

Application to Modify the Minister's Approval for the Barangaroo Concept Plan

Major Project 06_0162 (MOD 2)



Director-General's
Environmental Assessment Report
Section 75W of the
Environmental Planning and Assessment Act 1979

November, 2008

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EXECUTIVE SUMMARY

This is a report on a modification application seeking approval to modify the approved Concept Plan for Barangaroo.

The original Concept Plan (MP_06_0162) was approved by the Minister on 9 February 2007, and allowed for:

- A mixed use development involving a maximum of 388,300m² of gross floor area (GFA) contained within 8 blocks on a total site area of 22 hectares
- approximately 11 hectares of new public open space/public domain, with a range of formal and informal open spaces serving separate recreational functions and including a 1.4km public foreshore promenade
- a maximum of 8,500m² GFA for a passenger terminal and a maximum of 3,000m² GFA for active uses that support the public domain within the public recreation zone
- built form design principles, maximum building heights and maximum GFA for each development block within the mixed use zone
- public domain landscape concept, including parks, streets and pedestrian connections
- alteration of the existing seawalls and creation of a partial new shoreline to the harbour
- retention of the existing Sydney Ports Corporation Port Safety Operations and Harbour Tower Control Operations including employee parking
- the preparation of a Transport Management Accessibility Plan to investigate the surrounding street network and public transport service opportunities, constraints and infrastructure improvements

The majority of the site is owned by the Sydney Foreshore Authority (SHFA), with small areas owned by the Sydney Ports Corporation, Marine Ministerial Holding Corporation, Maritime Services Board of NSW and the Crown. Barangaroo is a generally rectangular site with a total area of 22 hectares and is located on the north western edge of the Sydney Central Business District.

As the application has been made by a public authority, pursuant to Clause 8F of the *Environmental Planning and Assessment Regulation 2000*, land owner's consent is not required.

Current Modification Application (MP06_0162 MOD 2)

On 25 June 2008, MG Planning Urban Planners on behalf of the Sydney Harbour Foreshore Authority (SHFA) (the Proponent) submitted to the Director-General a request for a modification to the Barangaroo Concept Plan seeking approval to increase the GFA of commercial uses by 50,000m² to 120,000m² in blocks 2, 3, 4 and 5 distributed as follows:

- Block 2: an increase by up to 26,250m²
- Block 3: an increase by up to 32,250m²
- Block 4: an increase by up to 46,500m²
- Block 5: an increase by up to 15,000m²

The current modification proposes to increase the total maximum GFA to 508,300m². This includes changes to the terms of approval and an amendment to the Major Projects SEPP to accommodate the increase in GFA.

The Capital Investment Value of the current modification is \$500 million (total value of \$2 billion for the entire Barangaroo Concept Plan if modified). The proposed maximum additional GFA will generate 6,600 operational jobs and approximately 1000 construction jobs in addition to the 16,000 operational jobs and approximately 3000 construction jobs provided for in the approved Concept Plan (total of approximately 26,600 jobs).

Modification to existing Concept Approval

The current modification is a modification to the Ministers determination of the Barangaroo Concept Plan (MPA No. 06_0162) made on 9th February 2007.

Major Projects SEPP Amendment

The current modification is located within, and consistent with the Zone B4 Mixed Use, however an amendment is required to the SEPP to permit the increase in GFA, which can be consequential to the current modification.

Public Exhibition

The current modification was referred to public agencies and placed on public exhibition from 16 July to 15 August 2008. A total of 51 public submissions were received (including community groups) and 9 submissions from public agencies. Key issues included:

- Loss of public open space
- The built form
- Traffic, public transport and car parking
- Heritage
- View loss
- Overshadowing
- Social impacts
- Increased demand on utilities and services
- Mix of uses
- Amenity impacts
- Economic considerations
- Ecologically sustainable development, and
- Consultation process

Preferred Project Report (PPR)

On 10 October 2008, a PPR was submitted by the proponent to address issues raised by the Department and public authorities, and to provide a response to the public submissions.

The PPR did not seek to amend the proposal as detailed in the modification application EA, however provided the following additional information to address issues raised during the exhibition period and Department of Planning, and further support the application for up to an additional 120,000m² GFA on the site:

- Additional 3D imaging of 2 massing options
- PARAMICS traffic modelling of the wider CBD traffic network
- a GFA, urban design and visual analysis review including the addition of urban design controls, and
- a demand supply dynamics report detailing the current commercial tenancy demands for the CBD

Assessment Outcomes

This report concludes that the additional commercial gross floor area is generally acceptable, subject to additional built form controls to ensure an appropriate relationship at street wall / podium level with the surrounding land uses and that the final building forms are an appropriate bulk and scale.

The following key modifications recommended by this report are additional built form controls that:

- Ensure sustainable urban design outcomes, an enhanced interface with the public domain and viable and useable commercial floor space
- provide a consistent podium along Hickson Road (8 storeys) and to achieve appropriate street frontage heights and relationship to properties east of Hickson Road by limiting the height and depth of the podium, and setback of the tower elements
- provide a consistent height and form along Globe Street by limiting the podium height (4 storeys) and to ensure an appropriate footpath width
- regulate the size of the floor plates for blocks 3 and 4 and limit the bulk and scale of the tower elements by breaking up the expanses of the buildings walls, and to allow for views and view sharing to occur
- require building separation to ensure an acceptable relationship between the towers and an appropriate level of amenity in terms of daylight, outlook, view sharing, ventilation, wind mitigation, privacy, and an appropriate scale to the street and public domain areas
- ensure Globe Street will be activated by ground floor retail uses
- prohibit connections between tower elements and above podium elements over public streets
- ensure podium roofs are to be green and accessible
- allow variation to the numerical controls relating to the towers

The Department has assessed the merits of the project and is satisfied that the impacts of the proposed development have been addressed via the Statement of Commitments and modifications to the application recommended by the Department. The Department is also satisfied that the impacts of the additional GFA, in particular the bulk and scale, can be suitably mitigated and/or managed through the design competition process required by the SEPP, and through the imposition of additional built form controls. The proposed redevelopment establishes a sound framework for the provision of ESD outcomes on the site and further detailed analysis can be undertaken at the Project Application stage.

On these grounds, and subject to amendments to ensure design excellence, the Department is satisfied that the current modification is acceptable. All statutory requirements relating to the current modification have been met.

Public Benefits

The public benefits resulting from the proposal (as modified by the Department) include:

- A key site in responding to the demand for commercial floorspace in the Sydney CBD to assist in developing Sydney as a Global city
- increased employment opportunities through the additional 6,600 operational jobs and approximately 1000 construction jobs generated through the development (total of approximately 7,600 jobs)
- an improved pedestrian streetscape in the southern portion of the site achieved through the introduction of built form controls to provide a consistent podium and setback of the towers along Hickson Road
- an improved pedestrian streetscape achieved along Globe Street by ensuring a consistent built form is delivered by limiting the podium height and ensuring an appropriate footpath width is provided through a minimum setback distance
- recognising block 2 as an opportunity to deliver a signature development of high urban design and architectural quality
- the improved tower to podium relationship, building separations and therefore improved amenity that will be achieved on block 3, 4 and 5 by additional built form controls

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1 THE SITE

Barangaroo (formerly known as East Darling Harbour) is located on the north western edge of the Sydney CBD. The site is bounded by the Sydney Harbour foreshore to the west and north, Hickson Road and Millers Point to the east and Kings Street Wharf / Cockle Bay / Darling Harbour to the south (see **Figure 1**). Barangaroo has a site area of 22 hectares and a 1.4 kilometre harbour foreshore frontage.



Figure 1 - Location Map of the Site

The site previously comprised 5 wharves (wharves 3,4,5,7 and 8). These wharves, until mid 2007, were used for commercial shipping for berthing and unloading of container ships. The international and domestic overseas passenger terminal is located at the southern end of the site which continues to operate on the site.

The Harbour control tower, located in the northern section of the site, and the port safety operations, located within the Moores Wharf building and wharf facility, are also both still being operated by the Sydney Ports Corporation.

The majority of the site is owned by the Sydney Foreshore Authority (SHFA), with small areas owned by the Sydney Ports Corporation, Marine Ministerial Holding Corporation, Maritime Services Board of NSW and the Crown (where owners consent has been received).

As the application has been made by a public authority, pursuant to Clause 8F of the *Environmental Planning and Assessment Regulation 2000*, land owner's consent is not required.

SHFA is the proponent for the current modification to the approved Concept Plan for Barangaroo.

2 BACKGROUND

2.1 Current modification Chronology

- On 25 June 2008, MG Planning Urban Planners on behalf of the Sydney Harbour Foreshore Authority, submitted to the Director-General a request for a modification to the Barangaroo approved Concept Plan MP 06_0162
- on 16 July to 15 August 2008, the current modification was referred to public agencies and placed on public exhibition
- on 10 October 2008, a PPR was submitted by the proponent to address issues raised by the Department and public authorities, and to provide a response to the public submissions
- on 27 October 2008, an addendum to the PPR was submitted by the proponent to address further issues raised by the Department

2.2 Concept Plan Application MP 06_0162

The Minister for Planning approved the Barangaroo Concept Plan (MP 06_0162) on 9 February 2007. The Concept approval allowed for:

- A mixed use development involving a maximum of 388,300m² of gross floor area (GFA) contained within 8 blocks on a total site area of 22 hectares
- approximately 11 hectares of new public open space/public domain, with a range of formal and informal open spaces serving separate recreational functions and including a 1.4km public foreshore promenade
- a maximum of 8,500m² GFA for a passenger terminal and a maximum of 3,000m² GFA for active uses that support the public domain within the public recreation zone
- built form design principles, maximum building heights and maximum GFA for each development block within the mixed use zone
- public domain landscape concept, including parks, streets and pedestrian connections
- Alteration of the existing seawalls and creation of a partial new shoreline to the harbour
- retention of the existing Sydney Ports Corporation Port Safety Operations and Harbour Tower Control Operations including employee parking
- the preparation of a Transport Management Accessibility Plan to investigate the surrounding street network and public transport service opportunities, constraints and infrastructure improvements

The Capital Investment Value of the Approved Concept Plan was \$1.5 Billion with up to 16,000 operational jobs.

A copy of the original approval and Major Projects gazettal notice is at **Appendix A** and a copy of the original report is at **Appendix B**.

2.3 Modification 1 MP 06_0162 MOD 1

On 9 August 2007, JBA Urban Planning Consultants (on behalf of SHFA - the Proponent) submitted to the Director-General a request for modification to the Barangaroo approved Concept Plan seeking approval for the following modifications:

- A modification to correct minor typographical errors
- A modification to condition C2 of the Concept Approval to reflect the amendments that have occurred to the SEPP since approval of the Concept Plan

On 25 September 2007 the Executive Director, Strategic Sites and Urban Renewal, as delegate of the Minister for Planning, approved MP 06_0162 MOD 1.

3 DESCRIPTION OF PROPOSED MODIFICATIONS (MP 06_0162 MOD 2)

3.1 Proposed Modifications

The modification seeks the approval for the following:

- a) An increase in GFA for commercial uses of 50,000m² to 120,000m² in blocks 2, 3, 4 and 5 (see **Figure 2**) distributed as follows:
- Block 2: an increase by up to 26,250m²
 - Block 3: an increase by up to 32,250m²
 - Block 4: an increase by up to 46,500m²
 - Block 5: an increase by up to 15,000m²

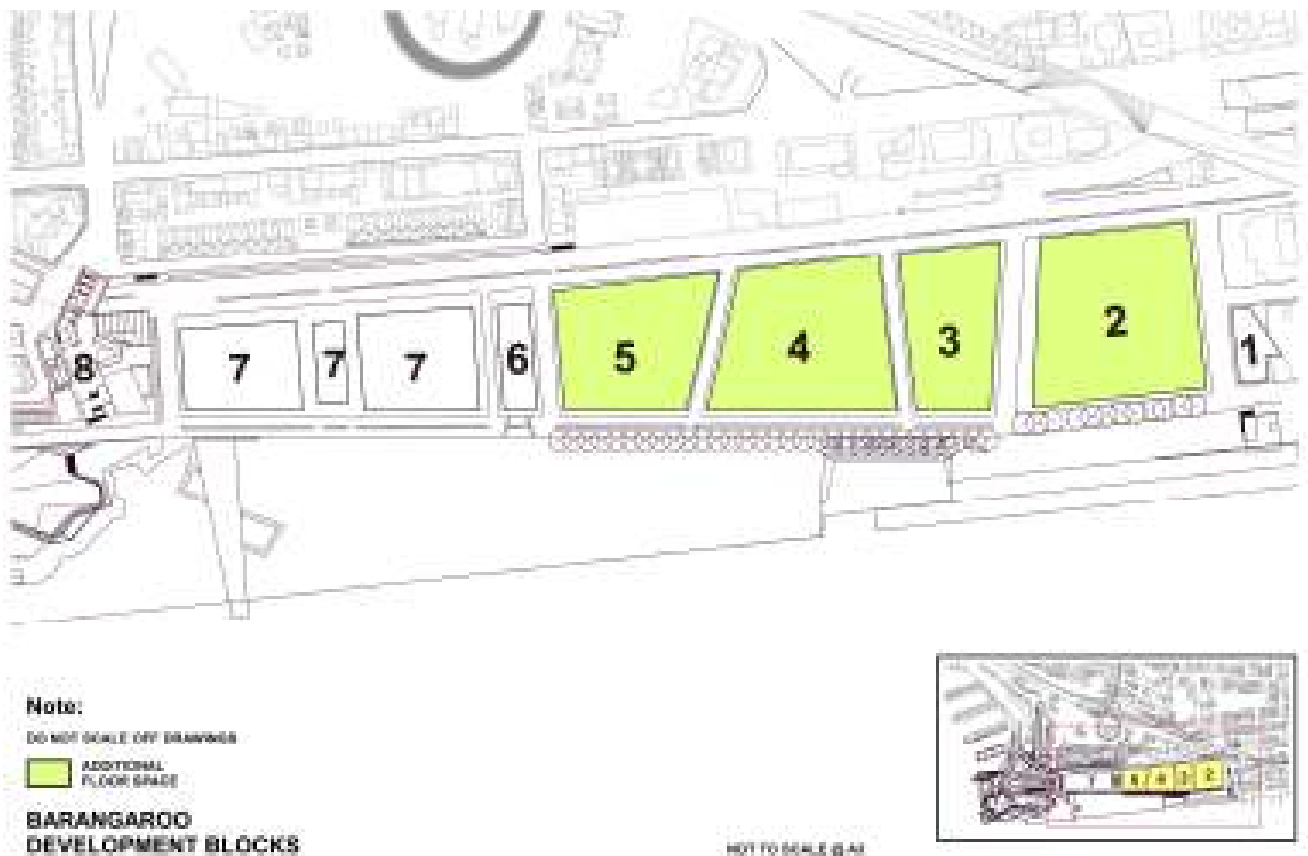


Figure 2 - Location Map of the Site Development Blocks

The remaining blocks, being Block 1 and Blocks 6-8, are not proposed to be amended through this current modification.

- b) Changes to the terms of Approval to accommodate the increase in GFA, including:
 - Changing document references
 - Amending the total amount of approved GFA from 388,300m² to 508,300m² and the associated increase in GFA's for blocks 2-5
 - Amending the total percentage of approved residential GFA in relation to total GFA
- c) An amendment to the State Environmental Planning Policy (Major Projects) 2005 to accommodate the increase in GFA

A copy of the submission is attached at **Appendix C**.

The proposed additional GFA will generate 6,600 operational jobs and approximately 1000 construction jobs in addition to the 16,000 operational jobs and approximately 3000 construction jobs provided for in the approved Concept Plan (total of approximately 26,600 jobs).

3.2 The proponents justification for the proposed modification application

The Proponent provides the following justification for the current modification:

- The additional floor space is required to enhance the growth and availability of commercial floor space in the CBD to augment Sydney's CBD as a premier commercial centre in the Asia-Pacific Region
- Barangaroo's role in meeting the demand for premium office space in the Sydney CBD is considered pivotal given the lack of large consolidated sites within the centre, and the preference of global and other major corporate entities for large office floor plates
- the additional floorspace can be accommodated within the existing approved height envelopes on the site
- research commissioned by SHFA has indicated that the approved concept for Barangaroo does not optimise the site's potential to meet the CBD's demand for premium office space
- the current modification will have a positive social impact as a result of the increased employment opportunities that will be generated
- the current modification will provide the impetus for a variety of transport improvements

3.3 Preferred Project Report and response to submissions

The proponent was provided with copies of all the submissions and requested to respond to the submissions in accordance with Section 75H of the Act. On 10 October 2008, the proponent submitted a response to the submissions and a revised Statement of Commitments. (See **Appendix F**)

The PPR did not seek to amend the proposal as detailed in the modification application EA, however provided the following additional information to address issues raised during the exhibition period, and further support the application for up to an additional 120,000m² GFA on the site:

- Additional 3D imaging of the 2 built form options
- PARAMICS Traffic Modelling of the wider CBD traffic network;
- An urban design and visual analysis review including additional built form controls
- A demand supply dynamics report

Subsequent to lodgement of the PPR the following additional information was supplied to the Department as an addendum to the PPR on 27 October 2008 (See **Appendix G**):

- A 3D model of the CBD comparing the approved Concept Plan and Option 3 model inserts

- Computer generated modelling with views of the modification from the water, travelling south down Hickson Road and travelling south down Globe Street
- Floor plans for Option 2 and Option 3 and the approved Concept Plan
- Sections of Option 2 and Option 3
- Aerial Photo of the site
- The SGS East Darling Harbour Economic Positioning Study
- The DEGW review of commercial components report
- Modelling representing the additional 50,000m² GFA option and associated GFA review

4 STATUTORY CONTEXT

4.1 Modification to existing Concept Approval

The current modification is a modification to the Ministers determination of the Barangaroo Concept Plan (MPA No. 06_0162) made on 9th February 2007.

4.2 Minister's Power to Approve

The Department has exhibited the Environmental Assessment (EA) in accordance with section 75H (3) of the *Environmental Planning and Assessment Act 1979*, as detailed in this report. Therefore, the Department has met its legal obligations and the Minister has the power to determine this project.

4.3 Director-General's Environmental Assessment Requirements (DGRs)

On 30 June 2006 the Director General issued environmental assessment requirements for the Concept Plan (DGRs) pursuant to Section 75F of the Act. The DGRs required the following key issues to be addressed:

- urban design, development controls and land uses
- transport and access
- Sydney Ports Corporation requirements
- streetscape and public domain
- heritage
- social and community needs and impacts
- soil contamination
- drainage and stormwater management
- utilities infrastructure
- development staging, and
- planning agreements/developer contributions

The Department concluded in May 2008 that the detailed DGRs issued on 30 June 2006 for the approved Concept Plan do not require amendment for the current modification as the key issues of environmental assessment are substantially the same.

The DGRs are contained in **Appendix D**. The EA Lodged by the proponent in June 2008 was deemed at that time to be adequate for exhibition.

4.4 Objects of the Environmental Planning and Assessment Act 1979 (EP&A Act)

The objects provide an overarching framework that informs the purpose and intent of the legislation and gives guidance to its operation. The Minister's consideration and determination of a project

application under Part 3A must be informed by the relevant provisions of the Act, consistent with the objects of the Act.

The objects of the Act in section 5 are as follows:

- (a) *To encourage:*
 - (i) *the proper management, development and conservation of natural and artificial resources, including agricultural land, natural areas, forests, minerals, water, cities, towns and villages for the purpose of promoting the social and economic welfare of the community and a better environment,*
 - (ii) *the promotion and co-ordination of the orderly and economic use and development of land,*
 - (iii) *the protection, provision and co-ordination of communication and utility services,*
 - (iv) *the provision of land for public purposes,*
 - (v) *the provision and co-ordination of community services and facilities,*
 - (vi) *the protection of the environment, including the protection and conservation of native animals and plants, including threatened species, populations and ecological communities, and their habitats,*
 - (vii) *ecologically sustainable development,*
 - (viii) *the provision and maintenance of affordable housing,*
- (b) *To promote the sharing of the responsibility for environmental planning between the different levels of government in the State, and*
- (c) *To provide increased opportunity for public involvement and participation in environmental planning and assessment*

The proposed modification seeks to ensure that future development at Barangaroo occurs appropriately, ensuring the orderly economic use of the land with the provision of additional commercial space whilst maintaining a significant public domain and the future provision of community facilities.

With respect to ESD, the Act adopts the definition in the Protection of the Environment Administration Act 1991 including the precautionary principle, the principle of inter-generational equity, the principle of conservation of biological diversity and ecological integrity, and the principle of improved valuation, pricing and incentive mechanisms, which are considered in more detail immediately below.

The Department has considered the Objects of the Act, including the encouragement of Ecologically Sustainable Development (ESD) in the assessment of the project application.

4.5 Ecologically Sustainable Development Principles

There are five accepted ESD principles:

- (a) *decision-making processes should effectively integrate both long-term and short-term economic, environmental, social and equitable considerations (the integration principle)*
- (b) *if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation (the precautionary principle)*
- (c) *the principle of inter-generational equity - that the present generation should ensure that the health, diversity and productivity of the environment is maintained or enhanced for the benefit of future generations (the inter-generational principle)*
- (d) *the conservation of biological diversity and ecological integrity should be a fundamental consideration in decision-making (the biodiversity principle), and*
- (e) *improved valuation, pricing and incentive mechanisms should be promoted (the valuation principle)*

The Department has considered the development in relation to the ESD principles and has made the following conclusions:

- (a) **Integration Principle** – The proposal has positive economic impacts supporting the revitalisation of East Darling Harbour as a long-term employment generating use and does not adversely impact on the environment
- (b) **Precautionary Principle** – There is no threat of serious or irreversible environmental damage as a result of the proposed modification which seeks an increase to the GFA for the approved concept plan. The site has a low level of environmental sensitivity and does not contain any threatened or vulnerable species, populations, communities or significant habitats. Any potential effects of climate change will be further assessed and addressed at project application stage.
- (c) **Inter-Generational Principle** – The proposed development represents a sustainable use of a site, utilises existing infrastructure within the Darling Harbour locality and contributes to the vibrancy of the area for the benefit of future generations. The approved Concept Plan provides public open space in combination with commercial, retail and residential development which will benefit both current and future generations
- (d) **Biodiversity Principle** – The proposal does not impact upon biological diversity or ecological integrity. The development site has a low level of environmental sensitivity
- (e) **Valuation Principle** – The approach taken for this Concept Plan has been to assess the environmental impacts of the proposal and identify appropriate safeguards to mitigate adverse environmental effects

An Ecologically Sustainable Design Report was prepared to accompany the original Concept Plan by Advanced Environmental in August 2006, which proposed a number of strategies to address ESD requirements for the site and identified targets for recycling, water, energy, micro-climate, environmental quality/amenity, landscape, transport, waste and materials for the development, reductions in potable water, green house gas emissions, sewer flow, power use and CHG emissions.

An ESD report is to be lodged with each development / project application with the achievement of the subsequent targets to be demonstrated as part of each relevant development / project application.

The revised statement of commitments for the current modification does not alter these requirements.

4.6 Section 75I (2) of the Act

Section 75I (2) of the Act and Clause 8B of the Environmental Planning and Assessment Regulation 2000 requires the Director-General's report to address a number of matters as follows:

Section 75I(2) criteria	Response
Copy of the proponent's environmental assessment and any preferred project report	The Proponent's EA and PPR forms part of the Director Generals Report and is located on the attached assessment file.
Any advice provided by public authorities on the project	All advice provided by public authorities on the current modification for the Minister's consideration is set out in this report.
Copy of any report of a panel constituted under Section 75G in respect of the project	No statutory independent hearing and assessment panel was undertaken in respect of this current modification.
Copy of or reference to the provisions of any State Environmental Planning Policy that substantially govern the carrying out of the project	Each relevant SEPP that substantially governs the carrying out of the current modification is identified immediately below in section 4.7.

Except in the case of a critical infrastructure project – a copy of or reference to the provisions of any environmental planning instrument that would (but for this Part) substantially govern the carrying out of the project and that have been taken into consideration in the environmental assessment of the project under this Division	An assessment of the development relative to the prevailing environmental planning instrument is provided in this report.
Any environmental assessment undertaken by the Director General or other matter the Director General considers appropriate.	The environmental assessment of the current modification is this report in its entirety.
A statement relating to compliance with the environmental assessment requirements under this Division with respect to the project.	The current modification adequately complies with the DGRs.
Clause 8B criteria	Response
An assessment of the environmental impact of the project	An assessment of the environmental impact of the current modification is discussed in this report.
Any aspect of the public interest that the Director-General considers relevant to the project	The public interest is discussed in this report.
The suitability of the site for the project	The objectives and zoning for the site under the Major Projects SEPP permit uses as proposed in this current modification.
Copies of submissions received by the Director-General in connection with public consultation under section 75H or a summary of the issues raised in those submissions.	A summary of the issues raised in the submissions is provided in this report.

To fulfil the requirements of Section 75I Clause 2(b) this report includes advice provided by public authorities. These issues formed part of the key issues raised in the DGEARs. The Department has reviewed the Environmental Assessment (EA), submissions to the preparation of the EA by public authorities, the submissions received from the public during the EA exhibition period and additional information provided by the proponent.

4.7 Environmental Planning Instruments (EPIs)

4.7.1 Application of EPIs to Part 3A projects

To satisfy the requirements of section 75I(2)(d) and (e) of the EP&A Act, this report includes references to the provisions of the environmental planning instruments that govern the carrying out of the project and have been taken into consideration in the environmental assessment of the project. An assessment of compliance with the relevant EPIs is provided immediately below.

The primary EPI guiding the assessment of the current modification is:

- State Environmental Planning Policy (Major Projects) 2005.

Other EPIs to be considered in the assessment of the current modification include:

- Darling Harbour Development Plan No.1
- Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005

- State Environmental Planning Policy (Infrastructure) 2007
- Draft State Environmental Planning Policy No. 66 – Integration of Land Use and Transport

The provisions, including development controls of local environmental plans, and development control plans are not required to be strictly applied in the assessment and determination of major projects under Section 75R(1) Part 3A of the Act, however the DGRs require the proponent to address the relevant provisions. Notwithstanding, there are no numerical controls applicable to the site under the Darling Harbour Development Plan and Sydney Harbour Catchment SREP 2005.

4.7.2 State Environmental Planning Policy (Major Projects) 2005

On 12 October 2007, the site was rezoned by the Minister for Planning from *Residential and Maritime and Transport* in Sydney Local Environmental Plan 2005 to *Part RE1 Public Recreation* and *Part B4 Mixed Use* under Schedule 3 of *State Environmental Planning Policy (SEPP) (Major Projects) 2005*.

The listing of the Barangaroo site in Schedule 3 of the Major Projects SEPP sets the planning parameters for future land use, type and scale of development consistent with achieving State and Regional planning objectives whilst taking into account the local planning context of the site.

Land Use Zones

The site contains two land use zones, Zone B4 Mixed Use and Zone RE1 Public Recreation.

The current modification is located within the Zone B4 Mixed Use and an increase in commercial GFA is consistent with the objectives of the zone in particular as it includes the ability of the site to provide a diverse range of commercial development.

Height of Buildings

Clause 17 states that height of any building on any block of land on the site is not to exceed the height shown on the building height map. The relevant blocks are 2, 3, 4 and 5, which have the following maximum heights:

Block	Existing Maximum RL	Proposed Maximum RL	Compliance
2	180	180	Yes
3	112	112	Yes
4	100	100	Yes
5	34	34	Yes

The current modification does not propose to exceed the maximum heights set by this control and therefore complies with this clause.

Gross Floor Area

Clause 18 states that the GFA of any block of land on the site is not to exceed the GFA shown on the GFA map.

The relevant blocks are 2, 3, 4 and 5, which have the following maximum GFAs (Blocks 1 and Blocks 6-8 do not form part of the current modification):

Block	Existing Maximum GFA	Proposed Maximum GFA	Compliance
1	11,800 m ²	0	Yes
2	180,000 m ²	206,250m ²	No
3	56,000 m ²	88,250m ²	No
4	74,500 m ²	121,000m ²	No
5	29,200 m ²	44,200m ²	No
6	3,000 m ²	0	Yes
7	28,000 m ²	0	Yes
8	5,800 m ²	0	Yes

Condition C1 of the Concept Plan approval does allow for the redistribution of the GFA within Blocks 2, 3 and 4, however it may not exceed that maximum total area for these blocks, being 310,000m². The current modification therefore does not comply with the maximum GFA limits of blocks 2-5, nor the allowable redistribution of these GFA's within blocks 2-4 given the maximum GFA of the current modification is 415,500m². The assessment of which is the subject of this report.

Clause 20 of the Major Projects SEPP provides a mechanism to vary development controls, subject to demonstration that the development standard is unreasonable or unnecessary and that there are sufficient environmental planning grounds to justify the contravention. However given the large variation sought, an amendment to the standard under Clause 20 is considered appropriate in this instance.

Additional floorspace in blocks 2-5, is determined to not have any unreasonable or unmanageable impacts in terms of traffic, overshadowing, views or demand on surrounding infrastructure. However to ensure an appropriate urban design outcome is achieved, the Department is recommending additional built form controls to regulate the size and location of the podiums and towers by introducing maximum heights (for the podiums), maximum widths and depths, minimum building separations and minimum street setbacks.

Design Excellence

Clause 19 sets the parameters for design excellence on the site. The assessment of design excellence must have regard to the following:

- *The architectural design and materials*
- *The form and external appearance of the building*
- *Whether the building will meet sustainable design principles, and*
- *A design competition must be held for development greater than RL 57 or any building greater than 1,500m² apart from any building the Director General has certified to be exhibit design excellence*

As the proposal seeks an amendment to the approved Concept Plan, a detailed assessment of design excellence cannot be undertaken at the Concept Plan stage, rather during subsequent project applications. The Department has however recommended the inclusion of additional built form controls to further ensure that design excellence will be achieved.

The following key modifications recommended by this report are additional built form controls that:

- Ensure sustainable urban design outcomes, an enhanced interface with the public domain and viable and useable commercial floor space
- provide a consistent podium along Hickson Road (8 storeys) and to achieve appropriate street frontage heights and relationship to properties east of Hickson Road by limiting the height and depth of the podium, and setback of the tower elements
- provide a consistent height and form along Globe Street by limiting the podium height (4

- storeys) and to ensure an appropriate footpath width
- regulate the size of the floor plates for blocks 3 and 4 and limit the bulk and scale of the tower elements by breaking up the expanses of the buildings walls, and to allow for views and view sharing to occur
- require building separation to ensure an acceptable relationship between the towers and an appropriate level of amenity in terms of daylight, outlook, view sharing, ventilation, wind mitigation, privacy, and an appropriate scale to the street and public domain areas

The current modification does not seek to alter the design excellence requirements of the SEPP and is consistent with this clause

Heritage conservation

Clause 21 sets the parameters for heritage conservation on the site. The current modification is for additional GFA in the southern section of the site, and does not impact any further on the heritage item listed, being the Dalgety's bond Store, located in the north-eastern section of the site.

The proposal is consistent with this clause.

Proposed Amendments to the Major Projects SEPP

Amendments to the SEPP, as proposed through this current modification, are required to give certainty for the future project applications on blocks 2-5 and the remainder of the site. This will be subject to a separate amendment process.

4.7.3 Darling Harbour Development Plan No.1

The approved Concept Plan is consistent with the objectives for the site as it encourages uses that will provide for tourist, educational, recreational, entertainment, cultural and commercial facilities.

The current modification does not alter this mix of uses, with the minimum and maximum amount of residential, retail and tourist GFA's unaltered/unchanged as part of the current modification. There are no changes proposed to the Public Domain.

4.7.4 Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005

The approved Concept Plan is consistent with the principles for the area in that it will regenerate and activate the site, provide for increased public access to a harbour site, enhance the diverse range of uses at Darling Harbour for existing and future generations, and will achieve a high quality and ecologically sustainable development on the site. The current approval will provide a vibrant place for people, enabling the use of an improved public domain environment and access to a variety of uses.

The current modification does not alter this, and will not adversely affect the natural assets of Sydney Harbour and is generally consistent with the considerations and objectives of the REP.

4.7.5 State Environmental Planning Policy (Infrastructure) 2007

The proposed development meets the aims of the Infrastructure SEPP as it allows for the efficient redevelopment of surplus government owned land. Schedule 3 of the SEPP also requires traffic generating development to be referred to the RTA. The current modification was considered by the Sydney Regional Traffic Committee which raised some matters relating to modal split, capacity of the rail and bus networks and preparation of a Transport Management Access Plan (TMAP).

The traffic and public transport issues have been addressed through the revised statement of commitments (and future preparation of a TMAP) and amendments to the current modification as recommended by the Department.

4.8 Modification of a Minister's Approval

The approval for the original Concept Plan was granted in accordance with Part 3A of the Act Section 75J Clause (2).

Section 75W (2) of the Act provides that a proponent may request the Minister modify the approval of a project. The Minister's approval is not required if the project as modified will be consistent with the original approval. In this case, as the current modification seeks to increase the approved GFA, a formal application under this section of the Act is necessary.

Section 75W (4) of the Act gives the Minister the authority to modify the approval (with or without conditions) or disapprove the modification application.

4.9 Developer Contributions

Section 61 of the *City of Sydney Act 1988* allows for a 1% levy to be imposed on development over \$200,000 including commercial components of Government, Public Authority or Council developments, determined under Part 4 of the EP&A Act. The contributions are payable to Council to assist with funding of public infrastructure, community projects and facilities. Section 75R(4) of the EP&A Act provides that development contributions apply to Part 3A projects that would have been subject to development contributions if they had been assessed under Part 4 of that Act.

As the subject application is for a modification to a concept plan, it is relevant to consider whether developer contributions should be levied on subsequent project applications.

In this case the Barangaroo redevelopment is proposed by a Public Authority and will result in the provision of significant public infrastructure and community facilities within the site, including approximately 11 hectares of new public open space/public domain, including a range of formal and informal open spaces serving separate recreational functions and a 1.4km public foreshore promenade. A new internal road network, public streetscape improvements and linkages to the surrounding street network are also proposed.

It is the Department's recommendation that, given the extent of infrastructure and community facilities to be provided on this site by a public authority, the imposition of a levy under Section 61 of the City of Sydney Act would be unreasonable in this case. Therefore a modification requiring this levy to apply to subsequent project applications is not recommended.

5 ASSESSMENT OF ENVIRONMENTAL IMPACTS

In addition to the EPIs and planning policies, addressed above, key issues raised in the submissions and/or identified during the Departments assessment of the Director Generals Environmental Assessment Requirements (DGRs) include:

- Economic and Public Benefits
- Relationship to the CBD Metro
- Increase in Gross Floor Area (GFA) / Density
- Urban Design and Built Form
- Traffic and Public Transport
- Expansion/Increase in Commercial Uses on the Site
- Social Impacts
- Consistency with the Design Principles of the approved Concept Plan

- Overshadowing
- Wind Impacts
- Views and View Corridors
- Heritage
- Demand on Utilities, Services and Infrastructure

5.1 Economic and Public Benefits

The proponent has detailed in the application and PPR that office space is becoming increasingly constrained (with fragmented land ownership patterns), particularly for offices offering larger floor plates. CB Richard Ellis have provided advice that the proposed Barangaroo development capacity is essential to meet the expected demand in the short and medium term, and indeed for the growth of Sydney's CBD and the health of the city's economy.

Further the proponent states that the net new supply of commercial space in the CBD has also been limited since the late 1990s resulting in very low occupancy rates, and a rental growth that has placed Sydney as one of the most expensive global cities. Tenants representing approximately 450,000m² of space with leases expiring over the next five years will also have an interest in relocating. In addition to tenant relocation, there is a new space demand for approximately 50,000m² to 100,000m² of commercial space per year.

Assessment

The Sydney Metropolitan Strategy places the City of Sydney council area in the Sydney City Subregion. Sydney is Australia's only Global city with 20 per cent of national employment in financial and business services, and nearly half of Australia and New Zealand's top 500 companies.

The strategy sets housing and employment targets for the Sydney City at 55,000 dwellings and 58,000 new jobs by the year 2031, with the regions workforce having a particular focus on high end commercial office jobs.

The Sydney City Draft Subregional Strategy further lists Barangaroo as a major development opportunity *"to conduct a focused and renewal process aimed at generating a new urban precinct....that reinforces Sydney's commercial and cultural role and enhances the life of its citizens"*

Barangaroo therefore plays an important role in meeting a proportion of the employment demand for Sydney, by providing up to 16,000 operational jobs and approximately 3000 construction jobs in the approved Concept Plan, and an additional 6,600 operational jobs and approximately 1000 construction jobs in the current modification (total of approximately 26,600 jobs).

Barangaroo (inclusive of the current modification) therefore has the ability to accommodate approximately 30% of the future employment growth required for Sydney until 2031. It also offers fewer constraints than other potential development sites in the CBD which require site consolidation to accommodate any significant amounts of the commercial floor space required to maintain Sydney's role as a Global City.

Specific modifications to the approved Concept Plan are also recommended by the Department to regulate the size and location of the podiums and towers by introducing maximum heights (for the podiums), maximum widths and depths, minimum building separations and minimum street setbacks.

The restrictions on width and depth will therefore regulate the size of the floor plates to ensure a diversity of occupancies, and combined with the building separations, better view corridors, good internal amenity, access to natural light and ventilation and a more appropriate building scale for pedestrians can be achieved within any final building design.

To ensure the activation of the Globe Street frontage (and provision of a wide footpath), a 5 metre setback for the podium has also been recommended by the Department. This will encourage safe and efficient pedestrian movement, and allow for outdoor seating where appropriate.

The public domain works provided for in the Approved Concept Plan also provide approximately 11 hectares of new public open space/public domain. This includes a range of formal and informal open spaces serving separate recreational functions including a 1.4km public foreshore promenade.

The current modification does not seek to modify the approved public domain improvements.

Summary

The public benefits afforded by the development of the entire site at street level, and benefits that will be provided to the local and wider community through the provision of a significant amount of public open space and employment opportunities are therefore considered an acceptable benefit from any increase in commercial GFA.

The modifications recommended by the Department will also ensure a diversity of occupancies and a more appropriate building scale for pedestrians can be achieved within any final building design.

5.2 *The relationship to the CBD Metro*

On 24 October 2008, the NSW Government announced the CBD metro (See **Figure 3**), being the construction of Central, Town Hall, Wynyard/Barangaroo, Pyrmont and the Rozelle stations.

The proposed metro line will result in improved access to the site by public transport and will support the high public transport mode splits approved in the Concept Plan.

A potential link below ground to Barangaroo station in conjunction with an enhanced link to Wynyard station will facilitate the safe and efficient movement of pedestrians to and from the site.



Figure 3: CBD Metro

5.3 Urban Design and Built Form

The potential built form and urban design quality of buildings resulting from the current modification is a key issue for consideration.

The proponent has provided additional modelling (physical model and 3D imaging) to further illustrate how any future buildings on the site can accommodate the additional GFA has been undertaken by the Proponent in the PPR, and addendum to the PPR (see **Appendix E** for additional imaging and **Appendix F** for PPR).

The proponent has also indicated in the PPR that the development options modelled are indicative, and is one representation on how the additional GFA could be accommodated, and not intended to be viewed as a potential design solution as detailed architectural design and modelling work have not been undertaken.

A series of secondary design controls have therefore been developed for the proponent in the PPR (by Conybeare Morrison) to supplement the overall bulk controls, in summary these controls are:

- Building Mass Setback Planes - sets the largest bulk of the building toward the western ridge of each block
- Building Street Wall Establishment Plane - to achieve an active streetwall around each block
- A Tower / Street wall Relationship Plane - to reinforce the streetwall in the form of the tower and therefore in the sky plane of the development
- Building Floorplate Articulation - to establish an articulated form for each high-rise tower and

limiting the bulky appearance of larger floorplates

- Tower Articulation Feature - to provide a distinction between the towers and the podiums so that the built form of each block will read as a series of separate buildings
- Ground Floor Permeability at Through Block Links - to confirm that the north south connection reads as a public link and is apparent from the public domain of Barangaroo
- Tower Top Stepped Profile Articulation - to confirm the principle of articulated tower volumes in the cityscape by indicating that floorplates should provide an articulated skyline
- Articulated Facades - to reinforce that building facades should be articulated to define building massing
- Active Streetfronts - to confirm the principle that a vital public domain will be created at street level

Assessment

The approved Concept Plan concentrates the majority of development in the southern section of the site. This provides an appropriate transition between the urban form of the CBD and a significant new public domain to the north of the site.

The current modification does not alter this framework, and is consistent with the framework of the winning design scheme, with the additional GFA being sought in the southern section of the site on existing approved building blocks 2-5, with the maximum heights (as defined in the Major projects SEPP) and street pattern to remain unchanged.

Although the final design, massing and configuration of the development will be determined subject to a design competition and in the project applications, the distribution and resulting urban design of any additional GFA within the blocks is an issue. This requires careful consideration of additional design parameters to ensure an acceptable urban design outcome will be achieved.

The proponent has provided two massing options for the additional 120,000m² GFA (being option 2 and 3). Both options showing varying degrees in which the additional GFA can be accommodated.

Option 2 shows buildings on blocks 3 to 5 as separate tower elements with a connecting core, whilst Option 3 shows a series of large floor plates with a single tower element located on top of the podiums for blocks 3 and 4, and single podium elements in block 5.

The series of large floor plates shown in option 3 (of approximately 2400m² to 2950m²) however will potentially result in large building masses on blocks 3 and 4. These could detract from the visual appearance of the buildings on these blocks, views of the development from the water, internal amenity and they also have the potential to detract from the diversity of occupancies small floor plates aim to deliver.

The proponent indicates in the PPR that the demand for larger floor plates cannot be readily met by other sites within the CBD, given issues with site consolidation and multiple ownership.

Whilst it is acknowledged the 700m² to 1000m² floor plates approved through the Concept Plan are now inadequate &/or impractical to cater for the demands of the current and future commercial market, there is still a need to ensure the urban design outcomes and flexibility of use associated with the approved Concept Plan are maintained.

Specific built form modifications to the approved Concept Plan are therefore recommended by the Department to regulate the size and location of the podiums and towers by introducing maximum heights (for the podiums), maximum widths and depths, minimum building separations and minimum street setbacks.

These will ensure a diversity of occupancies, promote the design and development of sustainable buildings, provide better view corridors, good internal amenity, access to natural light and ventilation and ensure a more appropriate building scale for pedestrians can be achieved within any final building design.

The additional built form controls also ensure that the development of the blocks will be more in keeping with the principles of smaller floor plates and separate building elements of the original design scheme as well as achieving greater alignment with the City of Sydney Council's controls.

In addition to the approved controls in the Concept Plan, the following additional built form controls are therefore recommended for the current modification:

Proposed Built Form Controls for Block 2 (overall)

- *The maximum horizontal dimension of any tower form fronting Globe Street and Hickson Road is not to exceed 25 metres*
- *Any tower forms are to be separated from the tower forms on Block 3 by a minimum of 30 metres.*

Justification for proposed controls

- To allow for flexibility of built form on block 2
- To achieve appropriate massing of tower buildings
- To ensure that the location of any tower proposed achieves an acceptable relationship with other towers on block 3 in terms of separation, setbacks, amenity and urban form

Proposed Built Form Controls for Blocks 3 - 4 (tower elements)

- *The maximum horizontal dimension of any tower form fronting Globe Street and Hickson Road is not to exceed 20 metres.*
- *The maximum horizontal dimension of any tower form fronting Napoleon Street, Bull Street and Healy Street is not to exceed 60 metres.*
- *Tower elements are to be setback a minimum of 25 metres from the Hickson Road street wall or podium edge.*
- *Towers elements are to be separated from each other by a sufficient width so that they appear as separate structures, and may be connected by a differentiated link structure (which may contain services / circulation / staff amenity space but is not to contain net lettable office space).*
- *Any tower forms on Block 3 are to be separated from tower forms on Block 4 by a minimum of 20 metres*

Justification for proposed controls

- To ensure the built form of the tower elements on blocks 3 and 4 will have appropriate relationships within the blocks themselves and to the adjoining built form of blocks 2 and 5 and existing built form east of Hickson Road
- To reduce the apparent bulk and scale of the buildings fronting the adjoining streets by breaking up expanses of the building walls with modulation of form
- To allow for view sharing and view corridors in the east/west direction from the city to the harbour
- To achieve the development of living and working environments with good internal amenity and minimise the need for artificial heating, cooling and lighting
- To ensure that the location of any tower proposed achieves an acceptable relationship with other towers (existing or proposed) on the same site or on blocks 2 and 5 and east of Hickson Road in terms of separation, setbacks, amenity and urban form
- To ensure greater alignment with the Council's controls for the CBD
- To achieve usable and pleasant streets surrounding blocks 3 and 4 and the public domain at ground level by controlling the size of upper level floor plates of buildings
- To ensure consistency with the competition design winning principles

Proposed Built Form Controls for Blocks 3 - 4 (podium elements)

- *The podium or street wall to Hickson Road is to have a maximum height of RL 33.2 metres (Note: existing ground level = RL 2.0).*
- *The podium or street wall to Globe Street is to have a maximum height of RL 18.8 metres (Note: existing ground level = RL 2.0).*
- *Appropriate street walls heights to Napoleon Street, Bull Street and Healy Street need to mediate between podium heights fronting Hickson Road and Globe Street.*
- *The street wall or podium is to have a minimum setback of 5 metres from the Globe Street kerb to ensure an adequate footpath dimension for circulation and active uses.*

Justification for proposed controls

- To ensure the built form of the podium elements will enhance Hickson Road as a boulevard and activate the Globe Street frontage
- To achieve appropriate street frontage heights, bulk, massing and modulation of buildings.
- To achieve usable and pleasant streets surrounding blocks 3 and 4 and the public domain at ground level by controlling the size of podium heights and width of footpaths

Proposed Built Form Controls for Block 5 (overall)

- *The podium or street wall to Hickson Road is to have a maximum height of RL 29.6 metres (Note: existing ground level = RL 2.0).*
- *The podium or street wall to Globe is to have a maximum height of RL 18.8 metres (Note: existing ground level = RL 2.0).*
- *Appropriate street wall heights to Agar Street and Healy Street need to mediate between podium heights fronting Hickson Road and Globe Street.*
- *Above podium elements are to have a minimum setback of 25 metres from the Hickson Road street wall or podium edge.*
- *Above podium elements are to have an appropriate setback from the Globe Street, Agar Street and Healy Street street wall or podium edge to ensure an appropriate scale to these streets.*
- *The street wall or podium is to have a minimum setback of 5 metres from the Globe Street kerb to ensure an adequate footpath dimension for circulation and active uses.*
- *Any above podium forms are to be separated from tower forms on Block 4 by a minimum of 20 metres.*

Justification for proposed controls

- To ensure the built form of the podium and above podium elements will enhance Hickson Road as a boulevard, activate Globe Street and will have appropriate relationships to the built form of block 4
- To achieve usable and pleasant streets surrounding block 5 and the public domain at ground level by controlling the size of podiums and above podium elements
- To achieve appropriate street frontage bulk, massing and modulation of buildings.
- To ensure that the location of any above podium element achieves an acceptable relationship with other towers on block 4 and 6 in terms of separation, setbacks, amenity and urban form
- To achieve the development of living and working environments with good internal amenity and minimise the need for artificial heating, cooling and lighting

Proposed Built Form Controls for Globe Street

- *The street wall or podium is to have a minimum setback of 5 metres from the Globe Street kerb to ensure an adequate footpath dimension for circulation and active uses.*
- *Globe Street is to be activated by ground floor retail uses.*

Justification for proposed control

- To ensure the activation of the Globe Street frontage.

Proposed Built Form Control – Blocks 2, 3, 4 and 5

- *Future project applications for buildings within Blocks 2, 3, 4 and 5 may accommodate a redistribution of the GFA (but not in excess of the total area) that is displaced by any encroachment of the enlarged southern cove identified in the modification B3 of the Concept plan approval or Built Form Controls identified by the Department in the current modification*

Justification of proposed control

- To allow for design flexibility to achieve design excellence whilst providing certainty in the amount of permissible GFA

General

- *Connections between tower elements and above podium elements are not permitted over public streets.*
- *Podium roofs are to be green and accessible.*
- *Variation of up to 10% to the numerical controls relating to towers (identified in modification B9(1) to (3)) or a signature building arising out of International best practice will be considered on merit subject to compliance with the design excellence provisions of the State Environmental Planning Policy (Major Projects) 2005.*

Justification of proposed controls

- To provide attractive pedestrian space and maintain view lines in an east / west direction
- To promote attractive and accessible roof space
- To allow flexibility in applying the built form controls

Summary

The overarching design and built form principle of the approved Concept Plan is maintained in the current modification. However, there is concern that the massing as depicted in the options provided in the PPR may detract from the:

- Visual appearance of the buildings on these blocks
- relationship of the towers to the podium
- views from the water
- internal amenity, and
- they also have the potential to detract from the diversity of occupancies small floor plates aim to deliver

The proposed additional built form controls recommended by the Department will ensure these issues are resolved and that urban design excellence is capable of being achieved during the detailed design phase.

Combined with design excellence provisions in the Major Projects SEPP, the revised statement of commitments details the process for a design excellence strategy and technical working group. This strategy will detail the future process to achieve urban design excellence in the built form and detailed design of the public domain, and will be submitted prior to the lodgement of any further applications relating to the building or public domain.

The Department is satisfied therefore that the additional development controls recommended, combined with the Concept Plan approval will deliver a built form of high urban design quality.

5.4 Increase in Gross Floor Area

The proposal seeks to increase the quantum of commercial GFA by up to 120,000m², resulting in a total GFA increase on the site above the approved Concept Plan by 30%, which is a key issue for consideration.

Assessment

The quantum of GFA approved on the site under the Concept Plan is a maximum of 388,300m², inclusive of commercial, residential, tourist, retail and community uses. The current modification proposes an increase of between 50,000m² and 120,000m² of additional commercial GFA (above what was approved in the Concept Plan bringing the site total to 508,300m² GFA) to be distributed between Blocks 2 to Blocks 5. On a site with an area of 22 hectares, this equates potentially 63% of commercial GFA under current modification (51% under Concept Approval), and a total FSR of 2.31:1.

The distribution of this increase is as follows:

Block	Additional amount	Total increase from:
2	26,250m ²	180,000m ² to 206,250m ²
3	32,250m ²	56,000m ² to 88,250m ²
4	46,500m ²	74,500m ² to 121,000m ²
5	15,000m ²	29,200m ² to 44,200m ²

The additional floor space is provided in the southern section of the site, within the approved height envelopes of the major Project SEPP. No amendments are proposed in blocks 1, or blocks 6-8.

The current modification maintains the same transition of built form from the adjoining CBD to the Public domain as provided in the approved Concept Plan, with tall buildings located in the south, tapering towards the north with shorter buildings.

Additional built form controls recommended by the Department (*see Attachment A*) will also ensure the location of the podium and tower elements fronting the western edge of Hickson Road will be consistent with the existing development on the eastern edge of Hickson Road.

The impact of the additional GFA on the traffic and public transport networks, views, overshadowing and wind have also been addressed in this report.

It was concluded that through the revised statement of commitments (and future preparation of the TMAP), and provision of improved pedestrian linkages from the site to Wynyard Station, the satisfactory operation of the road network is achievable.

The additional GFA also does not impact on the maximum heights as stipulated through the Major Projects SEPP, with the view impacts of the current modification being minor and highly dependent on detailed designs of the buildings which will be further assessed at the project application stage.

Given the additional GFA does not result in an increase to the heights of the buildings, or maximum building envelopes, additional overshadowing is also not anticipated, nor will the current modification exacerbate any wind impacts.

An improved and active pedestrian streetscape through the introduction of built form controls, improved relationship between the size and separations of the building forms and opportunity for block 2 to deliver a signature development is also considered a key feature of the current modification, as amended by the Department.

Although significant upgrading of services will be required for the development, the Utilities Services Infrastructure and Integrated Water Management Plan detailed in the statement of commitments will address any appropriate measures or upgrades required.

Summary

The Department is satisfied that additional GFA is acceptable above what was approved in the Concept Plan, as with the additional development controls recommended in this assessment, building blocks of high urban design quality will be achieved that will also maintain an appropriate relationship to the existing urban form adjoining the site.

5.5 Traffic and Public Transport

5.5.1 Traffic generations and impact on intersections

The impact of additional GFA and resultant number of employees both locally and more broadly was a key consideration of the original Concept Plan approval, and is a key issue for the current modification.

Transport Management Access Plan (Requirement of Concept Plan Approval)

The Minister's Terms of Approval for the Concept Plan require the preparation of a Transport Management and Access Plan (TMAP).

The TMAP is to investigate the following:

- The surrounding street network and land use components
- The method by which traffic estimation figures are generated
- Identifying the public transport service opportunities and constraints
- The likely traffic impacts on the local and regional intersections
- The identification of local and regional infrastructure improvements
- The timing of traffic and public transport infrastructure improvements
- The on site parking regime
- The integration and linkage of Barangaroo with rail and bus services at Wynyard
- The consideration of active waterfront and ferry use

A further requirement of the TMAP was for the RTA's PARAMICS micro-simulation model of the CBD to be applied to build on the initial findings of the Traffic Study prepared by Masson Wilson and Twiney (MWT) for the approved Concept Plan. This is required to test the impact on traffic operation of changes to pedestrian movements and volume configurations, different bus service strategies and variations in traffic generation estimates.

Revised Transport Report (Submitted with the Current modification)

The transport report prepared for the Concept Plan was revised by MWT in June 2008 to test the impacts of the additional GFA, and submitted as part of this current modification.

This estimates an additional 206 to 234 vehicles/hour occurring in peak periods, and a total of 708 to 750 vehicle/hour movements (including the approved Concept Plan) occurring in peak periods.

The proponent concluded that the modelling of the key intersections for the local traffic network would not result in significant changes in operation with the additional GFA (in comparison to the approved Concept Plan) apart from the Hickson/Napoleon Street intersection, which would require signals to provide a reasonable level of traffic operation.

PARAMICS modelling (Submitted with the PPR)

Further PARAMICS modelling of the wider CBD and the impacts of the GFA generated by the approved Concept Plan, modification application, and the impacts of amended bus routes was then undertaken in consultation with the RTA and submitted with the PPR.

- *Approved Concept Plan:*
 - PARAMICS modelling of the approved Concept Plan concluded that with the additional traffic generated by the approved Concept Plan, and with the 4% mode share to car for the office components (being the approved mode split for the Approved Concept Plan), the road network can cope with the additional demand however some queuing exists, and average speeds are lower
 - A 10% mode share to car for the office components was also tested by the proponent (indicative estimated figure), which indicated that the existing congestion in the road network is exacerbated to the point that the local road network would not be able to satisfactorily accommodate the additional traffic generated by the approved (and consequentially current modification to the) Concept Plan
- *Current modification:*
 - PARAMICS modelling was undertaken to examine the impacts of the additional 120,000m² GFA as proposed under the current modification, with the approved 4% mode share to car for the office components. It was concluded that the operation of the traffic network was reasonable, and while the network speeds were lower, the extra GFA would not overload the local road network
- *Amended Bus Routes:*
 - PARAMICS Modelling was also undertaken to test traffic management measures to reduce traffic use of Margaret Street between York Street and George Street in order to expedite bus movements along Margaret Street to/from Barangaroo. The results of this modelling indicated some benefits, but concluded there was a need to examine potential future measures for Margaret Street at a more micro level

Assessment

The modelling indicates that the achievement of the mode splits, as approved in the Concept Plan, is critical to ensuring the operation of the surrounding traffic network can satisfactorily accommodate the GFA as approved under the current modification.

It is therefore necessary for the approved mode split to be supported by a TMAP as required by the approved Concept Plan, particularly as the PARAMICS modelling of a 10% mode share indicated that congestion on the existing road network and intersections would not cope. This highlights the importance of the TMAP accounting for the additional 120,000m², and a modification is proposed to ensure that this occurs.

The achievement of the mode splits is also closely related to the approved car parking rates of the approved Concept Plan and the ability of the public transport system to accommodate the additional demand generated from the development.

In this respect, The TMAP will further explore the operation of the surrounding road network and future infrastructure and public transport improvements necessary for the additional floor space to ensure the mode splits and therefore satisfactory operation of the road network is achievable.

Summary

The Department is satisfied that the traffic issues have been addressed through the revised statement of commitments (and future preparation of the TMAP).

5.5.2 Public Transport

The capacity of the public transport system to cater for the additional demand generated by the current modification is a key issue for consideration.

The transport report submitted with the Concept Plan identified the measures required to meet the public transport demands of the Barangaroo development. These include pedestrian linkages, bus services, ferry facilities and cycleways.

The TMAP will further investigate these measures, whilst detailing any future public transport service opportunities and constraints for the site.

MWT have provided advice in the PPR that the TMAP will also provide the mechanism for negotiation with agencies to agree on the public transport commitments required to support the site. Also that a bus service strategy has been developed for the site by a specialist firm in close consultation with the Transport Accessibility Working Group (TAWG) and the Ministry of Transport (MOT) bus planning group.

This includes the investigation of the feasibility of future specialist transport services to the site, off-site improvements that will facilitate pedestrian and cycle access from existing points, options for the extension or amendment to the existing bus services and bus stops, and the potential provision of passenger wharf facilities.

The proponent has also stated that the approved mode split applied to the site is based on the proposed public transport initiatives of high volume and quality pedestrian connections, and the restrictive parking policy to be applied to the site. The stringent parking controls approved in the Concept Plan are therefore an essential element to restricting car use for access to the site, making the train the main alternative due to its extensive coverage of the broader Sydney region.

Assessment

The provision of the pedestrian linkage from the site/Hickson Road to Wynyard Station (a consideration of the TMAP) is considered critical in ensuring the safe and efficient pedestrian movement between the site and the transport hub of Wynyard Station (and Barangaroo Station as proposed in the CBD metro). Although investigations of this link are being investigated as part of the TMAP, it is the Departments recommendation that details of the proposed improved pedestrian linkages between the Barangaroo site and Wynyard shall be provided with the first Project Application for Block 2 and shall be completed prior to occupation of Block 2.

The proposed CBD metro will also result in improved access to the site, will provide a catalyst for a pedestrian link between Wynyard and Barangaroo and help achieve the high mode splits to public transport.

Summary

The Department is satisfied that the public transport issues have been addressed through the revised statement of commitments (and future preparation of the TMAP) and amendments to the current modification as recommended by the Department.

5.6 Increase in Commercial Uses on the Site

The current modification seeks to expand on the provision of commercial space within Sydney without a commensurate increase in other uses, which is a key issue for consideration.

Assessment

The Barangaroo development provides a mix of uses across the site including residential, tourist, retail and community uses as well as a significant public domain. The majority of uses in the southern section however are proposed to be commercial.

The minimum and maximum amount of residential, retail and tourist GFA's as stipulated in the approved Concept Plan are not proposed to be changed as part of the current modification, and are considered appropriate limits irrespective of any increase in commercial GFA. The site will therefore maintain its mixed use function.

Specific modifications to the approved Concept Plan are also recommended by the Department to regulate the size and location of the podiums and towers by introducing maximum heights (for the podiums), maximum widths and depths, minimum building separations and minimum street setbacks.

These will ensure a diversity of occupancies, promote the design and development of sustainable buildings, provide better views corridors, good internal amenity, access to natural light and ventilation and ensure a more appropriate building scale for pedestrians can be achieved within any final building design.

Controls have also been recommended by the Department that ensure a 5 metre footpath is provided and the activation of the Globe is achieved through ground floor retail uses.

Summary

The increase in commercial uses alone without any increase in residential or retail uses is considered appropriate and combined with the controls recommended by the Department, an acceptable pedestrian amenity and activation of the street level will be achieved.

5.7 Social Impacts

The impact the additional GFA may have on the amenity of the area is a key issue for consideration.

Assessment

The minimum and maximum amount of residential, retail and tourist GFA's as stipulated in the approved Concept Plan are not proposed to be changed as part of the current modification.

The activation of the site after hours and on weekends with residents and pedestrians will therefore not be changed as a result of the increase in commercial GFA alone.

To achieve pleasant streets and public domain at ground level additional built form controls have been recommended by the Department to regulate the size and location of the podiums and towers by introducing maximum heights and depths, and minimum street setbacks. These controls will reinforce the strong definition of the streets and public spaces whilst ensuring an appropriate building scale for pedestrians will be achieved.

To ensure the activation of the Globe Street frontage (and provision of a wide footpath), a 5 metre setback for the podium has also been recommended by the Department, and Globe Street is to be activated by ground floor retail uses. This will encourage safe and efficient pedestrian movement, and allow for outdoor seating where appropriate.

Controls have also been recommended by the Department that will manage the size of the floorplates which will seek to achieve both viable and useable commercial floor space whilst also

providing living and working environments within the buildings with good internal amenity that minimise the need for artificial heating, cooling and lighting.

A community and social plan was also required by the original Concept Plan, which will include the provision of social, health, cultural and recreational facilities. This will encourage the active use of the public domain and public spaces to ensure that the vibrancy of the site as a result of the mix of uses is realised and is required to be submitted prior to the lodgement of any project application.

In relation to the provision of affordable housing, public housing is currently provided for in the locality, with a large percentage of the housing stock at Millers Point being owned by the Department of Housing.

A housing strategy was also required by the original Concept Plan which will identify the preferred mix of housing opportunities, incorporating intermediate housing tenure options as a proportion of the total housing and is also required to be submitted prior to the lodgement of any project application.

The current modification is for non-residential development, and will not alter the approval relative to the residential component, and so the housing strategy required by the original Concept Plan is considered appropriate.

Summary

The Department is satisfied that with the additional recommended built form controls, and the community and social plan required by the approved Concept Plan, the increase in commercial GFA as proposed in the current modification will deliver buildings, streetscapes and public domain areas that will have positive impacts on the surrounding social environment of the area.

5.8 Consistency with the Design Principles of the Approved Concept Plan

The concept approval established 8 indicative built form principles, with the terms of approval condition C2 stipulating that a comparison of the proposed development must occur against these built form controls. The specific forms depicted in these principles however are not approved as part of the Concept Plan, which allows the evolution of design excellence on the approved building blocks.

The current modification is proposing an amendment to one of the design principles, being the “*Low Scale Valley*” principle, however the remaining principles are to remain unchanged.

Assessment

An assessment of the Current modification in relation to these principles is shown below:

City’s New Western Façade

“To create an integrated new western frontage to the city centre, the slender ends of buildings (above podium level) are to be oriented to the waterfront to define an open silhouette”

The indicative tower elements (as shown in Options 2 and 3) are oriented with the building lengths in an east/west direction thereby ensuring the “*slender ends*” of the buildings are oriented towards the waterfront.

The options modelled however may potentially lead to bulky buildings, and the ends facing Hickson Road and Globe Street may therefore not read as “*slender ends*” as envisaged in the principle.

Built form controls to regulate the widths of the towers have therefore been recommended by the Department which will ensure the “*slender ends*” of the towers will be achieved.

Building separation controls have also been recommended to ensure the location of the towers will achieve acceptable relationships with adjoining towers on the same block or neighbouring blocks.

Hickson Road as a Boulevard

“To promote the scale of Hickson Road as a grand boulevard, buildings are to provide a consistent street wall and form to Hickson Road and “Globe Street” and use a palette of consistent and natural materials that are complementary to the sandstone nature of the headland”

The indicative development options show an increase in GFA that contain a podium fronting Hickson Road providing a consistent street wall and podium or tower elements fronting Globe Street that also provide a consistent street wall.

Additional built form controls have also been recommended by the Department that ensure the podiums maintain a consistent height fronting Hickson Road, and that the location of the towers fronting Hickson Road are setback to maintain an appropriate building scale for pedestrians at street level.

These controls also ensure the location of the podium and tower elements fronting the western edge of Hickson Road will be consistent with the existing development on the eastern edge of Hickson Road.

These additional recommended controls will therefore maintain Hickson Road as a boulevard, and so the current modification is consistent with this principle.

The current modification does not propose changes to the requirement for natural building materials

Buildings to define Streets

“To define the public space of the street, all building facades are to be set to the street alignment with respect to the differing characters, scales and activation of the streets”

The indicative development options show that the increase in GFA still allows for building facades to be set to the street alignment, thereby defining the public space of the streets.

Specific modifications to the approved Concept Plan are also recommended by the Department to ensure a consistent street wall is achieved, such as building separations, podium height limits and tower setbacks.

The current modification is consistent with this principle.

Low Scale Valley

“To promote built form of a human scale along pedestrian lanes, to encourage diversity in open space uses and to allow midday sun penetration within more dense blocks, mid-block buildings are to be limited to 4-5 storeys in height and are to provide accessible roof top open spaces. This enables the formation of an accessible roof valley”.

Due to the increase in floor plates and / or height of the towers fronting Hickson Road for blocks 3-5, the current modification is unable to achieve total consistency with this principle in providing buildings of 4-5 storeys with accessible roof top open spaces.

The current modification therefore proposes to amend this principle, and introduce a new principle “*north south pedestrian connection*”, which will allow for a pedestrian connection in a north / south

direction, however will remove the ability to achieve accessible roof top open spaces between blocks 3-5 at the 4-5 storey height limit.

The roof top open spaces provided for in the “*low scale valley principle*” at the 4-5 storey level however would be for use of the occupants of the buildings, not for general public use. A built form control recommended by the Department therefore stipulates that podium roofs are to be green and accessible, which would ensure the podium roof space is attractive when viewed from above, and accessible by the residents or workers contained in the buildings.

The Department is recommending that the north-south pedestrian connection principle be amended to ensure enhanced permeability through the blocks, also in an east-west direction, and which relate to pedestrian desire lines.

New built form controls recommended by the Department will also ensure that the tower is setback from the podium fronting both Hickson Road and Globe Street, which will maintain an appropriate building scale for pedestrians at street level.

Combined with the recommended setback, width and depth controls of the tower elements, building separation controls will reduce the apparent bulk and scale of the buildings by breaking up expanses of building wall and ensuring the separation of the towers.

The quality of open space delivered at ground level will also be enhanced through the building separation controls recommended between the blocks, and provision of a 5 metre footpath fronting Globe Street.

Given the availability of open space delivered through the entire Barangaroo site, and improved quality of open space delivered at street level through the recommended controls, the amendment of this principle is considered acceptable. The Department also however encourages the greater accessibility of pedestrians in an east / west direction, which could be provided by pedestrian connections between the building forms located within the blocks.

Tapering Built Form

“To continue a built form dialogue with the adjoining city, building heights across the site are to generally taper towards the north, with the highest forms concentrated in the block in front of Napoleon Street”

Tapering of the buildings from the CBD to the public domain is maintained in the current modification with the tallest buildings located in the south, tapering buildings towards the north of the site.

There is no change proposed to the maximum heights for each block, and the current modification is consistent with this principle.

Open Space within Blocks

“To create hollow blocks permeated with open spaces, courtyards, walkways and gardens, the central band of the accessible roof valley interrelate with the ground plane and intermediate levels”

The ability for above podium open space and an accessible roof valley at the 4/5 storey level for blocks 3-5 will potentially be removed as a result of the increase in GFA (subject to final design). A north / south pedestrian connection however has been shown in the options to allow pedestrian movements in a north / south direction, and the approved street network has been maintained to allow pedestrian movement in an east / west direction. The accessibility of the blocks will therefore be maintained, with blocks 2, 6, 7 & 8 providing adequate space for ground floor courtyards and open spaces if required.

Given the availability of open space within the site with a significant area of public domain, and extensive pedestrian promenade that will be achieved, the inconsistency of this principle is considered acceptable.

View Sharing

“To promote the equitable access to views towards the harbour, the built form is to be arranged to define the street corridors and to allow view corridors from the existing private buildings to the east”

The current modification does not seek to alter the street pattern of the approved Concept Plan, thereby ensuring the main view corridors into / out of the site are maintained.

Building separation and building bulk controls have also been recommended by the Department that will reduce the horizontal dimensions of the tower elements as depicted in the options modelled by the proponent, and separation of the towers.

Controlling the widths of the towers and building separations will ensure reasonable view sharing in the main east / west view corridor (into and out-of the site), and therefore consistency with this principle.

This principle will also still be required to be adhered to by future project applications, and the additional GFA will not alter the ability to comply with it.

Orientation of Buildings

“To provide optimum orientation and transparency across the site and to create a silhouette of slender towers to Globe Street and the waterfront – the long facades of tower forms are to be oriented to the north. However, on Hickson Road, to define the linear nature of this road, the long facades are to be generally oriented to the east”.

The indicative tower elements (as shown in Option 2 and 3) are oriented with the longest facades of the towers facing north, with the slender ends of the buildings facing Globe Street, the waterfront and Hickson Road.

Podiums fronting Hickson Road have also been maintained in the current modification, with the long facades oriented to the east to maintain the linear nature of the street.

Setback controls have also been recommended by the Department, to ensure the tower elements maintain a minimum of 25 metres from the Hickson Road street wall or podium edge.

The current modification is consistent with this principle.

5.9 Overshadowing

Located to the east and south-east of the site are some residential and commercial buildings fronting Hickson Road. The impact the current modification may have on the overshadowing of these properties (particularly of the adjoining Highgate, Stamford Marque, Stamford on Kent and the Bond buildings) is a key issue for consideration.

Assessment

The proponent has provided a shadow analysis in the EA.

The majority of overshadowing to properties to the south and south-east of the site as a result of the approved Concept Plan are due to the allowable maximum building forms in block 2, and the 2 tower

elements located in the south-western and south-eastern portion of the block. These adjacent properties are also predominantly commercial.

Summary

Given that the current modification does not increase built form envelopes or heights, additional overshadowing is not anticipated and details of shadow impacts will be finalised in future project applications.

5.10 Wind Impacts

The resulting built form of the development may have an impact on the wind environment of the site and create a wind tunnel along Hickson Road, which is a key issue for consideration.

Assessment

The current modification will result in additional building mass in blocks 2 – 5.

The proponent submitted a revised preliminary assessment of the existing and future wind conditions with the EA which highlighted potential areas of concern and made some suggestions to assist in the future design process.

The proponent concluded in the PPR that the current modification is not considered to result in a deterioration of the existing conditions of the Concept Approval.

As detailed in the Statement of Commitments, wind tunnel modelling and verification of proposed treatments will be carried out at the detailed building design and application stage, in accordance with the recognised industry guidelines.

Summary

It is concluded that consequential mitigation measures to reduce any wind impacts can be detailed at the future project application stage.

5.11 Views and View Corridors

Given the sites prominent location, a number of important views exist from the surrounding (external) areas including Darling Harbour, Balmain east and McMahon's Point.

There also exists some residential and commercial buildings to the east and south east of the site fronting Hickson Road that currently enjoy water views over the site.

The impact the current modification may have on views is a key issue for consideration (In particular potential impacts to the Highgate, Stamford Marque, Stamford on Kent, Bond Apartments and the Historic Millers Point Precinct).

In the PPR the Proponent has provided additional view analysis for the properties to the east comparing the current modification to the approved Concept Plan with respect to 3 aspects of the visual environment.

The 3 aspects of the visual environment that have been assessed are as follows:

- The Proximity of Commercial Buildings to Hickson Road
- The Sky Exposure Plane – Being the edge of the built form against the sky
- Views through to the Water

The results of this analysis are discussed below:

Highgate

Existing views from the western facing units exist ranging from Darling Harbour to the northern edge of the CBD peninsula.

The analysis shows that the current modification will not result in any significant view loss looking north-west, west or south-west in comparison to the approved Concept Plan.

Stamford Marque

Existing views from the western facing units exist ranging from Darling Harbour to the northern edge of the CBD peninsula.

The analysis shows that the current modification will not result in any significant view loss looking north-west or south-west in comparison to the approved Concept Plan, however partial view loss exists looking directly west.

Stamford on Kent

Existing views from the western facing units exist ranging from Darling Harbour to the northern edge of the CBD peninsula.

The analysis shows that the current modification will result in partial view loss looking north-west, west and south-west in comparison to the approved Concept Plan.

The Bond

Existing water views from the western facing units exist.

The analysis shows that the current modification will not result in any significant view loss looking north-west, west or south-west in comparison to the approved Concept Plan.

Assessment

The NSW Land and Environment Court case *Tenacity Consulting v Warringah Council* established Planning Principles for the consideration and assessment of view impacts, view loss and view sharing with view sharing defined as follows:

'The notion of view sharing is invoked when a property enjoys existing views and a proposed development would share that view by taking some of it away for its own enjoyment'.

In considering whether or not view sharing is reasonable, the following criteria were adopted:

- What views are affected (i.e. whether or not they are iconic views, water views, obscured etc)
- From what part of the property are the views obtained
- The extent of the impact, and
- The reasonableness of the proposal which is causing the impact

In this regard, an assessment of the impact of the proposal upon views from the Highgate, Stamford Marque, Stamford on Kent and the Bond Apartments in accordance with these principles is as follows:

Views which are affected

In this case the views that are affected are largely water views.

From what part of the property are the views obtained

The views from the buildings to the east of the site are obtained from the western facing windows, and balconies of the Highgate, Stamford Marque, and Stamford on Kent buildings.

The extent of the impact

The current modification may result in minor view loss in comparison with the approved Concept Plan, the final details of which will be determined at project application stage.

The reasonableness of the proposal which is causing the impact (i.e. whether the development complies with existing planning controls and/or whether a better design could alleviate view impacts)

The current modification is consistent with the *Major Projects SEPP*, apart from the Maximum GFA control which is to be amended as part of the current modification.

Specific modifications to the approved Concept Plan are also recommended by the Department to regulate the size and location of the podiums and towers by introducing maximum heights (for the podiums), maximum widths and depths, minimum building separations and minimum street setbacks.

These additional controls will ensure a better design, and reasonable view sharing will be achieved.

Summary

The proponents view analysis concluded that the view impacts of the current modification are minor and are highly dependent on the detailed design of the buildings on the site. The current modification can therefore be accommodated without resulting in significant view impacts, however further assessment of the specific designs will need to be undertaken at the project application stage.

Specific modifications to the approved Concept Plan are also recommended by the Department to regulate the size and location of the podiums and towers by introducing maximum heights (for the podiums), maximum widths and depths, minimum building separations and minimum street setbacks.

The building separation and building bulk controls recommended will reduce the horizontal dimensions of the tower elements as depicted in the options modelled by the proponent.

Controlling the widths of the towers, together with the approved street pattern remaining unchanged, will ensure the main view corridors and therefore view sharing in the main east / west view corridor (into and out-of the site) will remain largely unchanged.

The current modification also does not seek to amend the existing design principle (view sharing), and there will be an opportunity for further consideration when final building forms and locations of buildings are known.

In relation to views into / out of the Millers Point precinct, the additional GFA sought is in the southern section of the site, so some views south from the precinct may be affected by the current modification. The Statement of Commitments however details key aspects of view retention to Observatory Hill Park and Millers Point, which will ensure any potential impacts on the Millers point Conservation Area are mitigated.

5.12 Heritage

The impact the current modification may have on the heritage items nearby is a key issue for consideration.

Summary

The site contains one heritage item as listed in Schedule 3 of the Major Projects SEPP; being the Dalgety Bond Store. Given this is located in the northern section of the site, and the current modification is to amend GFA in the southern section of the site, the proposal will not alter the impacts on this building from the approved Concept Plan.

Other items of historic significance are located to the north-east and east of the site (Millers Point precinct, Former MSB stores, Grafton Bond Store, Moreton's Hotel) and impacts on these by the current modification will be minimal.

5.13 Demand on Utilities, Services and Infrastructure

The demands the additional GFA will place on the services and infrastructure surrounding the development is a key issue for consideration.

Summary

The current availability of services to the site and the need for upgrading or extension to accommodate the future development was considered in detail in the approved Concept Plan.

This concluded that significant upgrading of services will be required for the development, which will be undertaken prior to any development occurring on the site, and will be subject to a Utilities Services Infrastructure Plan and Integrated Water Management Plan to be submitted prior to the lodgement of any development or project application.

The proponent will also be having ongoing dialogue with Sydney Water, who will be instructing on any water and wastewater requirements.

The revised set of commitments for the current modification does not alter these requirements.

6 CONSULTATION AND EXHIBITION

Given the nature of the proposed amendment, the current modification was referred to public agencies and placed on public exhibition from 16 July to 15 August 2008.

The request for the current modification was placed on the Department's website in accordance with the requirements of the *Environmental Planning and Assessment Act, 1979* and *Environment Planning and Assessment Regulation, 2000*.

A total of 51 public submissions were received (including community groups) and 9 submissions from public agencies.

6.1 Public authority submissions

The following is a summary of submission received from the public authorities.

6.1.1 Sydney Regional Development Advisory Committee (SRDAC)

The current modification was considered by the Sydney Regional Development Advisory Committee (SRDAC) who have not raised an objection to the current modification however raised the following matters:

- Transport initiatives need to be in place at early stage otherwise the model split targets would be difficult to achieve
- Concerns over ability of the rail network and Wynyard Station to accommodate additional

commuters

- The existing bus stops in Wynyard and York St currently experience significant delays
- The TMAP should be reviewed at the completion of each stage of the development
- A demolition and construction traffic management plan detailing construction vehicle routes, number of trucks, hours of operation, access arrangements and traffic control should be submitted to Council and the RTA prior to the issue of the construction certificate
- The design and construction of all works associated with the provision of car parking areas, access roads and driveways, public roads, bus lanes, cycle ways, pedestrian pathways are to comply with relevant codes and standards

Comment

As previously discussed, a TMAP is required to be prepared that includes the investigation of the feasibility of future specialist transport services to the site, off-site improvements that will facilitate pedestrian and cycle access, options for the extension or amendment to existing bus services and bus stops, and the provision of passenger wharf facilities. MWT have also stated that a bus service strategy has been developed for the site by a specialist firm in close consultation with TAWG and the MOT bus planning group. The provision of improved pedestrian linkages between Barangaroo and Wynyard will help achieve the modal split targets as approved in the Concept Plan.

The SRDAC also state that a demolition and construction traffic management plan detailing construction vehicle routes, number of trucks, hours of operation, access arrangements and traffic control should be submitted to Council and the RTA prior to the issue of the construction certificate. Also the design and construction of all works associated with the provision of car parking areas, access roads and driveways, public roads, bus lanes, cycle ways, pedestrian pathways are to comply with relevant codes and standards.

The proposed CBD metro line will result in improved access to the site by public transport and will support the high public transport mode splits approved in the Concept Plan.

These will be issues that are addressed and resolved when the detailed project applications are addressed.

6.1.2 Sydney Ports

Sydney Ports have not raised any issues in relation to the current modification, however note that they need a right of carriageway over SHFA land to access the Harbour control tower, located in the northern section of the site, at the lower level and from Merriman Street.

They also state that the inclusion of a Passenger terminal on the Barangaroo Site is not to be impacted by any potential increase in GFA associated with the current modification.

Comment

The increase in GFA is proposed to be in blocks 2-5, located east of Globe Street. This will not impact on any future provision of a passenger terminal on the site which is located west of Globe Street.

6.1.3 City of Sydney

The City of Sydney raised a number of concerns in relation to the current modification, in summary:

- insufficient urban design analysis and option modelling to determine how an increase in floor space may be distributed across the site without detracting from the design principles of the winning scheme
- the built form outcomes of the current modification with increased and maximised floor plates

resulting in reduced articulation and 'slab like' forms

- No tapering of the buildings exists and the City is undertaking a built form review of the western section of the CBD and Barangaroo should be integrated into this
- A capacity study undertaken by the City indicates the estimated commercial capacity of the CBD office space has the potential to address between 15 and 20 years of demand
- The current modification requires a greater intensity of residential development, and affordable housing should be considered
- The road network is already at capacity; public transport is at capacity; Hickson Road needs to be upgraded to service the mixed use area; The City should form part of the TMAP
- No social impact statement has been prepared; there will be an increased demand for social infrastructure; the dominance of the site is for mixed uses, however an increase in commercial GFA only is proposed; there is also a need for active and passive recreational issues on the site

Comment

Additional information was received from the proponent by the Department during the assessment process, such as 3D modelling, floor plans and sections of the options and economic analysis.

All of these issues however have been addressed in the above assessment where it was concluded that an increase in GFA on the site is acceptable subject to the imposition of specific built form controls that will mitigate any adverse affects.

Specific modifications to the approved Concept Plan have therefore been recommended by the Department to regulate the size and location of the podiums and towers by introducing maximum heights (for the podiums), maximum widths and depths, minimum building separations and minimum street setbacks.

The building separation and building bulk controls recommended will reduce the horizontal dimensions of the tower elements as depicted in the options modelled by the proponent and will ensure that the final dimensions and proportions of tower elements are aligned with the Council's controls.

The potential floor plates that could therefore be delivered (with the recommended modifications to the horizontal dimensions of the towers and variation control of up to 10% to these controls), are comparable with the maximum 1,400m² commercial floorplates stipulated in the Central Sydney DCP 1996.

Tapering of the buildings from the CBD to the public domain will maintained in the current modification with the tallest buildings located in the south, tapering buildings towards the north of the site, and no change to the approved maximum heights proposed.

The modifications recommended will also regulate the size of the floor plates whilst still allowing connected towers to provide larger floor plates, while allowing built forms to be articulated and also ensuring a diversity of occupancies and a more appropriate building scale for pedestrians can be achieved within any final building design.

The TMAP will also further explore the operation of the surrounding road network and future infrastructure and public transport improvements necessary for the additional floor space to ensure the mode splits and therefore satisfactory operation of the road network is achievable. The proposed CBD metro will result in improved access to the site by public transport and will support the high public transport mode splits approved.

The minimum and maximum amount of residential, retail and tourist GFA's as stipulated in the approved Concept Plan are not proposed to be changed as part of the current modification. The

activation of the site after hours and on weekends with residents and pedestrians will therefore not be changed as a result of the increase in commercial GFA alone.

To ensure the activation of the Globe Street frontage (and provision of a wide footpath), a 5 metre setback for the podium, and for Globe Street to be activated by ground floor uses has also been recommended by the Department. This will encourage safe and efficient pedestrian movement, and allow for outdoor seating where appropriate.

A variety of uses and mix of commercial space is important for a Global city and the linkage between retail, residential, tourists and community uses will ensure the area will not become a 'dead zone' after hours or on weekends.

Controls have also been recommended by the Department (widths and depths of podiums and towers) to manage the size of the floorplates which will seek to achieve both viable and useable commercial floor space whilst also providing living and working environments within the buildings with good internal amenity that minimise the need for artificial heating, cooling and lighting.

6.1.4 Sydney Water

Sydney Water have not raised objections to the current modification, however indicated that the proposed development presents significant issues for existing water and wastewater infrastructure, however they are currently developing a service strategy for the water, wastewater and recycled water infrastructure for the Sydney CBD.

Sydney Water has briefed the proponent on possible servicing strategies for the site, and will have ongoing dialogue with the proponent regarding water and wastewater requirements.

Sydney water will further assess the impact of the proposed development when the section 73 certificate is lodged, which will enable them to specify any works required as a result of the development and to assess whether amplification and/or changes are applicable.

Comment

Resolution of these issues will occur at project application stage.

6.1.5 NSW Department of Housing

The Department of Housing have not raised objections to the current modification however raised concerns on the impact on views into/ out of the Millers Point Conservation area, that a repeat of increased floorspace on blocks 6-8 could have damaging consequences for the heritage significance of Millers Point and the provision of affordable housing.

The Department of Housing also want to be included in development of the Infrastructure Plan (to determine provision of social and physical infrastructure), detailed in the statement of commitments.

Comment

View impacts into / out of Millers Point have been previously considered in this report, where it was concluded that view impacts resulting from the current modification can be mitigated.

The current modification does not seek to increase floor space on blocks 6-8 and proposes no changes to the residential component of the site.

6.1.6 Heritage Council

The Heritage Council raised an issue regarding what impact the current modification may have on the heritage items nearby, and the Millers Point Conservation area.

Comment

Issues with respect to heritage have been previously addressed where it was concluded that the current modification will not negatively impact on nearby historical items or the conservation area.

6.1.7 Sydney Buses

Sydney Buses have not raised objections to the current modification however raised a concern regarding the traffic impacts on the wider CBD area, and have estimated the daily inbound journey to work by bus to the CBD as a result of the current modification (inclusive of the approved Concept Plan) to be 4100 commuter trips during the am peak, representing an increase of around 8% to the number of passengers entering the CBD by bus.

Comment

The traffic assessment prepared by MWT, and submitted in the PPR estimates that the current modification would result in a total increase of approximately 2,000 bus patrons in the am peak (with 1,400 identified in the Approved Concept Plan). This represents an increase of 600 bus patrons above the approved Concept Plan, being an approximate increase of 2 to 3% above the current demand.

Further, the proponent has advised that the comparison figure for a total increase in bus patronage as a result of the current modification (inclusive of approved Concept Plan) would be 6.5% for the am peak. The 8% derived by Sydney Buses is an increase in bus patronage for the entire day.

Sydney Buses also note that the structure of the bus network proposals should be developed in consultation with State Transit; that a new north/south bus route is envisaged to specifically serve Barangaroo, with the level of service progressively increasing as the site develops; and that the capacity of the Millers Point terminus has been reduced due to traffic changes in the rocks, with the result that services to Millers Point had to be reduced.

The TMAP will investigate options for amendment or extension to the bus services. MWT have also stated that a bus service strategy has been developed for the site by a specialist firm in close consultation with TAWG and the Ministry of Transport (MOT) bus planning group.

6.1.8 Sydney Ferries

Sydney Ferries did not raise any concerns with the current modification, however identified a parcel of land at the southern end of Barangaroo that they deem ideal for an integrated Public Transport Interchange (Ferry and Bus Hub).

Comment

There are future opportunities or possibilities for ferry services to the site.

6.1.9 Ministry of Transport (MOT)

The MOT has not raised objections to the current modification however noted the following:

- Barangaroo is to become part of an expanded transport hub at Wynyard
- The State Infrastructure Strategy 2008-2018 is investigating the future redevelopment of

Wynyard Station – taking into account long term passenger demands and pedestrian connectivity in the immediate surrounds of the station – commencing in the near future

- The MOT supports a high capacity grade separated pedestrian link between Barangaroo and Wynyard
- Noted that the North West metro is expected to be opened in 2017 – A station in the Barangaroo Wynyard precinct will benefit transport and access to Barangaroo
- The North West Metro will help achieve the mode share target for the journey to work by rail to Barangaroo
- The special commission of inquiry into Sydney ferries (Walker inquiry) – recommended a second ferry hub to be located at King St Wharf, but also flagged the possibility of a facility at Barangaroo – which could contribute to achieving the public transport targets for the precinct

Comment

Noted and the proposed CBD metro line will result in improved access to the site by public transport and will support the high public transport mode splits approved in the Concept Plan.

6.2 Public Submissions

Public Submissions have been broadly categorised as follows:

- Loss of Public Open Space
- The Built Form
- Traffic, Public Transport and Car Parking
- Heritage
- View Loss
- Overshadowing
- Social Impacts
- Increased demand on Utilities and Services
- No mix of uses
- Amenity Impacts
- Economic considerations
- Ecologically Sustainable Development
- Consultation Process

Comment

The majority of the above issues have all been addressed in the report where it was concluded that an increase in GFA on the site is acceptable subject to the imposition of specific built form controls that will mitigate any adverse affects.

Additional setback controls recommended by the Department will ensure the location of the podium and tower elements fronting the western edge of Hickson Road will be consistent with the existing development on the eastern edge of Hickson Road.

The TMAP will also further explore the operation of the surrounding road network and future infrastructure and public transport improvements necessary for the additional floor space to ensure the mode splits and therefore satisfactory operation of the road network is achievable. The proposed metro line will result in improved access to the site by public transport and will support the high public transport mode splits approved.

The additional GFA also does not impact on the maximum heights as stipulated through the Major Projects SEPP, and the building separation and building bulk controls recommended will however

reduce the horizontal dimensions of the tower elements as depicted in the options modelled by the proponent. The view impacts of the current modification will therefore be minor and highly dependent on detailed designs of the buildings which will be further assessed at the project application stage.

Given the additional GFA does not result in an increase to the heights of the buildings, or building envelopes, additional overshadowing is also not anticipated, nor will the current modification exacerbate any wind impacts.

The modifications recommended will also regulate the size of the floor plates and therefore ensure a diversity of occupancies and a more appropriate building scale for pedestrians can be achieved within any final building design.

The minimum and maximum amount of residential, retail and tourist GFA's as stipulated in the approved Concept Plan are not proposed to be changed as part of the current modification. The activation of the site after hours and on weekends with residents and pedestrians will therefore not be changed as a result of the increase in commercial GFA alone.

Although significant upgrading of services will be required for the development, the Utilities Services Infrastructure and Integrated Water Management Plan detailed in the statement of commitments will explore any appropriate measures or upgrades required.

Controls have also been recommended by the Department (widths and depths of podiums and towers) to manage the size of the floorplates which will seek to achieve both viable and useable commercial floor space whilst also providing living and working environments within the buildings with good internal amenity that minimise the need for artificial heating, cooling and lighting.

In relation to the public consultation and assessment process, all of the necessary statutory processes in accordance with the Act and Major Projects SEPP have been complied with and the application was publicly exhibited for 30 days and notified to adjoining landowners.

The application documentation was available on the Department's web-site and information centre as well as Council offices.

7 CONCLUSION

The Department has assessed the current modification to the Barangaroo Approved Concept Plan and considered the submissions in response to the proposal. The key issues raised in the submissions related to the built form, traffic, public transport and social impacts, heritage, amenity, ecologically sustainable development, view loss and overshadowing, demand on utilities and services, mix of uses and economic considerations.

A key feature of the current modification is the provision of additional commercial floor area, considered essential to accommodating the employment targets of 58,000 more jobs by 2031 for the Sydney City Subregion, and assists in developing Sydney as a Global city.

The provision of an improved and active pedestrian streetscape, improved relationship between the size and separations of the building forms and opportunity for block 2 to deliver a signature development is also considered a key feature of the current modification, as amended by the Department.

These benefits will be enhanced through the modifications recommended by the Department that regulate the size and location of the podiums and towers by introducing maximum heights (for the podiums), maximum widths and depths, minimum building separations, minimum street setbacks and the provision for Globe Street to be activated by ground floor retail uses.

The proposal meets the objectives of the Major Projects SEPP, in that it is consistent with the maximum height limits and objectives of the B4 Mixed Use Zone.

The Department has determined that the current modification to increase commercial GFA is acceptable, subject to the imposition of specific built form controls that mitigate any adverse effects resulting from the location or size of the podiums and towers.

8 RECOMMENDATION

It is recommended that the Minister for Planning:

- A). **Consider** all relevant matters prescribed under Section 75O(2) of the *Environmental Planning and Assessment Act, 1979*, including those relevant matters prescribed by Section 75N and 75I(2) as contained in the findings and recommendations of this report;
- B). **Approve** the application, subject to modifications, under section 75W Environmental Planning and Assessment Act, 1979 having considered all relevant matters in accordance with (A) above; and
- C). **Sign** the attached instrument of modification

Prepared by:

Endorsed by:

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Approved by:

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APPENDIX A – DETERMINATION OF THE BARANGAROO CONCEPT PLAN

APPENDIX B – DIRECTOR GENERALS ENVIRONMENTAL ASSESSMENT REPORT – BARANGAROO CONCEPT PLAN

APPENDIX C – ENVIRONMENTAL ASSESSMENT REPORT

Provided on disk.

APPENDIX D – DIRECTOR GENERALS ENVIRONMENTAL ASSESSMENT REQUIREMENTS

APPENDIX E – 3D IMAGING

Additional 3D modelling of the options provided in the PPR (updated in the addendum to the PPR.

Option 1: Consolidated Concept Plan - indicative buildings

Option 2: Current Modification - indicative buildings distributing 120,000m²

Option 3: Current Modification - indicative buildings distributing 120,000m²

Option 4: Current Modification - indicative buildings distributing 50,000m²

APPENDIX F – RESPONSE TO SUBMISSIONS

A response from the Proponent to matters raised in submissions is provided with the PPR.
Provided on disk.

APPENDIX G – PREFERRED PROJECT REPORT ADDENDUM

Additional information requested by the Department during the assessment process, attached as an addendum to the PPR. Provided on disk.