Planning Proposal



10 Mitchell Street, 2, 4, 6, and 8 Lingard Street, and 16 Merewether Street, Merewether

CONTENTS

SUMMARY OF PROPOSALII
BACKGROUNDII
SITEII
PART 1 – OBJECTIVES OR INTENDED OUTCOMES1
PART 2 – EXPLANATION OF PROVISIONS1
PART 3 – JUSTIFICATION2
Section A - Need for the planning proposal2
Section B - Relationship to strategic planning framework
Section C - Environmental, social, and economic impact
Section D - State and Commonwealth interests12
PART 4 – MAPPING13
PART 5 – COMMUNITY CONSULTATION18
PART 6 – PROJECT TIMELINE19
ATTACHMENT A Flooding Risk Assessment Prepared by WBM BTM Pty Ltd20

10 MITCHELL STREET, 2, 4, 6, AND 8 LINGARD STREET, AND 16 MEREWETHER STREET, MEREWETHER

Summary of Proposal

Proposal	10 Mitchell Street, 2, 4, 6, and 8 Lingard Street, and 16						
	Merewether Street Merew	ether,					
Property Details	10 Mitchell Street, 2, 4,	Lots 1 to 11 SP 48635, Lots 3					
	6, and 8 Lingard Street,	and 10 in Section 3 of DP					
	and 16 Merewether	111239, Lots 1 and 2 DP					
	Street Merewether,	198946, Lots 1 and 4 DP					
		218920, Lot 7 DP 741487, Lot					
		1564 DP 775503, and Lots 1					
		to 3 DP 1027546					
Applicant Details	ADW Johnson Pty Ltd on I	behalf of their Client					

Background

Council has received a request to amend Newcastle LEP 2012 in order to enable the expansion of the existing hospital's health services on adjoining land currently zoned for light industrial development.

Council has previously approved a number of development application for alterations and additions to the existing Lingard Private Hospital. As a consequence the existing site has exhausted its capacity to re-develop the existing hospital any further, however demand for increased and improved health services has dictated the hospital's current need to seek out additional land on which to expand their health services.

The IN2 Light Industrial zoned land located opposite the existing Lingard Private Hospital site provides a prime opportunity for the required expansion of the hospital's health services within close proximity to the existing hospital facility for efficiency and convenience for patients and visitors and whilst maintaining the employment function of the land. However, 'health services facilities' are not a permissible use within the IN2 Light Industrial zone, hence the need for this planning proposal.

Site

The subject site upon which the proponent (HealtheCare Lingard Pty Ltd) proposes to locate their health services facility is at 22-24 Merewether Street and 6 Lingard Street, Merewether and is described as Lots 1, 2 and 3 DP 1027546. These lots have a combined total area of 1938m2.

The entire IN2 zoned parcel of land the subject of the Planning Proposal consists 14 to 24 Merewether Street, 2 to 8 Lingard Street and 10 Mitchell Street, Merewether. The land is described as Lots 1, 2 & 3 DP 1027546, Lots 3 & 10 Section 3 DP 111239, Lots 1 & 4 DP 218920, Lot 7 DP 741487, Lot 1564 DP 775503, Lots 1 & 2 DP 198946, and SP 48635. This entire parcel of land has an area of approximately 1.36ha.

The subject parcel of land contains a mix of health related, commercial and industrial land uses including the following businesses:

- Merewether Commercial Centre;
 - NSA Australia & Juice Plus;
 - Custodian Wealth Builders;
 - Newcastle Locksmiths;
 - Merewether Auto Electrics;
 - Newcastle Motor Repairs;
 - Shop Gear;
 - Entech Advanced Research Laboratory;
 - Impact Heath Studios;
 - Maynew Group;
- Murphy Plumbing;
- Paul Bros Dry Cleaners;
- Sellers Quality Meat.
- Townson Commercial Centre
 - Orthopaedic Surgeon
 - Charles MacDonald Dental
 - Lingard Medical Centre
- C3 Church Merewether
- Kings Newcastle Coach Tours & Travel
- Crashcorp Newcastle
- Lingard Business Centre
 - Karana
 - Land Development Solutions
 - County Property Group
 - Fitness Physiotherapy

The subject land is surrounded by land zoned R2 Low Density Residential and RE2 Public Recreation.

- Figure 1: Local Context of Site depicts the existing development pattern and local character.
- **Figure 2:** Air Photo of Site shows the range of development footprints within the subject land.

The local character of the IN2 zoned land is further depicted in photo 1 to 8 below.

Photograph 1 View along Merewether Street.



Photograph 2: View further along Merewether Street.



Photograph 3: View , looking north along Mitchell Street.



Photograph 4: View looking west along Mitchell Street



Photograph 5: View of looking eastsoutheast along Lingard Street.



Photograph 6: View looking northeast along Lingard Street.



Photograph 7: View along Lingard Street.



Photograph 8: View along Mitchell Street





Newcastle Local Environmental Plan 2012

Local Area Context Map

Cadastre



LGA boundary







Newcastle Local Environmental Plan 2012

Site Air Photo Map

Cadastre

Cadastre base data 01/08/2007 © LPMA Addendum data 21/02/2013 © Newcastle City Council Subject Site

Suburb boundary





Planning Proposal - 22 & 24 Merewether Street and 6 Lingard Street Merewether - Site Air Photo Map

PART 1 - OBJECTIVES OR INTENDED OUTCOMES

To enable the establishment of a health services facility on land east of the existing Lingard Private Hospital in Merewether and provide for a range of business land uses on the land.

PART 2 - EXPLANATION OF PROVISIONS

Amend Newcastle LEP 2012 with respect to land at 10 Mitchell Street, 2, 4, 6, and 8 Lingard Street, and 16 Merewether Street Merewether, described as Lots 1 to 11 SP 48635, Lots 3 and 10 in Section 3 of DP 111239, Lots 1 and 2 DP 198946, Lots 1 and 4 DP 218920, Lot 7 DP 741487, Lot 1564 DP 775503, and Lots 1 to 3 DP 1027546 as follows:

- 1. Amend the Land Zoning Map from IN2 Light Industrial Zone to B5 Business Development Zone.
- 2. Amend the Height of Building Map to include a maximum height of 10 metres.
- 3. Amend the Floor Space Ratio (FSR) Map to include a maximum FSR of 0.9.

PART 3 – JUSTIFICATION

Section A - Need for the planning proposal

1. Is the planning proposal a result of any strategic study or report?

No, the proposal is a result of a request made to Council to amend Newcastle LEP 2012 in order to achieve the aforementioned objective.

However, Council's primary strategy governing industrial zoned lands is the Newcastle Lands Analysis 2005. Council commissioned a review of this strategy in 2009. In the 2009 review report the consultants noted that recent uses in this area of Merewether were geared towards retail and services. Furthermore, the subject site is surrounded by residential use and a hospital and so is limited in terms of appropriate industrial uses. The review report concluded that:

There are a number of small, relatively isolated industrial areas within residential contexts that could be considered for other uses. These uses include additional business and commercial uses, noting that light industrial uses should generally remain permissible.

In relation to the subject site the review report recommended that:

The change recorded towards retail is perhaps reflecting the limits of this area as an industrial zone and an appropriate business zoning could be considered.

2. Is the planning proposal the best means of achieving the objectives or intended outcomes, or is there a better way?

Yes, the proposed B5 Business Development zone will allow the establishment of 'health services facilities' on the subject site under Clause 57(1) of State Environmental Planning Policy (Infrastructure) 2007. This zone will also better reflect the existing uses on the land and maintain the land for the purpose of employment.

Other options considered include:

- The use of Schedule 1 Additional Permitted Uses to enable 'health services facilities' on the land. However, this option would not rectify other existing noncompliant uses located on land currently zoned IN2 Light Industrial. The range of existing uses on the land are better reflected by a B5 Business Development Zone.
- Including 'health services facilities' as a permissible use within the IN2 Light Industrial Zone. This option would affect all land within this zone and has merit. However this option may result in land use conflicts if applied within other areas of the city. furthermore this option does not resolve other noncompliant uses operating on the land; some of which are not suitable IN2 Light Industrial Zone, as they do not reflect the objectives of this zone.

Section B - Relationship to strategic planning framework

3. Is the planning proposal consistent with the objectives and actions contained within the applicable regional or sub-regional strategy (including the Sydney Metropolitan Strategy and exhibited draft strategies)?

Lower Hunter Regional Strategy (2006)

The Lower Hunter Regional Strategy applies to the land. The aim of this Strategy is to ensure that adequate land is available to accommodate the projected housing and employment growth in the Hunter Region over the next 25 years.

The proposal will ensure the protection of employment generating opportunities and is therefore considered consistent with this aim.

4. Is the planning proposal consistent with the local council's Community Strategic Plan, or other local strategic plan?

Newcastle 2030 Community Strategic Plan

Council adopted the Newcastle 2030 Community Strategic Plan in February 2011. The planning proposal primarily aligns to the strategic direction 'Open and Collaborative Leadership' identified within the Newcastle Community Strategic Plan 2030.

Compliance with the LEP amendment process, in particular section 57 – community consultation of the Environmental Planning and Assessment (EP&A) Act 1979, will assist in achieving the strategic objective; "Consider decision-making based on collaborative, transparent and accountable leadership" and the identified strategy 7.2b, which states: "Provide opportunities for genuine and representative community engagement in local decision making".

Newcastle Urban Strategy (NUS)

The proposal is consistent with the neighbourhood vision for Merewether identified in the NUS, which states:

"Merewether's beach-side character and function as a convenient location offering high amenity, a diversity of housing types with improved local employment opportunities will be consolidated."

The proposal will provide 'improved local employment opportunities' that are reflective of the changing nature of the local economy within non-Port-related locations of Newcastle.

5. Is the planning proposal consistent with applicable state environmental planning policies?

Consistency (of the planning proposal) with State Environmental Planning Policies is outlined in the table below.

Table 1 - Consideration of State Envir	1	
Name of SEPP	Applicable	Consistency
State Environmental Planning Policy No 1—Development Standards	No	
State Environmental Planning Policy No 4—Development Without Consent and Miscellaneous Exempt and Complying Development	No	
State Environmental Planning Policy No 6—Number of Storeys in a Building	No	
State Environmental Planning Policy No 14—Coastal Wetlands	No	
State Environmental Planning Policy No 15—Rural Landsharing Communities	No	
State Environmental Planning Policy No 19—Bushland in Urban Areas	No	
State Environmental Planning Policy No 21—Caravan Parks	No	
State Environmental Planning Policy No 22—Shops and Commercial Premises	No	
State Environmental Planning Policy No 26—Littoral Rainforests	No	
State Environmental Planning Policy No 29—Western Sydney Recreation Area	No	
State Environmental Planning Policy No 30—Intensive Agriculture	No	
State Environmental Planning Policy No 32—Urban Consolidation (Redevelopment of Urban Land)	No	
State Environmental Planning Policy No 33—Hazardous and Offensive Development	No	
State Environmental Planning Policy No 36—Manufactured Home Estates	No	
State Environmental Planning Policy No 39—Spit Island Bird Habitat	No	
State Environmental Planning Policy No 41—Casino Entertainment Complex	No	
State Environmental Planning Policy No 44—Koala Habitat Protection	Yes	Yes, there are no known records of koalas on site.
State Environmental Planning Policy No 47—Moore Park Showground	No	

Table 1 - Consideration of State Environmental Planning Policies

Name of SEPP	Applicable	Consistency
State Environmental Planning Policy No 50—Canal Estate Development	No	
State Environmental Planning Policy No 52—Farm Dams and Other Works in Land and Water Management Plan Areas	No	
State Environmental Planning Policy No 53—Metropolitan Residential Development	No	
State Environmental Planning Policy No 55—Remediation of Land	Yes	Yes, The subject site currently contains a mix of commercial, retail, and light industrial uses. While none of these uses are categorised as hazardous or noxious activities, two of these do have facilities for the storage of fuel. The fuel and waste storage at both sites are being undertaken in a contained and managed manner. There is no evidence that the storage facilities are compromised and there are no current proposals to cease or modify these activities. Notwithstanding the presence of fuel storage on the part of the land, Council is satisfied that the land may be zoned B5 Business Development and remediation occur if a proposal for a sensitive use be proposed. However, further investigation of contamination of the land will be carried out prior to exhibiting this planning proposal.
State Environmental Planning Policy No 59—Central Western Sydney Economic and Employment Area	No	
State Environmental Planning Policy No 60—Exempt and Complying Development	No	
State Environmental Planning Policy No 62—Sustainable Aquaculture	No	
State Environmental Planning Policy No 64—Advertising and Signage	Yes	Yes, future signage on the site will be compatible with the desired amenity and visual character of the local area.
State Environmental Planning Policy No 65—Design Quality of Residential Flat Development	No	
State Environmental Planning Policy No 70—Affordable Housing (Revised Schemes)	No	

Name of SEPP	Applicable	Consistency
State Environmental Planning Policy No 71—Coastal Protection	Yes	Yes, The subject site is identified as being located within the NSW Coastal Zone, however the site is not considered to be a "sensitive coastal location" as it is not located within 100m of a water body.
State Environmental Planning Policy (Affordable Rental Housing) 2009	No	
State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004	No	
State Environmental Planning Policy (Exempt and Complying Development Codes) 2008	No	
State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004	No	
State Environmental Planning Policy (Infrastructure) 2007	Yes	Yes, The proposed 'health services facility' will become a permissible land use (with consent) within the prescribed B5 Business Development zone under Clause 57(1) of Division 10 – Health services facilities, of the SEPP.
State Environmental Planning Policy (Kosciusko National Park—Alpine Resorts) 2007	No	
State Environmental Planning Policy (Major Development) 2005	No	
State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007	No	
State Environmental Planning Policy (Rural Lands) 2008	No	
State Environmental Planning Policy (Sydney Region Growth Centres) 2006	No	
State Environmental Planning Policy (Temporary Structures and Places of Public Entertainment) 2007	No	
State Environmental Planning Policy (Western Sydney Parklands) 2009	No	
SEPP (State and Regional Development) 2011	No	

6. Is the planning proposal consistent with applicable Ministerial Directions (s.117 directions)?

Consistency (of the planning proposal) with Ministerial Directions is outlined in the table below.

Table 2 - Consideration of Section 117 Direction

S117 Direction	Applicable	Consistent				
1. Employment and Resources						
1.1 Business and Industrial Zones	Yes	Yes, The Planning Proposal proposes to rezone the subject land to B5 Business Development zone, which ensures the continued permissibility of existing and future business and light industrial uses within the locality.				
1.2 Rural Zones	No					
1.3 Mining, Petroleum Production and Extractive Industries	No					
1.4 Oyster Aquaculture	No					
1.5 Rural Lands	No					
2. Environment and Heritage						
2.1 Environment Protection Zones	Yes	Yes, whilst the subject land is identified as being located within the NSW Coastal Zone, it is not considered to be a 'sensitive coastal location' as it is not located within 100m of a water body.				
2.2 Coastal Protection	No					
2.3 Heritage Conservation	No					
2.4 Recreation Vehicle Areas	No					
3. Housing, Infrastructure and Urban De	velopment					
3.1 Residential Zones	No					
3.2 Caravan Parks and Manufactured Home Estates	No					
3.3 Home Occupations	No					
3.4 Integrating Land Use and Transport	Yes	Yes, the proposal is consistent with the objectives of this direction as the site is strategically located for the proposed use and will not affect transport choices.				
3.5 Development Near Licensed Aerodromes	No					
4. Hazard and Risk						
4.1 Acid Sulfate Soils	Yes	Yes, works carried out on the land must be undertaken in accordance with Clause 6.1 Acid sulfate soils of the Newcastle Local Environmental Plan 2012.				
4.2 Mine Subsidence and Unstable Land	Yes	Yes, Council will consult with the Mines Subsidence Board prior commencement of community consultation.				

S117 Direction	Applicable	Consistent
4.3 Flood Prone Land	Yes, the subject site is subject to flooding and is identified in the Newcastle City Wide Floodplain Management Plan as being affected by a flood storage area.	 Yes, Consultants WBM BMT Pty Ltd have undertaken a review of the risks associated with flooding to the potential future development of the subject site. They conclude that suitable redevelopment of the subject site can be achieved on the basis that within the built area the following limitations are applied: Buildings are required to be able to withstand the forces of floodwaters up to the PMF event; The floor level of the first storey may be below the PMF level, but flood refuge would be required on higher levels that can temporarily accommodate all occupants of the first storey. Alternatively, the first storey can be at a level above the PMF, and no special flood refuge area would be required (as all refuge could be provided within the developments. There should be minimal change to the ground levels of the site. A balanced cut and fill should be sought if any filling is required. Provisions are made to maintain existing flood storage (or maximum loss of 20%) through building design.
4.4 Planning for Bushfire Protection	No	
5. Regional Planning		
5.1 Implementation of Regional Strategies	Yes	Yes, the planning proposal is consistent with the Lower Hunter Regional Strategy and does not undermine achievement of its vision, land use strategy, policies, outcomes, or actions.
5.2 Sydney Drinking Water Catchments	No	
5.3 Farmland of State and Regional Significance on the NSW Far North Coast	No	
5.4 Commercial and Retail Development along the Pacific Highway, North Coast	No	
5.5 Development in the vicinity of Ellalong, Paxton and Millfield (Cessnock LGA)	No	
5.6 Sydney to Canberra Corridor (Revoked 10 July 2008. See amended Direction 5.1)	No	
5.7 Central Coast (Revoked 10 July 2008. See amended Direction 5.1)	No	

S117 Direction	Applicable	Consistent
5.8 Second Sydney Airport: Badgerys Creek	No	
6. Local Plan Making		
6.1 Approval and Referral Requirements	No	
6.2 Reserving Land for Public Purposes	No	
6.3 Site Specific Provisions	No	

Section C - Environmental, social, and economic impact

7. Is there any likelihood that critical habitat or threatened species, populations or ecological communities, or their habitats, will be adversely affected as a result of the proposal?

The site is currently developed for urban purposes and the planning proposal has no potential for critical habitat or threatened species, populations or ecological communities, or their habitats, to be adversely affected.

8. Are there any other likely environmental effects as a result of the planning proposal and how are they proposed to be managed?

Mine Subsidence

The site is located within a Mine Subsidence District. The planning proposal will be referred to the Mines Subsidence Board for concurrence prior to commencing community consultation.

Hydrology and Water Management

As discussed above, the land is located within flood prone area.

Consultants WBM BMT Pty Ltd have undertaken a review of the risks associated with flooding to the potential future development of the subject site and have concluded that suitable redevelopment of the subject site can be achieved subject to certain limitations.

A copy of their review is attached to this planning proposal Attachment A.

Bushfire

According to Newcastle Bush Fire Hazard Map (2009) the land is not affected by bushfire risk or in the vicinity of such a risk.

Heritage

There are no listed items of environmental heritage on site or in the vicinity of the site.

Contamination

As discussed above, the land may be contaminated from fuel storage on two of the properties.

Council will require the applicant to undertake further investigation of contamination on the land prior exhibiting this planning proposal.

Traffic Impacts and Vehicular and Pedestrian Access

The land is adequately accessible to pedestrians and via public transport (bus services).

It is not anticipated that any new health services facilities resulting from this proposal require a physical linkage between the current Lingard Hospital site and the subject site, nor is it intended that there would be any regular transport of patients between the facilities.

Merewether Street has low traffic volumes and clear sightlines. The street is divided by a landscaped strip which provides for additional on street parking on the southern side of the street. The street layout provides some segregation of traffic flow increasing safety for pedestrians and vehicles. It is anticipated that pedestrian access from Lingard Hospital to the subject site would be via the intersection of Merewether and Lingard Streets.

Further traffic impact will be assessed at the DA stage when development proposals are prepared and lodged for determination.

9. Has the planning proposal adequately addressed any social and economic effects?

The land is not identified as containing items of European or Aboriginal cultural heritage.

The proposal is expected to deliver significant net social and economic benefits. The proposal will contribute to an increase in much-needed health care services for the community, an increase in generation of employment resulting from the proposed facility, and ensure the continued permissibility of a variety of existing and future commercial and industrial land uses.

The proposal will integrate well with existing surrounding land uses including residential areas, providing an efficient expansion of the Lingard Private Hospital health facilities to surrounding residents and the wider community.

Traffic and parking will be addressed through the development control process.

Section D - State and Commonwealth interests

10. Is there adequate public infrastructure for the planning proposal?

The site is already serviced by all essential infrastructure including electricity, water and sewer. The anticipated development of the site is not expected to warrant significant upgrade to existing public infrastructure.

The proposal contributes to provision of vital health services to the community and complements public health infrastructure and programs.

11. What are the views of State and Commonwealth public authorities consulted in accordance with the gateway determination?

No, State and Commonwealth public authorities have been consulted at this stage but will carried out in accordance with the requirements of the gateway determination.

Council proposes to consult with both the RMS and Mines Subsidence Board prior to commencement of community consultation.

PART 4 – MAPPING

The planning proposal seeks to amend the following maps within Newcastle LEP 2012:

- Land Zoning Map
- Height of Buildings Map
- Floor Space Ratio Map

The following maps are included to illustrate the mapping amendments proposed:

- **Figure 3:** Existing Land Zoning Map
- Figure 4: Proposed Land Zoning Map
- Figure 5: Proposed Max Height of Buildings Map
- Figure 6: Proposed Max Floor Space Ratio Map



Newcastle Local Environmental Plan 2012

Existing Land Zoning Map

Cadastre

Cadastre base data 01/08/2007 © LPMA Addendum data 21/02/2013 © Newcastle City Council Subject Site Zone B1 Neighbourhood Centre B2 Local Centre



IN3 Heavy Industrial

R2 Low Density Residential R3 Medium Density Residential

R4 High Density Residential

RE1 Public Recreation

RE2 Private Recreation

SP1 Special Activities

SP2 Infrastructure

W2 Recreational Waterways

UL Unzoned Land



Planning Proposal - 22 & 24 Merewether Street and 6 Lingard Street Merewether - Existing Land Zoning Map





Newcastle Local Environmental Plan 2012

Proposed Land Zoning Map

Cadastre

Cadastre base data 01/08/2007 © LPMA Addendum data 21/02/2013 © Newcastle City Council Subject Site Zone B1 Neighbourhood Centre B2 Local Centre B3 Commercial Core B4 Mixed Use B5 Business Development

E1 National Parks and Nature Reserves E2 Environmental Conservation

E3 Environmental Management

E4 Environmental Living

IN1 General Industrial

IN2 Light Industrial

IN3 Heavy Industrial

R2 Low Density Residential R3 Medium Density Residential

R4 High Density Residential

RE1 Public Recreation

RE2 Private Recreation

SP1 Special Activities

SP2 Infrastructure

W2 Recreational Waterways

UL Unzoned Land

 ORTH
 0
 50

 Projection GDA 1994
 20ne 56
 Scale 1:2,000 @ A4

Planning Proposal - 22 & 24 Merewether Street and 6 Lingard Street Merewether - Proposed Land Zoning Map







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PART 5 – COMMUNITY CONSULTATION

The planning proposal is considered as low impact in accordance with the Department of Planning's guidelines, 'A guide to preparing local environmental plans'. Hence it is proposed that the planning proposal will be publicly exhibited for a minimum 14 day period.

PART 6 – PROJECT TIMELINE

The project is expected to be completed within seven months from Gateway Determination. The following timetable is proposed:

Task	Planning Proposal Timeline											
	Mar 13	Apr 13	May 13	Jun 13	Jul 13	Aug 13	Sep 13	Oct 13	Nov 13	Dec 13	Jan 14	Feb 14
Issue of Gateway Determination												
Prepare any outstanding studies												
Consult with required State Agencies												
Exhibition of planning proposal and technical studies												
Review of submissions and preparation of report to Council												
Report to Council following exhibition												
Planning Proposal sent back to Department requesting that the draft LEP be prepared												

Attachment A

Flooding Risk Assessment prepared by WBM BTM Pty Ltd



BMT WBM Pty Ltd 126 Belford Street BROADMEADOW NSW 2292 Australia PO Box 266 Broadmeadow NSW 2292

Tel: +61 2 4940 8882 Fax: +61 2 4940 8887

ABN 54 010 830 421

www.bmtwbm.com.au

Our Ref: DJL: L.N20053.001.LingardHospitalFRA.docx

30 January 2013

Lingard Private Hospital c/- ADWJohnson 7/335 Hillsborough Rd Warners Bay NSW 2282

Attention: John Meggitt

Dear John,

RE: Lingard Private Hospital

This letter report provides an initial high level review of the risks associated with flooding which may pose constraints on the potential for development of the land bounded by Merewether Street, Lingard Street, Mitchell Street and Union Street (refer to Figure 1). The report has been prepared to provide additional information to support a rezoning application.

The flooding constraints applicable to the site have been defined largely through computer modelling, undertaken by Newcastle City Council (Council) in 2008. Modelling has been carried out for a range of floods including the 1% AEP (100yr ARI) event, which defines flood planning levels (and design floor levels etc), as well as the Probable Maximum Flood (PMF) event, which is the largest possible flood. This upper bound flood condition is used for consideration of risks to life, and also for definition of flood areas within the floodplain.

A discussion of the flood-related constraints imposed on the property is provided below.

1. Flood Inundation and Depths

As noted, the principal flood planning events are the 1% AEP and PMF events. The flood inundation extents and relative flood depths in the vicinity of the development site are shown in Figure 2 and Figure 3 for the 1% AEP and PMF events respectively.

At the 1% AEP magnitude, the majority of the site is subject to inundation. The typical flood depth in the inundated area is between 0.5-0.75m. This depth of flooding corresponds to the peak 1% AEP flood level of 5.78m AHD as provided by Council. The Flood Certificate provided by Council for the site, confirms flood inundation at the site during the June 2007 flood event, corresponding to a peak flood level of the order of approximately 6.0m AHD.

The site represents a local topographical depression with fills with floodwater. The large inundation extent shown in Figure 2 extending across Frederick St, Mitchell St, Merewether St and Union St all form part of the same flood storage area. The natural overflow/outlet points for this depression are overtopping of Watkins St in the vicinity of the main Hunter Water trunk drainage channel and flow along Union St, to the north of Railway Street. At both of these locations, the local ground levels representing the main hydraulic control is of the order of 5.5m AHD. Accordingly, where storm runoff volume exceeds the drainage system capacity and provides for inundation in the local depression including the subject site, flood water levels would be expected

to build to at least 5.5m AHD before any significant relief through overtopping at the Watkins St/Union St overflow points.



Under PMF conditions, typical peak flood depths are of the order of 1.0 - 1.5m. This is an extreme event that would result in extensive flooding across the City. In considering the impact of the PMF flood condition on the proposed development, the main focus is to not to provide increase in the potential risk to life. As shown in Figure 3, extensive areas of surrounding land would also be subject to high depth flood inundation at the PMF level.

Significantly, at the PMF flood peak, all of the roads surrounding the development are inundated thereby preventing access. In the event of flash conditions, rapid inundation of roads may limit the potential to provide safe egress/evacuation from the site. With potentially minimal warning time, there may not be sufficient time to enact an orderly evacuation prior to access roads being cut. This is a similar situation across many past of Newcastle City. Accordingly, Council has adopted flood planning policies that recognise these limitations and incorporate provisions for on-site flood refuge.

2. Flood Classification

The hydraulic categories as defined in the Floodplain Development Manual are:

- **Floodway** Areas that convey a significant portion of the flow. These are areas that, even if partially blocked, would cause a significant increase in flood levels or a significant redistribution of flood flows, which may adversely affect other areas.
- Flood Storage Areas that are important in the temporary storage of the floodwater during the passage of the flood. If the area is substantially removed by levees or fill it will result in elevated water levels and/or elevated discharges. Flood Storage areas, if completely blocked would cause peak flood levels to increase by 0.1m and/or would cause the peak discharge to increase by more than 10%.
- Flood Fringe Remaining area of flood prone land, after Floodway and Flood Storage areas have been defined. Blockage or filling of this area will not have any significant effect on the flood pattern or flood levels.

The flood classification mapping at the PMF level for the site is shown in Figure 4.

Floodways convey the majority of flow during a flood event. Therefore, any blockage within a floodway is expected to impact on the flood behaviour, possibly increasing flood levels upstream and/or downstream. The site has no floodway classification that would constrain development.

The majority of the site is classified as flood storage. As discussed, being a local depression, the existing site provides for temporary flood storage and accordingly plays a function in attenuating peak flood discharges. The filling of the flood storage through development has the potential to increase peak flood discharges which may provide for an adverse impact on property compared to existing conditions.

For assessment purposes, the flood 1% AEP flood event is used to determine upstream and downstream impacts associated with individual developments.

Council has a requirement that not more than 20% of the flood storage area within an individual property should be blocked by new development. This is a cumulative effect limitation that is adopted City-wide. It is considered that this constraint may be subject to negotiation, as there are a number of vagaries associated with how it should be applied. Typically the flood storage should be considered in terms of volume (at the PMF level), with potential development not occupying more than 20% of the total flood storage volume.

The flood classifications have been based the product of velocity and depth (i.e. $V \times D$) is greater than 1.0 for the PMF event. This is a 'crude' and simplistic definition, but suitable for broadscale mapping and categorisation of land across a floodplain. On a property by property basis, detailed investigations are required to determine the impact of individual developments.

The existing development on the site can be seen in Figure 5. In order to assess the impact of the proposed development, consideration needs to be given to the existing site development in defining existing available flood storage. The scale of the city-wide flood modelling does not provide for detailed assessment of individual property. Accordingly, modelling could be undertaken at a local level to assess impact of filling on design flood condition. This assessment would include a Modelling of the proposed development site has not been undertaken at this rezoning stage, given there are no firm concept layouts to enable a relative assessment of impacts.



Figure 5 Existing Site Development

Council is also required to consider cumulative impacts on flooding. This means that while an individual development may have only a small impact on flood levels, if all properties within the floodplain were to be developed in a similar way, then the overall result would be a significant impact. Therefore, Council will not automatically accept a development, even if site-specific assessments show that the individual impact would be minimal.

The PMF flood also needs to be considered, as a new development should not increase the overall risk to life of existing properties upstream or downstream (ie the risk to life hazard category should not increase on neighbouring properties), although there can be impacts on both the PMF flood levels and PMF flood velocities.

Given that much of the site has existing development, it is considered that redevelopment would be possible in order to provide a minimal loss in flood storage. In limiting the potential loss of storage, development layouts can consider:

- Achieving a balanced cut/fill for any earthworks on site; and
- Provision of dedicated flood storage incorporated into building design (e.g. under floor).

3. Risk to Life Consideration

For any development on the site, the flashy nature of flooding would mean that there is potentially minimal warning time. As such, all people on the site at the time of the flood would need to take refuge within the development. In providing for on-site refuge, the development would require:

- that the structure cannot fail, even under the most severe flood event, otherwise anyone taking refuge within the development could perish; and
- refuge is required above the maximum flood (PMF) level. Refuge is required to accommodate all potential residents of the property.

Newcastle City Council has a procedure for assessing the risks to life associated with flooding. Risks to life are based on the whether the flooding is flash flooding or riverine flooding, and also if there is an escape route available. It is also dependent on the 'hydraulic behaviour threshold', which is another physical parameter based on the V x D relationship.

The Risk to Life Hazard for the site is shown in Figure 6. As shown in this figure, the majority of the site is classified L4.

Based on Council's Flood Policy, for L4 land, on-site refuge is required (as short duration flash flooding would prevent safe and timely evacuation from the premises), while heavy frame construction or structural reinforcement would be required.

It is recommended that all occupants within the development can be accommodated for a short period of time above the PMF flood level. This means that there should be sufficient communal area on an upper level that can temporarily accommodate occupants where floor level is lower than the PMF level. The development layout would need to consider provision of suitable access to the upper level communal areas from all lower floors.

It is recommended for a redevelopment of this scale to be supported at the development application stage by a site flood emergency management plan incorporating as a minimum:

- Description of flood behaviour
- Evacuation and evasion procedures
- Evacuation routes and flood refuges
- Flood preparedness and awareness procedures for residents and visitors

4. Development Potential

It is anticipated that suitable redevelopment of the subject site can be achieved based on the constraints discussed above. The principle constraints for the site relate to potential loss in temporary flood storage and potential risks to life considered up to the PMF level.

Within the buildable area, the following limitations would apply:

- buildings are required to be able to withstand the forces of floodwaters up to the PMF event;
- The floor level of the first storey may be below the PMF level, but flood refuge would be required on higher levels that can temporarily accommodate all residents of the first storey. Alternatively, the first storey (habitable level) can be at a level above the PMF, and no special flood refuge area would be required (as all residents could take refuge within their own apartments);
- There should be minimal change to the ground levels of the site. A balanced cut and fill should be sought if any filling is required; and
- Provisions are made to maintain existing flood storage (or maximum loss of 20%) through building design.

I trust this letter report provides sufficient preliminary advice to advance your discussions in relation to potential development of the site. Confirmation of developable area would require further detailed assessment which would be expected to be undertaken in association with any development application for the site. Please call me to discuss should you have any queries.

Yours Faithfully BMT WBM Pty Ltd

Darren Lyons Manager, Water and Environment – Newcastle







