – Very insignificant, insignificant, neutral, significant and very significant impact)

    a. Improved hospital services
    b. Increased hospital capacity (i.e. more beds, ability to treat more patients)
    c. Better health outcomes for the region
    d. Improved patient waiting times
    e. Improved look and feel of the site
    f. Negative changes to look and feel of the site
    g. Improved working conditions or job satisfaction for staff
    h. Talent attraction and retention
    i. More employment opportunities in the long-term (i.e. health industry staff)
    j. Improved traffic flow as a result of the bypass
    k. Reduced traffic congestion
    l. Increased traffic congestion
    m. Improved parking
    n. Other. Please specify_____ (Open ended)

4. Are there any measures you would like to see put in place to enhance or reduce the impacts as mentioned above? Tick a box Y/N

5. If yes, what measures would you like to see put in place? Please specify_____ (Open ended)

6. Would you like to further discuss your views on the impacts mentioned above? If yes, please provide a contact number. Participants will be randomly selected.

7. What would improve your patient experience when you arrive at the hospital? (You can select more than one answer)
    a. Additional bus, taxi and rideshare locations
    b. Dedicated drop off and pickup zones
    c. Dedicated parking and access zones for community transport
    d. Covered walkways to the main entries (to protect people from rain, sunshine etc.)
    e. Landscaping
    f. Comfortable seating
    g. Food, drink and other retail options
    h. Interactive digital map
    i. Clear signage and wayfinding
    j. Other, please specify:_____(Open ended)

8. How can we make public spaces in the John Hunter Hospital more welcoming and comfortable for everyone? (You can select more than one answer)
    a. Child and family friendly spaces
    b. Carer's space and amenities
    c. Seating and waiting areas
    d. Device charging areas
    e. Artworks
    f. Culturally sensitive areas
    g. Retail shops and food
    h. Outdoor spaces
    i. Other, please specify:_____(Open ended)

9. The project proposes two new outdoor areas between the existing John Hunter Hospital and the new Acute Services Building. What would you like to see in these outdoor areas? (You can select more than one answer)
    a. Quiet and reflective spaces
    b. Vibrant, active and collaborative spaces
    c. Area to host outdoor activities or gatherings
    d. Area for small groups
    e. Children's play area and equipment
    f. Artworks including sculptures
    g. Shaded areas
    h. Grassy areas
    i. Trees and vegetation
    j. Outdoor seating and picnic tables
    k. Other, please specify:_____(Open ended)

10. I am:
    a. A resident adjoining or surrounding the health campus
    b. A local resident (i.e. reside in Newcastle / Lake Macquarie)
    c. A local business representative
    d. A staff member of Hunter New England Local Health District
    e. A resident of Hunter New England Local Health District
    f. Other, please specify: _____

11. Age range:
    a. 18-24
    b. 25-34
    c. 35-44
    d. 45-54
    e. 55-64
    f. 65 and over
    g. Prefer not to say

12. Gender:
    a. Female
    b. Male
    c. Other
    d. Prefer not to say

13. Postcode: (open ended)

14. How would you prefer to receive future information about the project? (You can select more than one answer)
    e. Project website
    f. Project email
    g. Community information sessions
    h. Video updates
    i. Webinars
    j. Surveys
    k. Project newsletter (electronic)
    l. Project newsletter (printed)
    m. Other, please specify:_____(Open ended)

Would you like to be involved in the design process moving forward? If yes, please provide a contact number or email address and a member of the project team will be in touch. Alternatively, please email the project team via HI-JHHIP@health.nsw.gov.au.

Thank you for your valuable feedback.