

COUNCIL ASSESSMENT REPORT

Panel Reference	2015SYW129
DA Number	DA-612/2015
LGA	Liverpool City Council
Proposed Development	Two residential flat buildings comprising one x seven storey building and one x six storey building with a total of 140 units, underground car parking, demolition of structures, and site works.
Street Address	28 Shepherd Street, Liverpool
Applicant/Owner	Applicant - Coronation (28 Shepherd St) Pty Ltd Owner - Calistan Pty Ltd
Date of DA lodgement	3 July 2015
Number of Submissions	Nil
Recommendation	Approval, subject to conditions
Regional Development Criteria (Schedule 4A of the EP&A Act)	The proposal has a capital investment value of over \$20 million, the Sydney South West Planning Panel is therefore the determining authority.
List of all relevant s79C(1)(a) matters	<ul style="list-style-type: none"> • <i>List all of the relevant environmental planning instruments: s79C(1)(a)(i)</i> <ul style="list-style-type: none"> • Contaminated Land Management Act 1997. • Water Management Act 2000. • State Environmental Planning Policy No.65 – Design Quality of Residential Apartment Development. • State Environmental Planning Policy No.55 – Remediation of Land. • State Environmental Planning Policy (State and Regional Development) 2011. • State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004. • State Environmental Planning Policy (Infrastructure) 2007. • Greater Metropolitan Regional Environmental Plan No. 2 – Georges River Catchment. • Liverpool Local Environmental Plan 2008. • <i>List any proposed instrument that is or has been the subject of public consultation under the Act and that has been notified to the consent authority: s79C(1)(a)(ii)</i> <ul style="list-style-type: none"> • A Gateway determination has been issued by the Department of Planning & Environment known as Draft Amendment 65 to the LLEP 2008. • <i>List any relevant development control plan: s79C(1)(a)(iii)</i> <ul style="list-style-type: none"> • Liverpool Development Control Plan 2008. <ul style="list-style-type: none"> - Part 1 – General Controls for all Development. - Part 4 – Development in the Liverpool City Centre. • <i>List any relevant planning agreement that has been entered into under section 93F, or any draft planning agreement that a developer has offered to enter into under section 93F: s79C(1)(a)(iv)</i> <ul style="list-style-type: none"> • No planning agreement relates to the site or proposed

	<p>development.</p> <ul style="list-style-type: none"> List any coastal zone management plan: s79C(1)(a)(v) <ul style="list-style-type: none"> The subject site is not within any coastal zone management plan. List any relevant regulations: s79C(1)(a)(iv) eg. Regs 92, 93, 94, 94A, 288 Consideration of the provisions of the Building Code of Australia.
List all documents submitted with this report for the Panel's consideration	<p>Amended Plans of the proposal Recommended conditions of consent Design Excellence Panel minutes and changes by applicant Heritage Impact Assessment Aboriginal Cultural Heritage Due Diligence Assessment Applicant response to DPI Water issues Revised Riparian Assessment DPI Water comments and GTA Sydney Water comments Revised Design Verification Statement Remedial Action Plan Revised Apartment Design Guide Compliance Table Revised DCP Compliance Table Revised BASIX report Amended Statement of Environmental Effects Social Impact Assessment Acoustic Report</p>
Report prepared by	Nabila Samadie
Report date	12 December 2016

Summary of s79C matters

Have all recommendations in relation to relevant s79C matters been summarised in the Executive Summary of the assessment report? **Yes**

Legislative clauses requiring consent authority satisfaction

Have relevant clauses in all applicable environmental planning instruments where the consent authority must be satisfied about a particular matter been listed, and relevant recommendations summarised, in the Executive Summary of the assessment report?
e.g. Clause 7 of SEPP 55 - Remediation of Land, Clause 4.6(4) of the relevant LEP **Yes**

Clause 4.6 Exceptions to development standards

If a written request for a contravention to a development standard (clause 4.6 of the LEP) has been received, has it been attached to the assessment report? **Not Applicable**

Special Infrastructure Contributions

Does the DA require Special Infrastructure Contributions conditions (S94EF)?
Note: Certain DAs in the Western Sydney Growth Areas Special Contributions Area may require specific Special Infrastructure Contributions (SIC) conditions **Not Applicable**

Conditions

Have draft conditions been provided to the applicant for comment? **Yes**
Note: in order to reduce delays in determinations, the Panel prefer that draft conditions, notwithstanding Council's recommendation, be provided to the applicant to enable any comments to be considered as part of the assessment report

1. EXECUTIVE SUMMARY

The application seeks consent for the construction of two residential flat buildings (as amended) comprising 1 x 7 storey building and 1 x six storey building with a total of 140 units, underground carparking, demolition of structures, and site works.

The proposal is identified as Nominated Integrated Development, requiring approval from the NSW Department of Primary Industries – Water (DPI Water) pursuant to the Water Management Act 2000.

The Sydney South West Planning Panel (SSWPP) is the determining authority for the subject application as the Capital Investment Value (CIV) of the development is over \$20 million, pursuant to Schedule 4A of the Environmental Planning and Assessment Act (EP&AA) 1979.

The subject site is known as Lot 22 in DP 859055, 28 Shepherd Street, Liverpool and is located on the western side of Shepherd Street.

Georges River is on the eastern side (rear) of the boundary, shrubs (weeds) are located within the riverfront land between the 28 Shepherd Street site and the river.

The subject site is zoned R4 High Density Residential pursuant to Liverpool Local Environmental Plan 2008 (LLEP 2008), within which the proposed development is permissible with consent.

The main issues identified are as follows:

- Site constraints from the Building Foreshore Line and Environmentally Significant Land
- Solar access in accordance with the Apartment Design Guide
- Non-compliance with Liverpool Development Control Plan 2008 (LDCP 2008) – street setback, apartment mix and site coverage

The development application was advertised for a period of 30 days between 29 July 2015 and 28 August 2015 in accordance with Liverpool Development Control Plan 2008 (LDCP 2008). No submissions were received to the proposed development.

The application has been assessed pursuant to the provisions section 79C of the EP&AA. The proposal provides an appropriate response to the site's context and satisfies the State Environmental Planning Policy No. 65 (SEPP 65) design principles and the requirements of the Residential Apartment Design (ADG). The scale and built form is consistent with the desired future character of the area that is envisaged under the LLEP 2008 and LDCP 2008. Based on the assessment of the application, it is recommended that the application be approved subject to conditions of consent.

2. SITE DESCRIPTION AND LOCALITY

2.1 The site

The subject site is identified as Lot 22 in DP 859055, being 28 Shepherd Street, Liverpool and is irregular in shape with a total site area of 5887m². An aerial photograph of the subject site is provided below.

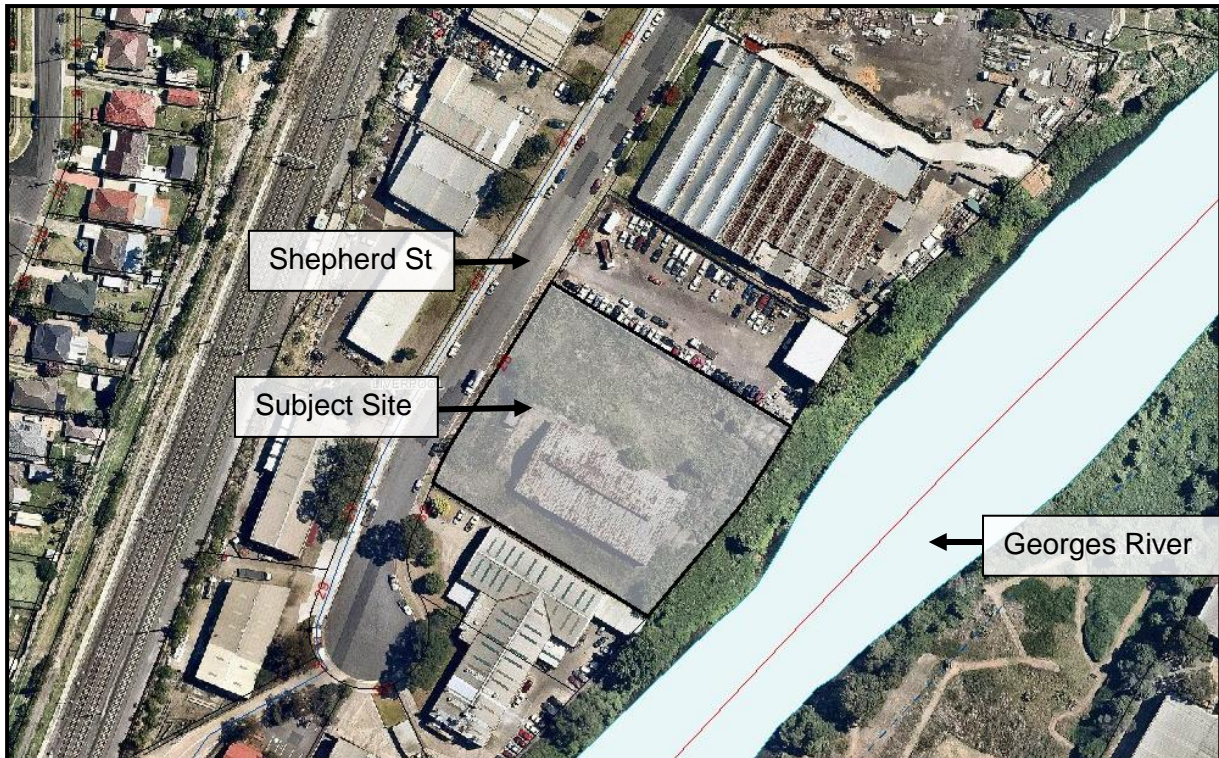


Figure 1: Aerial photograph of the Site



Figure 2: Aerial photograph of the Site

The subject site has a 72 metre frontage to Shepherd Street and backs onto the Georges River. The site currently contains a disused industrial warehouse building and contains some vegetation on site.

The site is located within the Liverpool City Centre, approximately 1km south of Liverpool Train Station. The site is located within an existing industrial area, which has been rezoned to High Density Residential and is undergoing urban transformation.

The site is in the immediate vicinity of a heritage listed item “McGrath Services Centre Building”, Item 104 (Woollen Mill) at 20 Shepherd Street, Liverpool.

Photographs of the existing site conditions are provided in Figures 3 to 5 below.



Figure 3: Front of the site with recent hording along Shepherd Street



Figure 4: Front of the site from Shepherd Street (source Google)



Figure 5: Side of the site from Shepherd Street (source Google)

2.2 The locality

The subject site is located on the east side of Shepherd Street. East of the site is the Georges River. Existing shrubs are located within the riverfront land between the 28 Shepherd Street site and the river.

To the north of the site is an industrial building, which is currently being used. To the west of the site, opposite Shepherd Street, are lower scale industrial sites between Shepherd Street and the railway line. The subject site is currently unused, with its most recent use being as industrial development.

Along the river foreshore line is predominantly overgrown vegetation. The riverfront is densely vegetated and a footpath connects Atkinson Street northward to Lighthorse Park.

The site is in close proximity to the former Woollen Mill building at 20 Shepherd Street, which is listed as a local heritage item under Part 1 of Schedule 5 of the Liverpool Local Environment Plan (LLEP) 2008.

2.3 Site affectations

The subject site has number of constraints, which are listed below:

Flooding

The proposed development is located on flood prone land. A Flood Impact Assessment has been submitted which includes an outline of the proposed flood mitigation measures proposed as part of the development.



Figure 6: Flood map – Source: Eview

Foreshore building line

The river front of the site is affected by the foreshore building line which is approximately setback 30m from the top of the regular river embankment. It is noted that the boardwalk no longer forms part of this proposal, with the proposal amended to only apply to the proposed development at 20 Shepherd Street, Liverpool. This matter is further discussed in this report.



Figure 7: Foreshore building line – Source: Eview

Acid Sulphate Soil

The subject site is located within a 'Class 5' Acid Sulphate Soil Zone. Accordingly, a Geotechnical Assessment has been submitted, which confirms no special building measures are required as the proposal will not be substantially affected by Acid Sulphate Soils.

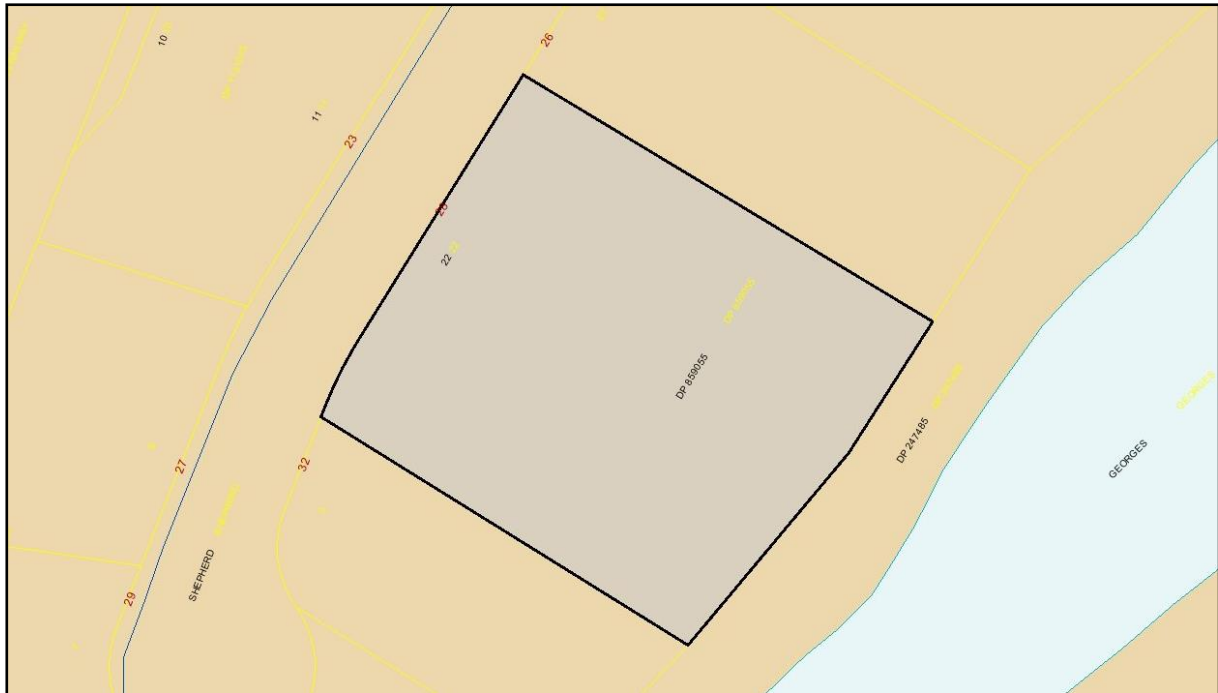


Figure 8: Acid Sulphate Soil map – Source: Eview

Environmentally significant land (ESL)

The subject site contains ESL along the Georges River frontage extending approximately 6 metres from the site boundary.



Figure 9: Environmentally Significant Land map – Source: Eview

3. BACKGROUND/HISTORY OF DA

3.1 Issues identified in initial assessment

Council sought further information and clarification regarding the following items on 9 October 2015:

- Building height variation;
- Identified contamination of site;
- Solar access;
- Non-compliance with Liverpool Local Environmental Plan 2008 (LLEP 2008) - Foreshore building line;
- Endeavour Energy matters; and
- Sydney Water matters.

Additional information has been submitted in response to the request for information, which is considered to have adequately addressed the matters raised.

3.2 Issues raised by DPI Water

DPI Water requested further information on 19 August 2015 and 1 December 2015, which required the applicant to address Cross-Section and River Section Diagrams and an additional report addressing the River Bank height and justification for encroachments into the Riparian Corridor. Refer to Attachment 8.

On 10 February 2016, the applicant submitted additional information addressing the above requirements from DPI Water. A referral was made to the DPI Water on 10 February 2016 to assess the submitted information.

On 6 April 2016, DPI Water raised further concerns about bank stability, the riparian buffer zone and lack of demonstration from the applicant regarding the 'offset' area encroachment within the outer 50% Vegetated Riparian Zone (VRZ). Refer to Attachment 8.

On 22 April 2016, response was provided by the applicant addressing DPI Water's concerns again raised in the letter dated 6 April 2016. This was forwarded to DPI Water on 26 April 2016 for comments.

On 28 April 2016, DPI Water via email summarised their previous concerns raised stated above. Refer to Attachment 8.

On 20 June 2016, an onsite meeting was arranged with DPI Water, Council and the applicant to discuss the issues raised by the DPI Water. The issues discussed at this meeting were;

- 'Top of the Bank'/ Highest Bank; and
- Justification for any encroachments into the Riparian Area, including offsets discussion.

The applicant agreed to provide further information to DPI Water to address these matter.

On 14 July 2016, the applicant sent through amended Riparian information prepared by Northrop responding to DPI Water's key issues raised at the onsite meeting. This information was sent to DPI Water on 18 July 2016 for assessment.

On 28 July 2016, another meeting was held between the applicant and DPI Water to discuss the information submitted by the applicant.

On 3 August 2016, DPI Water issued a letter advising that their General Terms of Approval (GTA) will not be granted, due to significant risks posed from the development to the waterfront and lack of information to assess the cumulative impact on the George's River. Refer to Attachment 8.

On 4 August 2016, Council advised the applicant of the comments from the DPI Water, particularly the issue of GTAs not being granted. The applicant was advised to address the issues raised in this letter by 31 August 2016.

On 5 August 2016, the applicant advised Council that they will be addressing the DPI Water's concerns and further information will be submitted.

On 18 October 2016, a meeting was arranged with Council and DPI Water to discuss the Council's broader vision of the George's River corridor. Two major issues that were raised by DPI Water and that needed to be addressed included:

1. **Riparian buffer zone** – the concern here is that Council is considering developments in close proximity to George's River without establishing a clear buffer zone, which in DPI's view needs to be a minimum of 40m. Further, there doesn't appear to be a clear reference point along the foreshore for measuring and determining the actual boundary of the buffer zone. The obvious risk relates to the developments that have already been approved and may already be encroaching the buffer zones (also relevant to 2 below).
2. **River bank stability** – there is visible evidence of active and ongoing erosion of the river banks, particularly adjoining Shepherd Street properties. The concern here is again the very close proximity of the approved developments, without any assessments or studies into the future stability of the areas being developed. As a minimum, geotechnical and geomorphological studies needed to be undertaken to inform the buffer zones, minimum offset of building footprints etc. – none of these appear to have been submitted for the developments.

With regards to the boardwalk, DPI Water now have a better understanding of the boardwalk in the context of Council's vision for improving river connections to the City Centre and are keen to participate in future discussions. This particular matter does not form part of the application.

On 25 October 2016, subsequent to the meeting on 18 October 2016, DPI Water reiterated their position as described in their letter dated 3 August 2016 and stated the following:

DPI Water (formerly the Office of Water) has reviewed documents for the above development application and advises that under the provisions of section 91A of the Environmental Planning & Assessment Act 1979 (EPA Act), DPI Water intends to refuse to issue a controlled activity approval under section 97(4) of the Water Management Act 2000 (WM Act).

*Our assessment indicates that adequate arrangements are not in force to ensure that no more than minimal harm will be done to any waterfront land relating to the Integrated Development - 28 Shepherd Street Liverpool - as a consequence of the carrying out of the proposed activity. Consequently, DPI Water **is refusing to issue** General Terms of Approval (GTA) for the proposal as submitted.*

The above refusal letter from DPI Water was sent to the applicant on 27 October 2016.

On 28 October 2016, the applicant provided draft amended plans addressing DPI Water's concerns regarding encroachment into the riparian zone.

On 3 November 2016, a meeting was held with Chief of Staff - Minister for Primary Industries, Lands and Waters, Group Director Water Regulations, Regional Manager DPI Water, the applicant and Council to discuss the refusal of GTAs. In this meeting the following matters were discussed:

- DPI Water raised concerns regarding the offsetting proposed on site. The applicant discussed the master plan and the location of the offsetting, which is proposed with rehabilitation of the current mill park, light house park and parts of the golf course near the Casula Power House.
- The applicant was required to submit a proposal to the DPI Water for consideration, which address the offsetting. It was advised by DPI Water that offsetting can be done elsewhere in the vicinity of the subject site or along the site.
- The applicant advised that they will submit amended information to address DPI Water's concern.

On 14 November 2016, additional information was submitted in response to the above meeting. Refer to Attachment 6. This information was referred to DPI Water for final comments.

On 5 December 2016, DPI Water issued their GTAs, refer to Attachment 8.

3.3 Related applications

a) Development Application 20 Shepherd Street, Liverpool

Use for exhibition homes DA-1011/2014

The use of the exhibition home was subsequently granted consent under DA-1011/2014, approved on 9 April 2015. A section 96 modification application to add a second display unit was also approved on 1 July 2015.

Unauthorised works which took place in relation to the exhibition home were subsequently granted consent under BC-22/2015, approved on 15 April 2015.

Residential Flat Building (RFB) DA-1010/2014

DA-1010/2014 at 20 Shepherd Street, Liverpool for the demolition of a portion of the existing heritage building 'former Challenge Woollen Mills'; removal of the existing car park; removal of 14 trees; remediation of the site; erection of two residential flat buildings ranging from 5 to 16 storeys and containing a total of 250 residential

apartments, two levels of basement parking containing 313 spaces; public domain works, landscaping and associated site works.

DA-1010/2014 was determined by the Sydney West Joint Regional Planning Panel (JRPP) on 8 October 2015, by way of approval. The approval was granted subject to a compliant FSR via a condition of consent.

b) Pre-DA meeting for 31 and 33 Shepherd Street, Liverpool

A Pre-DA meeting has been held for 31 and 33 Shepherd Street, Liverpool for the construction of two detached Residential Flat Buildings with basement parking.

c) Planning Proposal RZ-17/2015 - Draft Amendment No.65 to the LLEP 2008

The Shepherd Street Precinct which includes Nos.20-33 Shepherd St is subject to a Planning Proposal (Draft Amendment No.65 to the LLEP 2008) and seeks the following:

- Increase the building height from 24m to 77m; and
- Increase the floor space ratio (FSR) from 1.5:1 and 2.5:1 to between 3.3:1 and 3.7:1

The Gateway Determination to the Planning Proposal was provided from Department of Planning and Environment on the 9 September 2016.

d) Development Application at 20 Shepherd Street, Liverpool subject to Draft Amendment No.65 to the LLEP 2008

Alterations and additions to RFB DA-693/2016

DA-693/2016 proposes an additional nine storeys (comprising of 72 units) to Building A, approved under DA-1010/2014. This application is reliant on Draft Amendment No.65 to the LLEP 2008 and is currently under assessment by Council.

3.3 Design Excellence Panel Briefing

The subject application was considered by the Design Excellence Panel (DEP) on 20 August 2015. The main outcomes from considered by the DEP at its meeting are summarised below:

*The Design Excellence Panel makes the following comments in relation to the project:
The architectural design, composition, materials of the external elevations and communal roof terraces are well considered, however the development cannot be supported in its current form for the following reasons:*

- *The development exceeds the maximum height limit as required by the LLEP 2008*
- *Whilst it is acknowledged that there is no merit based assessment for height limit i.e. heritage incentives as per the adjoining site, the panel would consider that the additional height may be acceptable provided compliance with the ADG are met and a VPA may be entered into to incorporate a public through site link to the River.*
- *The Panel acknowledges the setback to the riparian corridor on this site , however the riverfront building alignment may be adjusted to improve separation between the built forms*
- *The lack of soft landscaping in the proposed through site link is undesirable, and a potential safety issue for pedestrians with vehicles exiting the basement carpark– It is recommended that the driveway is de-coupled from the through site link and*

accommodated under the building footprint. The loading dock would also need relocation. A well landscaped pedestrian through site link should be incorporated in the subject site.

- *The development does not meet the requirements of SEPP 65 and the Apartment Design Guide in a number of areas notably:*
 - *Solar access is not compliant i.e. 70% of units receiving two hours of sunlight*
 - *Inadequate deep soil, provision needs to be made for additional deep soil*
 - *Inboard habitable rooms – indicated as media rooms, have the potential to be turned into bedrooms. These rooms are not acceptable and should be deleted from the plans.*

Other considerations may include:

- *Reallocation of floor space between two buildings and adjustment of height to meet council standards or assess the merits of a VPA to justify height increase.*
- *The basement carpark occupies almost the entire site, Design of basement carpark over 2+ levels to increase deep soil onsite is recommended*
- *External façade treatment and architectural features are acceptable.*
- *An amended design is required to focus on addressing non-compliances with the LLEP and SEPP 65/ADG.*

In the event that amended plans are submitted to Council to address the concerns of the Design Excellence Advisory Panel the amended plans should be referred back to the Panel for comment.

The applicant was advised of the above DEP comments and draft amended plans were submitted for DEP review. The amended plans were considered by the DEP on 22 October 2015 (see attached DEP minutes). The main outcomes from consideration by the DEP are summarised below:

- *The panel stated that :*
 - *the development does not comply with the ADG and the solar access is only 62%*
 - *the separation distance does not comply with ADG on levels 5 and 6*
 - *the separation distance does comply with ADG on levels up to Level 4*
 - *the depth of the upper levels on the building on Shepherd Street could be reduced and levels 5-7 narrowed to achieve better solar access and meet the ADG requirements of separation*
 - *some deep soil was required in the central courtyard so that trees can be planted.*
 - *the landscaping against the walkway should be upgraded*
- *The architect stated that the building had to be moved back to comply with the requirement not to extend into the riparian zone*
- *The panel queried the access on the southern side and whether it really provided genuine public access. The architect said that the car access on the driveway had been relocated and was 20 metres from the front of the site. The loading dock and waste collection was further into the site.*
- *The panel asked :*
 - *whether the loading and car park entrance could be co-located*
- *The panel still has concerns regarding the parking blocking the entrance to the walkway and stated that the car parking basement including the loading dock and waste collection should be accessed directly under the building from Shepherd Street. This would allow a landscaped through site link.*

Following receipt of this advice, the application was referred to Council's City Architect, along with amended plans and information who provided further advice and recommendations to address the concerns raised by the DEP and satisfy SEPP 65 principles.

3.4 JRPP Briefing

A briefing meeting was held on 8 October 2015. The main outcomes of the briefing meeting with the JRPP are summarised below:

- Spatial relationship between buildings
- Height non-compliance
- Connection to the river - circulation space, passive landscape character

Amended Documentation and Design

In response to the concerns and additional information requested by Council, the applicant amended the development application on 18 November 2015 as follows:

- Removal of two storeys from Building C1 to comply with the maximum permitted building height control in the LLEP 2008;
- Modification of the internal building separation so that the proposal meets the required building separation under SEPP 65 and the ADG;
- Removal of all structures from within the Foreshore Building Line. This also results in a substantial improvement of deep soil to 17% of the site area;
- Modification to the basement entry towards Shepherd Street in order to reduce traffic towards the rear of the site to reduce potential for pedestrian and vehicular conflict;
- Improved solar access for the development to 62% of units; and
- Opening up of the media rooms to prevent enclosure and inclusion of windows to provide natural ventilation and daylight.

As a result of ongoing discussion with DPI Water, the applicant amended the development application on 22 November 2016 as follows:

- The river-fronting façade of Building C1 has been stepped back towards Shepherd Street, to ensure no elements are within the Inner Vegetated Riparian Zone. This set back is gradually reduced in the upper levels, resulting in a cantilevered building element.
- A resulting reduction in apartment numbers to a total of 140, with alterations and reconfiguration of the apartments in Building C1 fronting the Georges River.
- A reduction in total gross floor area to 11,968m², representative of a floor space ratio (FSR) of 2.03:1.
- A revised apartment mix of:
 - 38% x 1 bedroom
 - 56% x 2 bedroom
 - 5% x 3 bedroom
 - 1% studio
- Basements 1 and 2 have been set back 20m from the highest bank measurement, whilst Basement 3 has been set back 40m from the highest bank measurement. This results in a revised car parking provision of 161 spaces.

The figures below identify the main physical amendments to the proposal.

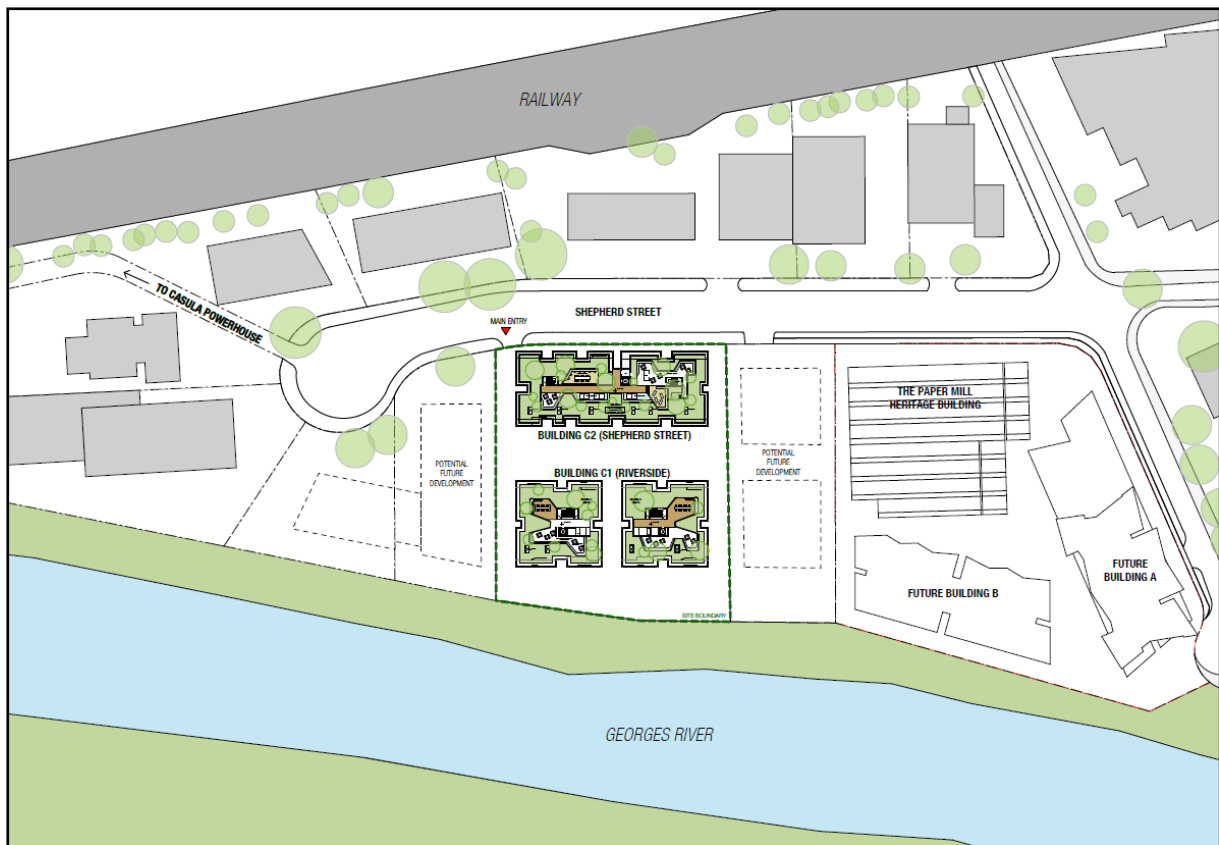


Figure 10: Contextual plan and site analysis (source Woods Bagot)

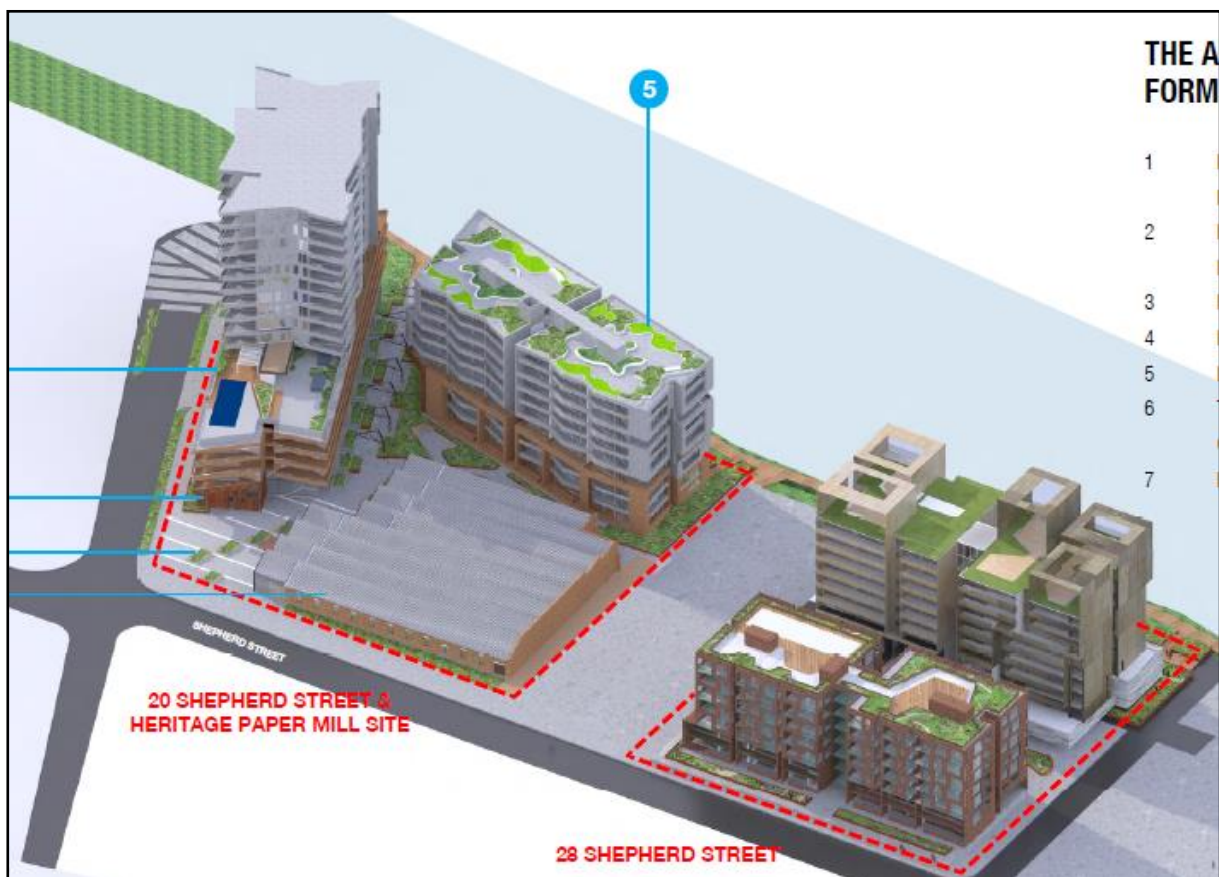


Figure 11: Contextual plan (source Woods Bagot)

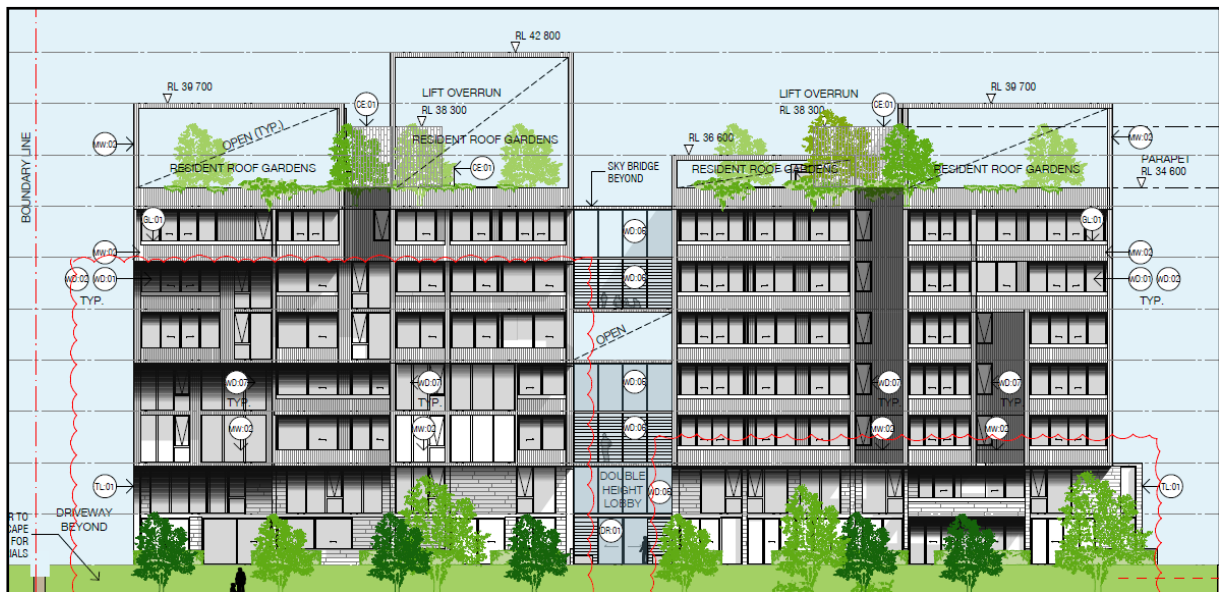


Figure 12: View of Building C1 from Georges River (source Woods Bagot)



Figure 13: Building C2 Shepherd Street elevation (source Woods Bagot)

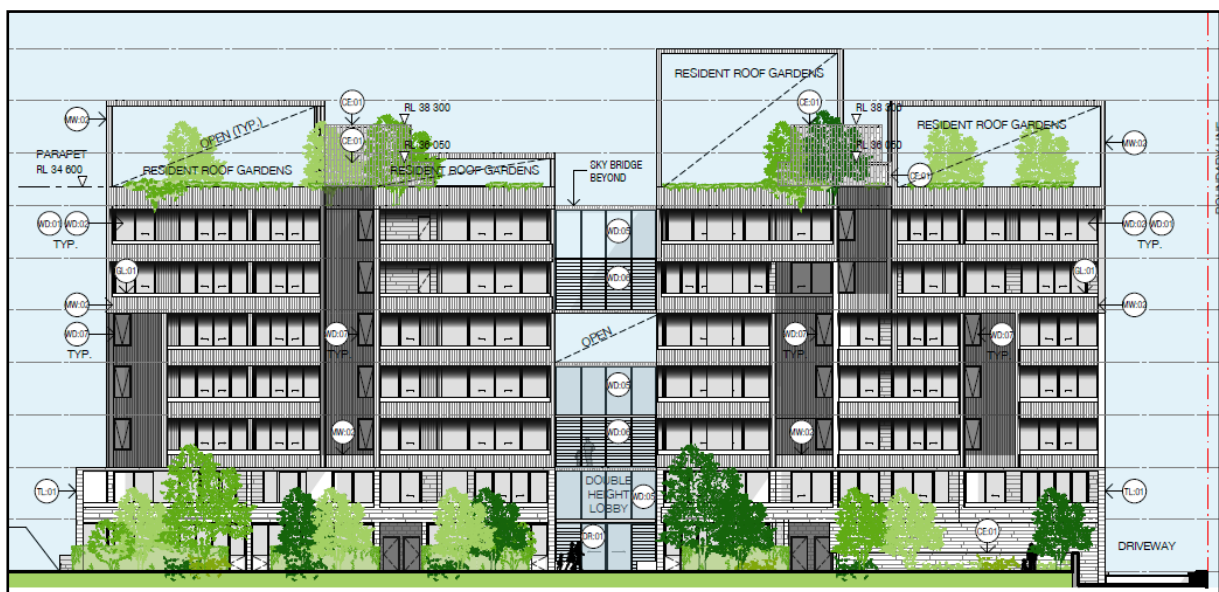


Figure 14: Building C1 Courtyard (source Woods Bagot)

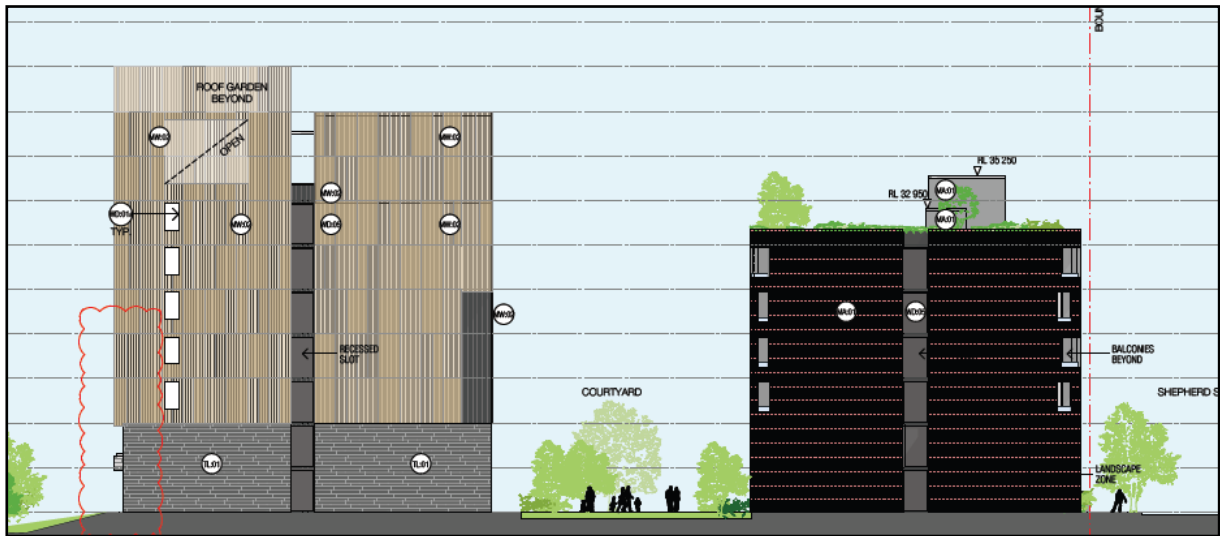


Figure 15: View from the north elevation (source Woods Bagot)

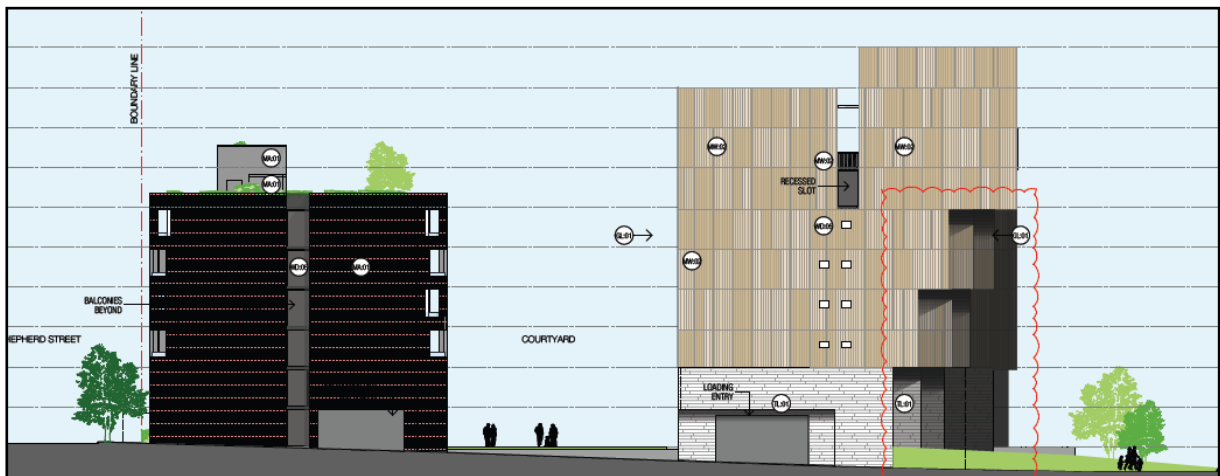


Figure 16: View from the south elevation (source Woods Bagot)

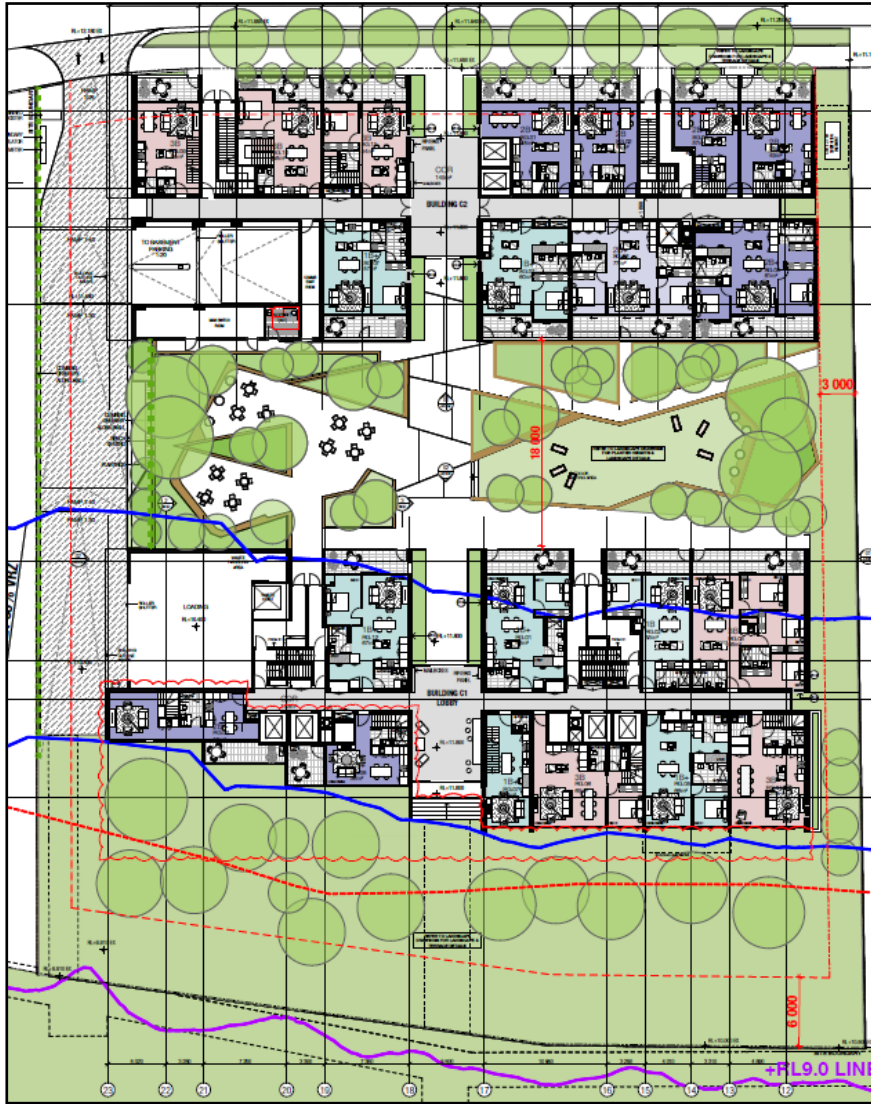


Figure 17: Proposed site plan (source Woods Bagot)

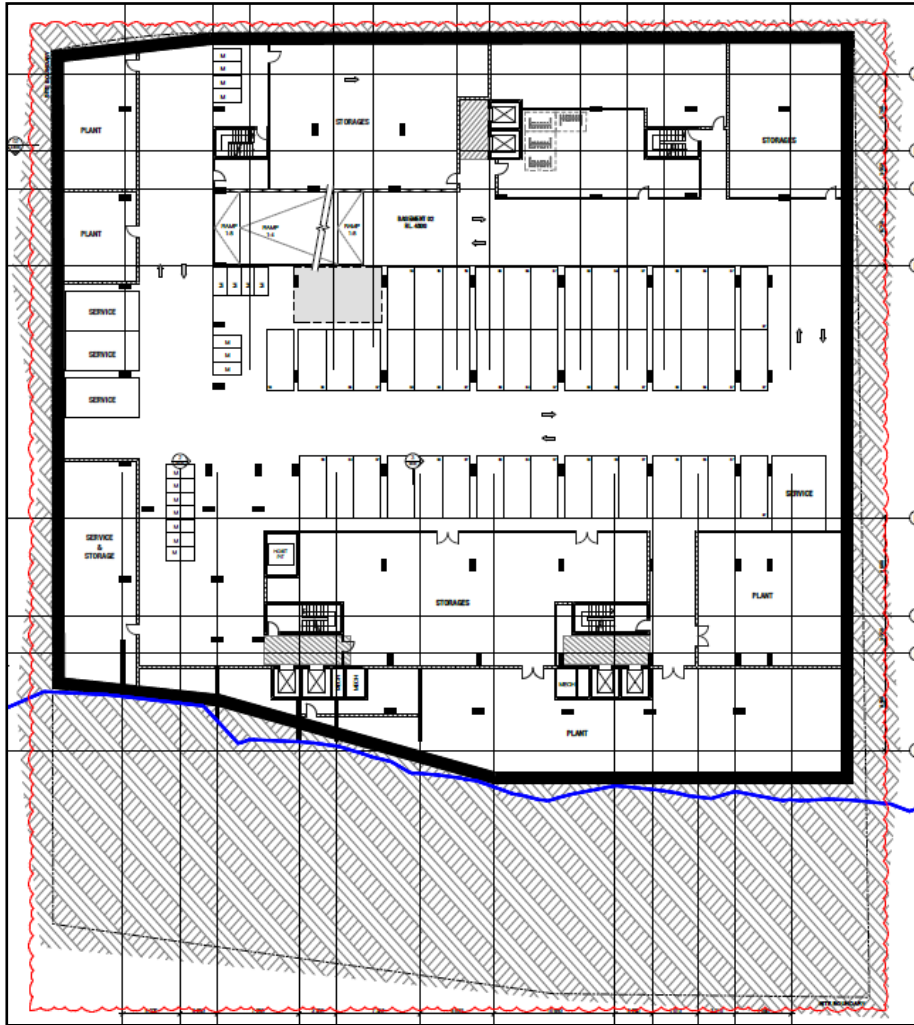


Figure 18: Amended basement level to address foreshore building line (source Woods Bagot)



Figure 19: Artist's impression - View of Building C1 from the River (source Woods Bagot)



Figure 20: Artist's impression - View of Building C2 from Shepherd Street (source Woods Bagot)

4. DETAILS OF THE PROPOSAL

Development consent is sought for two residential flat buildings of 140 units (as amended) including the following:

- Demolition of existing structures on site;
- Excavation, remediation and early works;
- Construction of a three level basement with vehicle egress and driveway off Shepherd Street;
- Construction of a 6-storey residential flat building (C2) facing Shepherd Street with 65 apartments and roof terraces;
- Construction of a 7-storey residential flat building (C1) facing Georges River with 75 apartments and roof terraces; and

The development proposes a total of 140 apartments, the details and units mix includes:

- 2 x studio apartments (1%)
- 53 x 1-br units (38%)
- 78 x 2-br units (56%)
- 7 x 3-br units (5%)
- 161 car parking space including 14 accessible parking spaces and 14 visitor parking
- 8 motorbike parking
- 73 Bicycle spaces

A summary of the proposed development is provided in the table below.

Table 5. Summary of Proposed Development	
Item	Total
Zoning	R4 – High Density Residential
Number of dwellings	140
Site Area	5887m ²
FSR	2.03:1
Height	C1 – 23.56m to top of parapet, 27.26 to top of lift overrun, 31m to top of architectural roof feature C2 – 24m to top of lift overrun
Parking	161
Gross Floor Area	11,968m ²
Solar Access	64% achieve 2 hours between 9.00am and 3.00pm at June 21
Cross-Ventilation	61% of units are naturally cross-ventilated
Unit Mix	2 x studio apartments (1%) 53 x 1-br units (38%) 78 x 2-br units (56%) 7 x 3-br units (5%)
Communal Open Space	66% of site area including roof terraces
Deep Soil	23.4% of site area

Figure 21: summary table (source Mecone)

5. STATUTORY CONSIDERATIONS

5.1 Relevant matters for consideration

The following Environmental Planning Instruments, Development Control Plans and Codes or Policies are relevant to this application:

Environmental Planning Instruments (EPI's)

- State Environmental Planning Policy No.65 – Design Quality of Residential Apartment Development.
- State Environmental Planning Policy No.55 – Remediation of Land.
- State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004.
- State Environmental Planning Policy (Infrastructure) 2007;

- Greater Metropolitan Regional Environmental Plan No. 2 – Georges River Catchment;
- Liverpool Local Environmental Plan 2008.

Draft Environmental Planning Instruments

- No draft Environmental Planning Instruments apply to the site.

Development Control Plans

- *Liverpool Development Control Plan 2008*
 - Part 1 – Controls applying to all development
 - Part 4 – Development in Liverpool City Centre

Contributions Plans

- Liverpool Contributions Plan 2007 applies to all development within the Liverpool City Centre, and requires the payment of contributions equal to 2% of the cost of the development pursuant to Section 94A of the EPA & Act.

5.2 Zoning

The site is zoned R4 High Density Residential pursuant to LLEP 2008 as depicted in the figure below.



Figure 22: Extract of LLEP 2008 zoning map

5.3 Zoning

The proposed development is defined as a 'Residential flat building', which is permissible within the R4 High Density Residential zoning.

6. ASSESSMENT

The development application has been assessed in accordance with the relevant matters of consideration prescribed by Section 79C of the Environmental Planning and Assessment Act 1979 and the Environmental Planning and Assessment Regulation 2000 as follows:

6.1 Section 79C(1)(a)(1) – Any Environmental Planning Instrument

State Environmental Planning Policy No.65 – Design Quality of Residential Apartment Development.

Non-discretionary development standards – Clause 30

Previously clause 30A of SEPP 65; expanded to include car parking as a non-discretionary standard. The three matters covered are, ceiling height, apartment size and car parking, which cannot be used as reasons for refusal where the proposal meets the minimum requirements.

Clause 30 makes these requirements non-discretionary development standards in accordance with clause 79C(2) of the EP&A Act.

State Environmental Planning Policy No. 65 applies to the proposal, as the application involves a residential flat building. Clause 30(2) of SEPP 65 requires residential flat developments to be designed in accordance with the design quality principles contained in Part 2 of SEPP 65. Following is a table summarising the ten (10) design quality principles outlined in SEPP 65, and compliance with such.

Note: As the subject development application was lodged after 17 July 2015, the Apartment Design Guidelines is applicable to the proposal.

DESIGN QUALITY PRINCIPLE REQUIRED	DOES THE PROPOSAL ADDRESS THE PRINCIPLE?	HOW DOES THE PROPOSAL ADDRESS THE PRINCIPLE?
PRINCIPLE 1: CONTEXT AND NEIGHBOURHOOD CHARACTER Good design responds and contributes to its context. Context is the key natural and built features of an area, their relationship and the character they create when combined. It also includes social, economic, health and environmental conditions. Responding to context involves identifying the desirable elements of an area's existing or future character. Well-designed buildings respond to and enhance the qualities and identity of the area including the adjacent sites,	Yes.	The Architect's SEPP 65 statement identifies the proposed development for 28 Shepherd Street as a great opportunity to redevelop an existing industrial site into a vibrant residential precinct on the George's River. The SEPP 65 statement for context and neighbourhood states: <i>The site is located in the Liverpool city centre zone and is within 15 minutes walking distance of the CBD and Liverpool Train station. Shepherd Street functions as a road access to the Casula Power Station to the far south and Light Horse Park to the far north. It is also a short 15 minute drive to the proposed airport at Badgerys's Creek. The surrounding context on the north is an industrial lot; light industrial warehouse buildings on the east and south; and finally, the tranquil Georges River on the west. The proposed development supports the vision by the</i>

<p>streetscape and neighbourhood.</p> <p>Consideration of local context is important for all sites, including sites in established areas, those undergoing change or identified for change.</p>		<p><i>Liverpool council to improve the quality of architecture and design in the area and specifically sets out to meet the stated objectives contained within the Liverpool Council Planning Controls and SEPP 65. The design aims to build upon those objectives in order to make a key contribution in this significant sector of Liverpool by providing a new high quality residential development integrated within the existing urban fabric.</i></p> <p><i>The two proposed new residential buildings have been configured to provide a strong street frontage to Shepherd Street on the east and a generous setback from the Georges River on the west.</i></p> <p><i>A public access through-site connection is provided as a 6m wide road including footpath, both graded to be gently sloping from the boundary located Shepherd Street to run perpendicular across the site to the Georges River. This also serves as an expansive visual corridor to the river.</i></p> <p>It is considered that the design of the proposed development responds and contributes to the future high density urban character of the area. The scale of building and type of use are compatible with the envisaged proposed redevelopment of the precinct and recognises and generally complies with the requirements of SEPP 65 and LLEP 2008.</p>
<p>PRINCIPLE 2: BUILT FORM AND SCALE</p> <p>Good design achieves a scale, bulk and height appropriate to the existing or desired future character of the street and surrounding buildings.</p> <p>Good design also achieves an appropriate built form for a site and the building's purpose in terms of building alignments, proportions, building type, articulation and the manipulation of building elements.</p> <p>Appropriate built form defines the public domain, contributes to the character of streetscapes and parks, including their views and vistas, and provides internal</p>	<p>Yes.</p>	<p>The Architect's SEPP 65 statement provides that:</p> <p><i>The scale and built form of the existing context includes a number of double to triple height industrial warehouse buildings that are well within the maximum building height set out in the Liverpool LEP 2008.</i></p> <p><i>However, this is gradually evolving as the site is located within an urban renewal precinct made up of industrial properties that have been zoned for high density residential development such as the recently approved 'Paper Mills' on 20 Shepherd Street, 420 Macquarie Street and 1-3 Bigge Street.</i></p> <p><i>The proposal is for a multi-unit residential development consisting of two separate buildings of varying heights which respond to the scale and form of the streetscape and river views. The proposed distribution</i></p>

amenity and outlook.		<p><i>of density is composed of a 6-storey building along Shepherd Street and a taller 7-storey building facing the Georges River.</i></p> <p>The proposal is considered to respond effectively to the heritage constraints on the site and is considered compatible with future development anticipated within the vicinity of the site, as well as the wider locality.</p> <p>The built form provides for suitable internal amenity and considers the character of the future streetscape and anticipated development outcomes within the locality.</p>
<p>PRINCIPLE 3: DENSITY</p> <p>Good design achieves a high level of amenity for residents and each apartment, resulting in a density appropriate to the site and its context. Appropriate densities are consistent with the area's existing or projected population. Appropriate densities can be sustained by existing or proposed infrastructure, public transport, access to jobs, community facilities and the environment.</p>	Yes.	<p>The Architect's SEPP 65 statement provides that:</p> <p><i>The proposed building offers 140 residential apartments with a mix of one, two and three bedrooms.</i></p> <p><i>The proposed density will positively contribute to meeting the housing targets of the Liverpool City Council.</i></p> <p><i>This apartment mix is generally in accordance with the Liverpool planning guidelines. 10% of the apartments are adaptable for people with disabilities and are distributed in both buildings.</i></p> <p><i>Residential amenities include oversized and fully glazed double storey lobbies which add to the visual permeability of the ground plane. Both buildings also have communal roof gardens. The roof landscape design consists of raised planters to allow for lush greenery and sunken seating areas for visual privacy as well as reduced wind exposure. The rooftop of Building C2 also has open areas for recreation facilities such as table tennis and BBQ spaces.</i></p> <p><i>The higher elevation of the rooftop of Building C1 is framed by architectural roof elements to provide wind protection and areas of shade during summer months. These architectural frames also add visual prominence to the building's forms. 70% of the protected roof gardens of Building C1 achieve a minimum of 2 hours of solar access on 21 June.</i></p> <p>The proposal contains a mix of units considered appropriate for the location and proximity to the City Centre. The proposed</p>

		density is considered to respond to the availability of infrastructure, public transport, community facilities and environmental quality.
<p>PRINCIPLE 4: SUSTAINABILITY</p> <p>Good design combines positive environmental, social and economic outcomes.</p> <p>Good sustainable design includes use of natural cross ventilation and sunlight for the amenity and liveability of residents and passive thermal design for ventilation, heating and cooling reducing reliance on technology and operation costs. Other elements include recycling and reuse of materials and waste, use of sustainable materials and deep soil zones for groundwater recharge and vegetation.</p>	Yes.	<p>The Architect's SEPP 65 statement provides that:</p> <p>Energy Efficient Fittings & Fixtures <i>Energy efficient fittings such as low energy LED and compact fluorescent lighting and 5 star energy rated appliances will be provided to all common areas.</i></p> <p>Rain water harvesting and reuse <i>Harvesting of rain water in tanks is being proposed and will be included if necessary by the consenting authority. Water storage tanks located in the basement would be used for rain water collection and reused for irrigating gardens.</i></p> <p><i>To support the natural run-off of the site, a WSUD swale is designed for the northern edge of the site.</i></p> <p>Water efficient fittings and fixtures <i>Water efficient fittings such as restricted water flow shower heads and dual flushing toilets will be provided to all residential apartments and common areas.</i></p> <p>The development provides opportunities in this regard, as reflected within the submitted BASIX Certificate. Energy efficiency is also aided by the use of water/energy efficient fittings, appliances and lighting.</p>
<p>PRINCIPLE 5: LANDSCAPE</p> <p>Good design recognises that together landscape and buildings operate as an integrated and sustainable system, resulting in attractive developments with good amenity. A positive image and contextual fit of well designed developments is achieved by contributing to the landscape character of the streetscape and neighbourhood.</p> <p>Good landscape design enhances the development's environmental performance by retaining positive natural</p>	Yes.	<p>The Architect's SEPP 65 statement provides that:</p> <p><i>The development aims to maximise communal open areas and landscaping at the ground level courtyard, roof top gardens and within the landscape zones the facing the river and Shepherd Street.</i></p> <p><i>The total percentage of deep soil is 10% to natural grade.</i></p> <p><i>Communal outdoor amenities are located on the roof tops of both buildings. The apartments will benefit from year-round outdoor access to large balconies. New street trees will be planted along Shepherd Street in accordance with council's landscape strategy and type. Please refer to Aspect's landscape drawings and report for the scope of landscape design and details.</i></p>

features which contribute to the local context, co-ordinating water and soil management, solar access, micro-climate, tree canopy, habitat values and preserving green networks. Good landscape design optimises useability, privacy and opportunities for social interaction, equitable access, respect for neighbours' amenity and provides for practical establishment and long term management.		<p>A detailed Landscape Design Report has been prepared and is discussed at the end of this table.</p> <p>It is considered that the relationship between the proposal and foreshore is reasonable and that the proposed common open space will provide a sufficient level of amenity to this area.</p>
<p>PRINCIPLE 6: AMENITY</p> <p>Good design positively influences internal and external amenity for residents and neighbours. Achieving good amenity contributes to positive living environments and resident well being.</p> <p>Good amenity combines appropriate room dimensions and shapes, access to sunlight, natural ventilation, outlook, visual and acoustic privacy, storage, indoor and outdoor space, efficient layouts and service areas and ease of access for all age groups and degrees of mobility.</p>	Yes	<p>The Architect's SEPP 65 statement provides that:</p> <p><i>Apart from achieving the required mix and compliance with much of the SEPP 65 guidelines, the fundamental design goals of this proposal have been:</i></p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>To maximise access to river and courtyard views</i> <input type="checkbox"/> <i>Prioritise the living rooms for amenity</i> <input type="checkbox"/> <i>Ensure fresh air and daylight to common areas</i> <input type="checkbox"/> <i>Create memorable experiences in the entry sequence to the development, expansive building lobbies and private communal open spaces.</i> <p><i>The proposal includes efficient and spacious apartment layouts, access to sunlight, natural ventilation, visual and acoustic privacy, storage, double storey sky bridge recreation spaces, outdoor roof gardens, efficient layouts and service areas and outlook and ease of access for all age groups and degrees of mobility where required.</i></p> <p><i>Common area corridors and lift lobbies have been designed with access to natural daylight and fresh air.</i></p> <p><i>Ground floor lift lobbies are double storey in height and fully glazed to enhance views through the ground plane. Building C1 also provides a unique amenity called "sky bridges" that will be used as indoor but fully ventilated residential recreation spaces with expansive views to the courtyards and river.</i></p> <p><i>Each apartment has been designed with modern open plan living areas comprising of the kitchen, dining and living areas. Each living space has direct access to a</i></p>

		<p><i>full height and full width glass sliding door panels and windows with direct access to outdoor balconies or terraces.</i></p> <p><i>The majority of the kitchens measure 8m from a window to the back of the kitchen splashback. Those that deviate from this dimension are located on the ground and first levels as these apartments are either double storey townhouses or oversized apartments.</i></p> <p>The proposal is considered to be satisfactory in this regard, optimising views and internal amenity through appropriate room dimensions and shapes, access to sunlight, natural ventilation, visual and acoustic privacy, storage, indoor and outdoor space, efficient layouts and service areas. The proposal provides for an acceptable unit mix for housing choice and provides access and facilities for people with disabilities.</p>
<p>PRINCIPLE 7: SAFETY</p> <p>Good design optimises safety and security within the development and the public domain. It provides for quality public and private spaces that are clearly defined and fit for the intended purpose. Opportunities to maximise passive surveillance of public and communal areas promote safety.</p> <p>A positive relationship between public and private spaces is achieved through clearly defined secure access points and well lit and visible areas that are easily maintained and appropriate to the location and purpose.</p>	Yes.	<p>A Crime Prevention Through Environmental Design (CPTED) report has been prepared.</p> <p>The proposed development maximises the potential for passive surveillance, with well separated buildings and carparking that is overlooked by adjacent buildings and a well-defined public domain and access pathways.</p> <p>An estate management office is proposed. Lobbies/shared entrances are to have buzzers and intercoms. Vehicle entrances are to be controlled via an automated gate.</p> <p>Security cameras and swipe card access to buildings are also proposed.</p>
<p>PRINCIPLE 8: HOUSING DIVERSITY AND SOCIAL INTERACTION</p> <p>Good design achieves a mix of apartment sizes, providing housing choice for different demographics, living needs and household budgets.</p> <p>Well designed apartment developments respond to social context by providing</p>	Yes.	<p>The Architect's SEPP 65 statement provides that:</p> <p><i>The proposal caters for a cross section of the suburban demographic in terms of density and affordability with the provision of 38% x 1 Bedroom apartments, 56% x 2-Bed apartments, 5% x 3 Bedroom and 1% x Studio apartments. Double storey townhouses are located on the ground floor on Shepherd Street and the river side to also add diversity to the residential</i></p>

<p>housing and facilities to suit the existing and future social mix.</p> <p>Good design involves practical and flexible features, including different types of communal spaces for a broad range of people and providing opportunities for social interaction among residents.</p>		<p><i>typology. The development also provides a mix of private open space in the form of large terraces and balconies and a communal rooftop terraces with substantial planting catering for both formal and informal recreational activities. The inclusion of accessibility features such as level footpaths and disability access at ground level caters for the varying degrees of accessibility in the general population. BCA and DDA reports are attached with the development application and the design reflects these reports.</i></p> <p>This principle essentially relates to design responding to the social context and needs of the local community in terms of lifestyles, affordability and access to social facilities and optimising the provision of housing to suit the social mix and provide for the desired future community. It is considered that the proposal satisfies these requirements.</p>
<p>PRINCIPLE 9: AESTHETICS</p> <p>Good design achieves a built form that has good proportions and a balanced composition of elements, reflecting the internal layout and structure. Good design uses a variety of materials, colours and textures.</p> <p>The visual appearance of a well designed apartment development responds to the existing or future local context, particularly desirable elements and repetitions of the streetscape.</p>	Yes.	<p>The Architect's SEPP 65 statement provides that:</p> <p><i>The architectural articulation, scale, mass, built form and materiality of the development are a direct response to the archaeology of the existing site, specifically the site's location as a paper mill factory founded in 1865. The design appraises a narrative that embeds the patina and history of the contextual materials and highlights an emergent urban grain in a new residential precinct.</i></p> <p>The proposal is considered responsive to the environment in terms of composition and use of materials, responding to the streetscape and existing heritage item, while addressing the Georges river. The overall aesthetics is considered to be a suitable response to the evolving character of the area and envisaged future development outcomes within the area.</p>

Further to the above design quality principles, Clause 30(2) of SEPP 65 also requires residential apartment development to be designed in accordance with the ADG. The following table outlines compliance with the ADG, where numerical requirements ('controls') are specified.

Apartment Design Guide (ADG)

Provisions	Compliance/Comment
3B Orientation	
Building types and layouts respond to the streetscape and site while optimising solar access within the development.	The streetscape character is evolving, the proposed development responds well to the future character of the area and is in keeping with the heritage character of the Woollen Mill. Overshadowing to adjoining neighbours is minimised. There are no residential properties that are affected by loss of sunlight in the vicinity of the site.
Overshadowing of neighbouring properties is minimised during mid-winter.	
Where an adjoining property does not currently receive the required hours of solar access, the proposed building ensures solar access to neighbouring properties is not reduced by more than 20%.	
If the proposal will significantly reduce the solar access of neighbours, building separation should be increased beyond minimums contained in section 3F Visual privacy.	
A minimum of 4 hours of solar access should be retained to solar collectors on neighbouring buildings.	There are no solar collectors located within any neighbouring properties.
3C Public domain interface	
Transition between private and public domain is achieved without compromising safety and security.	The transition between the private and public domain is achieved without compromising safety and security. No front fence is proposed. The amenity of the public domain is retained and enhanced. The visual prominence of underground car park is minimised. The pump rooms, garbage storage areas and other service requirements will be located in basement car parks or out of view. Substation is located along the northern side boundary and is not visually prominent.
Front fences and walls along street frontages should use visually permeable materials and treatments. The height of solid fences or walls should be limited to 1m.	
Amenity of the public domain is retained and enhanced.	
The visual prominence of underground car park vents should be minimised and located at a low level where possible.	
Substations, pump rooms, garbage storage areas and other service requirements should be located in basement car parks or out of view.	
3D Communal and public open space	
Communal open space has a minimum area equal to 25% of the site (see Figure 3D.3).	An area of 3172m ² (54%) is provided as communal open space. This includes both ground floor and roof top communal space.
Developments achieve a minimum of 50% direct sunlight to the principal usable part of the communal open space for a minimum of 2 hours between 9 am and 3 pm on 21 June (mid-winter).	The rooftop communal open space will benefit from full solar access. The ground floor communal open space will receive a minimum of 50% direct sunlight for approximately 2 hours at mid-winter.
Communal open space is designed to allow for a range of activities, respond to site conditions and be attractive and inviting.	Ground floor apartments are provided with raised terraces, which are generally consistent with the objectives of the Apartment Design Guide.

Provisions			Compliance/Comment
Communal open space is designed to maximise safety.			
3E Deep soil zones			
Deep soil zones are to meet the following minimum requirements:			The proposed deep soil zone covers 17% of the total site area and is more than the minimum dimension.
Site Area	Minimum Dimensions	Deep Soil Zone (% of site area)	
Less than 650m ²	-	7%	
650m ² to 1500m ²	3m		
Greater than 1500m ²	6m		
Greater than 1500m ² with significant tree cover	6m		
3F Visual Privacy			
Minimum require separation distances from buildings to the side and rear boundaries are as follows:			An 18m building separation is provided across all levels between the balconies/habitable rooms of both buildings. The roof of the building does not exceed 25m in height, as such a building separation of 9m is required, above 12m (4 storeys).
Building Height	Habitable Rooms and Balconies	Non Habitable Rooms	
Up to 12m (4 storeys)	6m	3m	
Up to 25m (5-8 storeys)	9m	4.5m	
Over 25m (9+ storeys)	12m	6m	
Site and building design elements increase privacy without compromising access to light and air and balance outlook and views from habitable rooms and private open space			The buildings are set back at a distance equal to or greater than the requirements of the design criteria. The setback criteria for non-habitable rooms have been adopted, as habitable rooms on the side of the building are provided with opaque glazing.
3G Pedestrian Access and Entries			
Building entries and pedestrian access connects to and addresses the public domain			Complies
Access, entries and pathways are accessible and easy to identify			
3H Vehicle Access			
Vehicle access points are designed and located to achieve safety, minimise conflicts between pedestrians and vehicles and create high quality streetscapes			Complies
3J Bicycle and Car Parking			
For development in the following locations:			Complies A total of 161 car parking space including 14 accessible parking spaces, 14 visitor parking and 4 service vehicles are provided 8 motorbike parking and 73 Bicycle spaces
- on sites that are within 800 metres of a railway station or light rail stop in the Sydney Metropolitan Area; or			

Provisions	Compliance/Comment
<div>- on land zoned, and sites within 400 metres of land zoned, B3 Commercial Core, B4 Mixed Use or equivalent in a nominated regional centre</div> <div>The minimum car parking requirement for residents and visitors is set out in the Guide to Traffic Generating Developments, or the car parking requirement prescribed by the relevant council, whichever is less. The car parking needs for a development must be provided off street</div>	are provided.
Parking and facilities are provided for other modes of transport	Complies
Car park design and access is safe and secure	N/A
Visual and environmental impacts of underground car parking are minimised	N/A
Visual and environmental impacts of on-grade car parking are minimised	
Visual and environmental impacts of above ground enclosed car parking are minimised	
4A Solar and Daylight Access	
Living rooms and private open spaces of at least 70% of apartments in a building receive a minimum of 2 hours direct sunlight between 9 am and 3 pm at mid-winter in the Sydney Metropolitan Area and in the Newcastle and Wollongong local government areas	Non-compliant 62% of apartments receive a minimum of 2 hours sunlight between the hours of 9am and 3pm at mid-winter.
A maximum of 15% of apartments in a building receive no direct sunlight between 9 am and 3 pm at mid-winter	Less than 15% of apartments receive no direct sunlight between the hours of 9am and 3pm at mid-winter.
4B Natural Ventilation	
All habitable rooms are naturally ventilated	Non-compliant 59% proposed, however the proposal is largely consistent with the design criteria, and incorporates a number of dual aspect and corner apartments, and generally limits apartment depths.
The layout and design of single aspect apartments maximises natural ventilation	
At least 60% of apartments are naturally cross ventilated in the first nine storeys of the building. Apartments at ten storeys or greater are deemed to be cross ventilated only if any enclosure of the balconies at these levels allows adequate natural ventilation and cannot be fully enclosed	
Overall depth of a cross-over or cross-through apartment does not exceed 18m, measured glass line to glass line	
Complies Cross-over or cross-through apartments do not exceed depth of 18m.	
4C Ceiling Heights	
Measured from finished floor level to finished ceiling level, minimum ceiling heights are:	Complies Ceiling heights of 3.1m have been provided to all units floors.
<div><div>Minimum ceiling height</div><div>Habitable2.7m</div></div>	No attic spaces are proposed

Provisions		Compliance/Comment									
rooms		No mixed use proposed.									
Non-habitable	2.4m										
For 2 storey apartments	2.7m for main living area floor 2.4m for second floor, where its area does not exceed 50% of the apartment area										
Attic spaces	1.8m at edge of room with a 30 degree minimum ceiling slope										
If located in mixed use areas	3.3m for ground and first floor to promote future flexibility of use										
4D Apartment Size and Layout											
Apartments are required to have the following minimum internal areas:		Complies. Minimum Apartment sizes provided are:									
<table><tr><th>Apartment Type</th><th>Minimum Internal Area</th></tr><tr><td>Studio</td><td>35m²</td></tr><tr><td>1 bedroom</td><td>50m²</td></tr><tr><td>2 bedroom</td><td>70m²</td></tr><tr><td>3 bedroom</td><td>90m²</td></tr></table>	Apartment Type	Minimum Internal Area	Studio	35m ²	1 bedroom	50m ²	2 bedroom	70m ²	3 bedroom	90m ²	50m ² one bedrooms; 79m ² two bedrooms; and 95m ² three bedrooms.
Apartment Type	Minimum Internal Area										
Studio	35m ²										
1 bedroom	50m ²										
2 bedroom	70m ²										
3 bedroom	90m ²										
The minimum internal areas include only one bathroom. Additional bathrooms increase the minimum internal area by 5m ² each. A fourth bedroom and further additional bedrooms increase the minimum internal area by 12m ² each		Complies									
Every habitable room must have a window in an external wall with a total minimum glass area of not less than 10% of the floor area of the room. Daylight and air may not be borrowed from other rooms		Complies									
Habitable room depths are limited to a maximum of 2.5 x the ceiling height		Required = 2.92m(ceiling height) x 2.5m = 7.3m. Generally complies									
In open plan layouts (where the living, dining and kitchen are combined) the maximum habitable room depth is 8m from a window		8.9m to Building C1 units RG5 and R1.04 These two units still achieve an acceptable level of solar access as well the provision of natural ventilation. Therefore, the minor non-compliance is considered acceptable.									
Master bedrooms have a minimum area of 10m ² and other bedrooms 9m ² (excluding wardrobe space)		Complies, all master bedrooms are 10m ² and other bedrooms are 9m ²									
Bedrooms have a minimum dimension of 3m (excluding wardrobe space)		Complies, bedrooms have a minimum dimension of 3m (excluding wardrobe space)									
Living rooms or combined living/dining rooms have a minimum width of:		3.6m to 3.8m for studio and 1 bedroom apartments									

Provisions			Compliance/Comment
<div>- 3.6m for studio and 1 bedroom apartments</div> <div>- 4m for 2 and 3 bedroom apartments</div>			5m to 6m for 2 and 3 bedroom apartments
The width of cross-over or cross-through apartments are at least 4m internally to avoid deep narrow apartment layouts			
4E Private Open Space and Balconies			
All apartments are required to have primary balconies as follows:			The proposal is generally consistent with the design guidelines; however, 3 bedroom apartments have been provided with 2m deep balconies. This is offset by the significant provision of communal space areas both on the ground floor and rooftops.
Dwelling Type	Minimum Area	Minimum Depth	
Studio	4m ²	-	
1 bedroom	8m ²	2m	
2 bedroom	10m ²	2m	
3 bedroom	12m ²	2.4	
The minimum balcony depth to be counted as contributing to the balcony area is 1m			
For apartments at ground level or on a podium or similar structure, a private open space is provided instead of a balcony. It must have a minimum area of 15m ² and a minimum depth of 3m			
Primary private open space and balconies are appropriately located to enhance liveability for residents			
Private open space and balcony design is integrated into and contributes to the overall architectural form and detail of the building			
Private open space and balcony design maximises safety.			
			Minimum width is more than 1m
			The ground floor apartments are provided with balconies, which range between 12m ² to 20m ² . This is considered satisfactory.
			Complies
			Complies
			Complies
4F Common Circulation and Spaces			
The maximum number of apartments off a circulation core on a single level is eight			7 apartments are accesses off a circulation core – complies
For buildings of 10 storeys and over, the maximum number of apartments sharing a single lift is 40			Both apartments are less than 10 storeys – Building C1 is provided with 4 lifts and Building C2 is provided with 2 lifts
Common circulation spaces promote safety and provide for social interaction between residents			
4G Storage			
In addition to storage in kitchens, bathrooms and bedrooms, the following storage is provided:			Adequate and secure storage is provided within basement levels as well as the apartments.
Dwelling Type	Storage Size Volume		
Studio	4m ³		
1 bedroom	6m ³		
2 bedroom	8m ³		

Provisions		Compliance/Comment
3 bedroom	10m ³	
At least 50% of the required storage is to be located within the apartment.		
4H Acoustic Privacy		
Noise transfer is minimised through the siting of buildings and building layout		Complies
4K Apartment Mix		
A range of apartment types and sizes is provided.		Complies 53 x 1 bedroom units (37%) 78 x 2 bedroom units (56%) 7 x 3 bedroom units (5%)
4L Ground Floor Apartments		
Street frontage activity is maximised where ground floor apartments are located.		Complies
Design of ground floor apartments delivers amenity and safety for residents.		Complies
4M Facades		
Building facades provide visual interest along the street while respecting the character of the local area.		The proposed building facades provide visual interest along the street and respect the character of the local area Complies
Building functions are expressed by the façade, e.g. express building entries, and important corners.		
4N Roof Design		
Roof treatments are integrated into the building design and positively respond to the street.		The proposed roof treatments are integrated into the building design and positively respond to the street The roof space is proposed to be used for open space The roof design incorporates sustainability features
Opportunities to use roof space for residential accommodation and open space are maximised.		
Roof design incorporates sustainability features.		
4O Landscape Design		
Landscape design is viable and sustainable.		Complies
Landscape design contributes to the streetscape and amenity. Recommended tree planting in deep soil zones:		Site is 5887m ² – therefore deep soil is 412m ² or 7% - 5 large trees are required or 10 medium trees Complies, more than 5 large trees are proposed
Site area	Recommended tree planting	
Up to 850m ²	1 medium tree per 50m ² of deep soil zone	
Between 850 - 1,500m ²	1 large tree or 2 medium trees per 90m ² of deep soil zone	
Greater than 1,500m ²	1 large tree or 2 medium trees per 80m ² of deep soil zone	
4P Planting on Structures		
Planting on structures contributes to the quality and amenity of communal and public		Complies

open spaces.	
4Q Universal Design	
A variety of apartments with adaptable designs are provided.	Complies
4S Mixed Use	
Mixed use developments are provided in appropriate locations and provide active street frontages that encourage pedestrian movement.	Complies
Residential levels of the building are integrated within the development, and safety and amenity is maximised.	Complies
4T Awnings and Signage	
Awnings are well located and complement and integrate with the building design.	Not applicable
Signage responds to the context and desired streetscape character.	Not applicable
4U Energy Efficiency	
Passive solar design to optimise heat storage in winter and reduce heat transfer in summer.	Complies
4W Waste Management	
Waste storage facilities are designed to minimise impacts on the streetscape, building entry and amenity of residents.	Complies

ADG Variations

The assessment has identified the following variation to the ADG:

Solar access

The development achieves 64% of dwellings with 2 hours of solar access between 9am and 3pm. The application is focused on providing amenity from facing the River rather than just some apartments, therefore 6% of the units will not receive the required 2 hours solar access. The development also provides roof communal spaces, which will receive 2 hours sunlight to over 70% of these spaces at mid-winter, providing additional solar access.

On this basis, the proposed development is considered satisfactory in relation to solar access.

Below is an extract of the solar analysis by Woods Bagot Architects.



Figure 23: Solar Analysis (Source Woods Bagot)

State Environmental Planning Policy No. 55 – Remediation of Land (SEPP 55)

The objectives of SEPP 55 are:

- to provide for a state wide planning approach to the remediation of contaminated land.
- to promote the remediation of contaminated land for the purpose of reducing the risk of harm to human health or any other aspect of the environment.

Pursuant to the above SEPP, Council must consider:

- whether the land is contaminated.
- if the land is contaminated, whether it is satisfied that the land is suitable in its contaminated state (or will be suitable, after remediation) for the proposed use.

The proposal involves a change in the use of the land, from an industrial area to residential uses and under the SEPP 55 guidelines is considered a site that could be contaminated.

The following reports were considered in the assessment of SEPP 55:

- Preliminary (Stage 1) Investigation of the property at 26-30 Shepherd Street, Liverpool, NSW- Analchem Environmental Resources, Ref: 96/3758 dated July 1996 (AER, 1996);
- Detailed site investigation of the property at 26-30 Shepherd Street, Liverpool, NSW- Analchem Environmental Resources dated February 1998 (AER 1998); and
- Phase 2 Environmental Site Assessment, 28 Shepherd Street, Liverpool NSW- Environmental Strategies dated 10 July 2014 (ES, 2014).

Environmental Investigations Australia Pty Ltd concluded that the site could be made suitable for the approved development following the implementation of the Remedial Action Plan and site validation.

On this basis, Council's Environment and Health section considers the contamination assessment to be satisfactory and have recommended conditions of consent.

The contamination assessment identifies that the site is suitable for residential development.

Clause 7 - Contamination and remediation to be considered in determining development application	Comment
(1) A consent authority must not consent to the carrying out of any development on land unless:	
(a) it has considered whether the land is contaminated, and	A contamination assessment has been submitted as part of this application and reviewed by Council's Environmental Health Officer.
(b) if the land is contaminated, it is satisfied that the land is suitable in its contaminated state (or will be suitable, after remediation) for the purpose for which the development is proposed to be carried out, and	The submitted assessment concludes the site is suitable for residential development.
(c) if the land requires remediation to be made suitable for the purpose for which the development is proposed to be carried out, it is satisfied that the land will be remediated before the land is used for that purpose.	Land is to be remediated if any contaminants are found during excavation works.

Therefore based on the above assessment the subject site is suitable for the proposed development subject to remediation works being undertaken where required and in accordance with the approved RAP.

State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004.

A BASIX certificate and report has been submitted with the development application.

State Environmental Planning Policy (Infrastructure) 2007

The application did not require referral to the Roads and Maritime Services (RMS) for comment pursuant to Clause 104 of the SEPP, as the development is not identified as *traffic generating development*.

The site is within proximity to a rail corridor (approximately 70 metres) and therefore State Environmental Planning Policy (Infrastructure) 2007 needs to be considered. *Clause 87 Impact of rail noise or vibration on non-rail development* provides that Council must consider if residential development on land adjacent to a rail corridor is likely to be adversely affected by rail noise or vibration. In consideration of this impact Council should have regard to guidelines that are issued by the Director-General, namely '*Development near rail corridors and busy roads – interim guidelines*.'

The guideline is in accordance with clause 87 of the Infrastructure State Environmental Planning Policy (SEPP) which states the following for residential developments adjacent to rail corridors:

If the development is for the purpose of a building for residential use, the consent authority must be satisfied that appropriate measures will be taken to ensure that the following LAeq levels are not exceeded:

- *in any bedroom in the building : 35dB(A) at any time 10pm–7am*
- *anywhere else in the building (other than a garage, kitchen, bathroom or hallway): 40dB(A) at any time.*

Under the Guidelines the level of assessment required is determined by the distance from the rail corridor, as identified by Figures 3.1 and 3.2. It is understood that the southern rail line services have a speed limit of >80km/h and any development within 70 metres of the rail line requires an acoustic assessment and/or vibration assessment. The train line is approximately 60 metres from the development and as such, consideration will be given to train noise and vibration in accordance with the Department of Planning Interim Guideline.

An acoustic report was submitted with the application, which is considered satisfactory. The report has provided the following criteria in terms of noise:

- *Noise intrusion from train passbys in accordance with the DoP Guidelines in section 5.5*
- *Train vibration criteria for human perception and structural damage in section 5.6 in accordance with the Assessing Vibration Guideline and the DoP Interim Guideline*
- *Noise criteria for emissions from the development to receivers in accordance with the INP provided in section 5.1*
- *Traffic generated noise criteria in accordance with the RNP provided in section 5.4*
- *Construction noise criteria provided in section 5.5 in accordance with the ICNG*

Other conditions have also been recommended by this report, which would form part of the conditions of consent.

Greater Metropolitan Regional Environmental Plan No. 2 – Georges River Catchment (deemed SEPP).

The Greater Metropolitan Regional Environmental Plan No. 2 – Georges River Catchment generally aims to maintain and improve the water quality and river flows of the Georges River and its tributaries.

When a consent authority determines a development application planning principles are to be applied (Clause 7(2)). Accordingly, a table summarising the matters for consideration in determining development application (Clause 8 and Clause 9), and compliance with such is provided below.

Clause 8 General Principles	Comment
When this Part applies the following must be taken into account:	Planning principles are to be applied when a consent authority determines a development application.
(a) the aims, objectives and planning principles of this plan,	The plan aims generally to maintain and improve the water quality and river flows of the Georges River and its tributaries.
(b) the likely effect of the proposed plan, development or activity on adjacent or downstream local government areas,	The proposal provides soil and erosion control measures, a Stormwater Concept Plan.
(c) the cumulative impact of the proposed development or activity on the Georges River or its tributaries,	<p>The proposal provides a stormwater management system that will connect to the existing system. A Stormwater concept plan also outlines proposed sediment and erosion control measures.</p> <p>The land use change from industrial to residential uses provides the opportunity for site remediation.</p>

d) any relevant plans of management including any River and Water Management Plans approved by the Minister for Environment and the Minister for Land and Water Conservation and best practice guidelines approved by the Department of Urban Affairs and Planning (all of which are available from the respective offices of those Departments),	The site is located within an area covered by the Liverpool District Stormwater Management Plan, as outlined within Liverpool City Council Water Strategy 2004.
(e) the <i>Georges River Catchment Regional Planning Strategy</i> (prepared by, and available from the offices of, the Department of Urban Affairs and Planning),	<p>The proposal includes a Stormwater Concept plan. There is no evidence that with imposition of mitigation measures, the proposed development would affect the diversity of the catchment.</p> <p>The issue of site contamination has been addressed above.</p>
(f) all relevant State Government policies, manuals and guidelines of which the council, consent authority, public authority or person has notice,	General Terms of Approval have been issued by the NSW DPI Water.
(g) whether there are any feasible alternatives to the development or other proposal concerned.	The site is located in an area nominated for residential development and the proposal provides an opportunity to address past potentially contaminating land use practices.
Clause 9 Specific Principles	Comment
(1) Acid sulfate soils	The land is identified as containing acid sulfate soils on LLEP 2008 Acid Sulfate Soil mapping – Class 5; however, no controls or conditions are required, as the development will not be affected by this classification of Acid Sulfate Soils.
(2) Bank disturbance	There will be minimal disturbance of the bank or foreshore along the Georges River and its tributaries, the DPI Water support the application and have granted their GTAs.
(3) Flooding	The site contains flood affected land. The proposal does not include filling of land. Any potential pollution hazard due to flooding of the residential development is considered minimal.
(4) Industrial discharges	As outlined within the contamination report, the past industrial use may have contributed to discharges to the Georges River. The proposal includes remediation of the site to make the site suitable for its intended residential use.
(5) Land degradation	An erosion and sediment control plan aims to manage salinity and minimise erosion and sediment loss.

	The proposal includes remediation of the site to minimise any impacts on ground and surface water.
(6) On-site sewage management	Not applicable.
(7) River-related uses	The foreshore line area is not currently accessible by the public due to the topography of the area. There are no River related activities from the site.
(8) Sewer overflows	Not applicable.
(9) Urban/stormwater runoff	A Stormwater Concept Plan proposes connection to existing services.
(10) Urban development areas	The site is not identified as being located within the South West Growth Centre within the Metropolitan Strategy. The site is not identified as being an Urban Release Area under LLEP 2008.
(11) Vegetated buffer areas	The site is located within a Vegetated Buffer Area as defined within GREP No. 2 (<i>Development on land within the Catchment that adjoins, and is within 100 metres of, a drainage line, creek, wetland or river foreshore area within the Catchment</i>). The site is adjacent to the Georges River the works proposed have been endorsed by the DPI Water.
(12) Water quality and river flows	A drainage plan proposes stormwater connection to existing services.
(13) Wetlands	Not applicable.

It is considered that the proposal fails to satisfy the provisions of the GMREP No.2 and will have impacts on the Georges River Catchment.

Liverpool Local Environmental Plan 2008

As stated previously the subject site is zoned R4 High Density Residential under Liverpool LLEP 2008. The proposed development is defined as a *residential flat building*, which is permitted with Council consent in the R4 High Density Residential zone.

Zone Objectives

The objectives of the R4 – High Density Residential zone are identified as follows:

- *To provide for the housing needs of the community within a high density residential environment.*
- *To provide a variety of housing types within a high density residential environment.*
- *To enable other land uses that provide facilities or services to meet the day to day needs of residents.*
- *To provide for a high concentration of housing with good access to transport, services and facilities.*
- *To minimise the fragmentation of land that would prevent the achievement of high density residential development.*

The proposed development would meet and satisfy the above stated objectives. Specifically, the building will provide a total of 140 apartments (with a mix of studio, 1, 2, 3 bedrooms and a number of adaptable units).

The site is located in an area identified for urban renewal and transformation, in close proximity to both Liverpool Railway Station and retail and commercial facilities. The redevelopment will not result in the fragmentation of land.

Principal Development Standards

The following principal development standards are applicable to the proposal:

CLAUSE	REQUIRED	PROPOSED	COMPLIANCE
Clause 4.1 Minimum subdivision lot size	The minimum subdivision lot size shown for the land on the subdivision lot size Map is "U" 1000sq.metres.	Not proposed	N/A
Clause 4.3 Height of Building	<p>The height of a building on any land is not to exceed the maximum height shown for the land on the Height of Buildings Map</p> <p>Applicable Height limit to the site is nominated as "S" 24 metres.</p>	<p>Height of Building C1 The proposal provides a maximum height of 21.7m to highest floor and 26.7m to the lift towers of Building C1.</p> <p>Building C1 also contains open roof structures, which is up to 31m high. However these are considered as architectural roof features.</p> <p>Height of Building C2 The proposal provides a maximum height of 18.6m to highest floor and 23.45m to the lift towers of Building C2.</p>	<p>Yes, the lift towers and the architectural roof features are exempt from the height limit, as they do not contribute to the overall bulk and scale of the development (pursuant to clause 5.6 of LLEP 2008)</p> <p>Yes</p>

CLAUSE	REQUIRED	PROPOSED	COMPLIANCE
Clause 4.4 Floor Space Ratio	<p>The floor space ratio on the LEP map is 'S1' or 1.5:1.</p> <p>Within the Liverpool City Centre the maximum floor space ratio [clause 4.4(2B)] is 2.5:1 for a site area of greater than 2,500m².</p>	The proposed development will have a maximum floor space ratio of 2.5:1 (14718m ² of gross floor area).	Yes
Clause 4.6 Exceptions to Development Standards	This clause provides for a degree of flexibility in applying development standards provided a better outcome can be achieved.	No variations sought.	Yes
Clause 5.6 – Architectural Roof Features	<p>Council may permit variations to the maximum building height for roof features of visual interest.</p> <p>The roof features must be decorative elements, and the majority of the roof must be contained within the maximum building height.</p>	Building C1 proposes open roof structures, which is up to 31m high. These are considered as architectural roof features.	Yes
Clause 5.9 – Preservation of Trees or Vegetation	Councils consent is required prior to the removal of any existing trees or vegetation.	The site contains predominantly hardstand areas. The development is accompanied by an integrated landscape plan.	Yes

CLAUSE	REQUIRED	PROPOSED	COMPLIANCE
Clause 5.10 – Heritage Conservation	Council may, before granting consent to any development on land within the vicinity of land upon which a heritage item is situated, or a conservation area may require a heritage impact statement to be prepared that assesses the extent to which the carrying out of the proposed development would affect the heritage significance of the heritage item or heritage conservation area concerned	<p>The site is adjacent to a listed heritage item “McGrath Services Centre Building, Item 104” (Woollen Mill), and is in the vicinity of other another heritage item, namely: Light Horse Park (Item 70).</p> <p>The applicant has submitted a Statement of Heritage Impact. See below for matters discussed regarding Aboriginal heritage.</p>	Yes, subject to conditions. Refer to comments below in relation to Aboriginal Heritage
Liverpool City Centre			
Clause 7.1 - Objectives for Development in Liverpool City Centre	Council must be satisfied that the proposed development is consistent with such of the objectives considered relevant to the development.	Objectives (a) to preserve existing street layout and reinforced rate character; and (f) to enhance places of heritage significance. This matter is discussed at the end of this table.	Yes

CLAUSE	REQUIRED	PROPOSED	COMPLIANCE
Clause 7.4 Building Separation in the Liverpool City Centre	<ul style="list-style-type: none"> • 9 metres for parts of buildings between 12 metres and 25 metres above ground level (finished) on land in Zone R4 High Density Residential, and • 12 metres for parts of buildings between 25 metres and 35 metres above ground level (finished) on land in Zone R4 High Density Residential, and • 18 metres for parts of buildings above 35 metres on land in Zone R4 High Density Residential and 	Both buildings are less than 25m in height and have a building separation of 18.m between them	Yes
Clause 7.5 – Design Excellence In Liverpool City Centre	The objective of this clause is to deliver a high standard of architectural and urban design.	<p>The proposal is of high quality design.</p> <p>See earlier discussion regarding DEP and City Architect's comments</p>	Yes
General Provisions			

CLAUSE	REQUIRED	PROPOSED	COMPLIANCE
Clause 7.6 Environmentally significant land	Consider impacts of development on environmentally significant land, bed and banks of waterbody, water quality and public access to foreshore.	The site contains a small portion of environmentally significant land identified on mapping as fronting the Georges River. A Riparian Report has been prepared and previously submitted by ACS Environmental. The section of the Georges River that forms the eastern boundary of the site is a 3rd Order watercourse; as such, a riparian setback (VRZ) of 30m from the riverbank is taken as a guideline to the distance incorporated as a vegetated buffer zone to the development (NSW Office of Water 2012).	Yes

CLAUSE	REQUIRED	PROPOSED	COMPLIANCE
Clause 7.7 Acid Sulfate Soils	<p>The subject site is identified as Class 5 Land on the Acid Sulfate Soils Map.</p> <p>Works within 500m of adjacent Class 1, 2, 3, or 4 land that is below 5 metres AHD by which the water table will be lowered an Acid Sulfate Soils Management Plan is required.</p>	<p>The proposal proposes basement car parking requiring excavation.</p> <p>A Geotechnical report has been submitted addressing the Acid Sulfate Soils Management.</p>	Yes - to be conditioned
Clause 7.9 Foreshore Building Line	The objective of this clause is to ensure that development in the foreshore area will not impact on natural foreshore processes or affect the significance and amenity of the area.	No encroachments to the Foreshore Building Line	Yes
7.14 – Minimum Building Street Frontage	The aim of this clause is to ensure that visually buildings have an appropriate overall horizontal proportion compared to their vertical proportion, and to ensure that car parking is appropriately dimensioned and vehicular access is reasonably spaced.	<p>The site has a 55.4metre frontage to Shepherd Street which complies with the required 24metre requirement.</p> <p>Pedestrian and vehicular access is proposed from Shepherd St.</p>	Yes
7.31 Earthworks	to ensure that earthworks for which development consent is required will not have a detrimental impact on environmental functions and processes, neighbouring uses, cultural or heritage items or features of the surrounding land	Waste management plan has been submitted for demolition and construction. This will be undertaken in conjunction with the required Remediation Action Plan.	Yes

Aboriginal Cultural Heritage

The subject site would have contained significant natural resources (water sources) and due to this Aboriginal Settlement is likely. The Aboriginal Cultural Heritage Due Diligence Assessment found that there were no identified Aboriginal sites on the subject lots and concluded that as a result of ground disturbance there is very low likelihood of intact archaeological deposits. No further archaeological investigation is required. See **Attachment 5** for further details provided in the Aboriginal Cultural Heritage Due Diligence Assessment.

6.2 Section 79C(1)(a)(ii) - Any Draft Environmental Planning Instrument

The following draft Environmental Planning Instruments applies to the site,

(a) Draft Liverpool Local Environmental Plan 2008 Amendment No. 52 (RZ-10/2015)

Draft LEP 2008 amendment No. 52 is a Council initiated planning proposal seeking to review the development standards of the Liverpool City Centre with the purpose of facilitating an urban form that responds to the character of the specific precinct and is able to incorporate different building typologies and offers a range of economic opportunities. The planning proposal is intended to act as a facilitator to mixed-use growth in Liverpool City Centre and does not relate to any specific development. The adequacy of infrastructure for any specific development proposed pursuant to this planning proposal would be assessed as part of a development application.

A critical part of the plan is to provide proportionate development standards to allow height and FSR to better relate resulting in workable and desired building density outcomes and improve access to and connectivity within Liverpool City Centre. Council intends to extend laneways through to streets so that there are clear sight lines and create arcades and cross block links. Other upgrades to infrastructure (the provision of further electricity substations, the possible undergrounding of electricity cables) will progress over time as necessary.

With regards to the subject application, it facilitates an urban form that responds to the character of the specific precinct and is able to incorporate different building typologies and offers a range of economic opportunities in the city centre, which supports the intention of amendment No 52.

(b) Draft Amendment No.65 to the LLEP 2008 (RZ-17/2015)

The Shepherd Street Precinct which includes Nos.20-33 Shepherd St is subject to a Planning Proposal (Draft Amendment No.65 to the LLEP 2008) and seeks to increase the building height from 24m to 77m and increase the floor space ratio (FSR) from 1.5:1 and 2.5:1 to between 3.3:1 and 3.7:1

The Gateway Determination to the Planning Proposal was provided from the Department of Planning and Environment on the 9 September 2016.

6.3 Section 79C(1)(a)(iii) - Provisions of any Development Control Plan

Part 1 - General Controls for all Development and Part 4 - Development in The Liverpool City Centre of the Development Control Plan apply to the proposed development and prescribe standards and criteria relevant to the proposal.

The following compliance table outlines compliance with these controls.

PART 1 – GENERAL CONTROLS FOR ALL DEVELOPMENT		
CONTROLS	PROVIDED	COMPLIES
2. TREE PRESERVATION	Minimal existing vegetation. Two trees within setbacks to Shepherd Street will be removed, with a number (Bottlebrush, Paperbark, and Pepper Tree) to be retained.	Yes subject to conditions
3. LANDSCAPING	The proposal provides a detailed landscape plan and design that includes a Landscape Design report.	Yes
4. BUSHLAND AND FAUNA HABITAT PRESERVATION	<p>The subject site contains bushland or fauna habitat. A Riparian, Assessment and Management report and an Arborist Report was submitted, which are considered acceptable.</p> <p>A strip of vegetation (20m in width) adjoins the site to the south, running along the bank of the Georges River. The DPI Water has issued its General Terms of Approval.</p>	Yes
5. BUSHFIRE RISK	The subject site is not bushfire prone	N/A
6. WATER CYCLE MANAGEMENT	<p>The proposed development provides a stormwater and hydraulic design. It proposes a connection to Council's stormwater infrastructure to the pit located at the end of Atkinson St.</p> <p>A Stormwater Drainage design has been prepared. The proposal does not provide for on-site detention due to the impervious site area and location adjacent the discharge point at Georges River.</p>	Yes
7. DEVELOPMENT NEAR CREEKS AND RIVERS	<p>The subject site has a frontage of approximately 52metres to the Georges River.</p> <p>The DPI Water has issued its General Terms of Approval.</p> <p>The proposed development is considered to be acceptable in terms of its impacts on the river.</p>	Yes
8. EROSION AND SEDIMENT CONTROL	<p>The proposed provides a soil and erosion control measures including</p> <ul style="list-style-type: none"> • sediment and erosion control silt fence • Temporary Construction Vehicle Entry consisting of a 15m long by 3m wide 'cattle rack'. • Stormwater pump out if required • Dust control measures that appears to be acceptable to Council. Conditions will be imposed regarding this matter. 	Yes
9. FLOODING RISK	The proposed development site is located	Yes

PART 1 – GENERAL CONTROLS FOR ALL DEVELOPMENT

	<p>within the catchment of Georges River. The site is not affected by flooding under 1% Annual Exceedance Probability (AEP) event. However, it is affected by the Probable Maximum Flood (PMF) event. The 1% AEP flood level in the vicinity of the proposed development site is 9.9m Australian Height Datum (AHD).</p> <p>In order to mitigate adverse impact of flooding development controls shall apply for the proposed development. Conditions related to stormwater drainage system and water quality should be obtained from Land Development section.</p>	
10. CONTAMINATION LAND RISK	<p>The proposal involves a change in land-use from industrial to residential use.</p> <p>A Detailed Site Investigation has been undertaken which concludes that the <i>'site would be suitable for residential redevelopment provided that remedial works and/or management intervention are implemented to address the elevated levels of heavy metals TPH, benzene, PAH and asbestos in the soil'</i>.</p>	Yes
11. SALINITY RISK	<p>The Salinity Map for Western Sydney (2002) identifies the site in an area of 'moderate' salinity.</p> <p>This section of the DCP requires a Level 3 salinity response for 'moderate' salinity areas. The applicant has identified the land as containing low levels and will construct the foundations and slab flooring in accordance with AS2159-2009 and AS2870-2011.</p>	Yes
12. ACID SULFATE SOILS RISK	<p>The subject site is identified as Class 5 on the Acid Sulphate Soils Map. A Geotechnical Assessment has been submitted, which confirms no special building measures are required as the proposal will not be substantially affected by Acid Sulphate Soils.</p>	Yes
13. WEEDS	<p>There is an Environment Restoration Plan in place to address the weed issues along the Georges River frontage</p>	Yes
14. DEMOLITION OF EXISTING DEVELOPMENT	<p>The site has a number of buildings proposed for demolition. The Waste Management Plan and demolition plan have been submitted.</p>	Yes
15. ON-SITE SEWERAGE DISPOSAL	<p>The subject site does not require on-site sewerage disposal as the area has access to sewer.</p>	N/A
16. ABORIGINAL ARCHAEOLOGY	<p>An Aboriginal Cultural Heritage Due Diligence Assessment was submitted with DA, which has been assessed by Council's Heritage Advisor as satisfactory.</p>	Yes

PART 1 – GENERAL CONTROLS FOR ALL DEVELOPMENT		
17. HERITAGE AND ARCHAEOLOGICAL SITES	<p>The subject site is within close proximity of a heritage listed item “McGrath Services Centre Buisling, Item 104” (Woolen Mill), and is in the immediate vicinity of other another heritage item, namely: Lighthorse Park (Item 70).</p> <p>The applicant has submitted a Statement of Heritage Impact, which has been assessed by Council’s Heritage Advisor as satisfactory.</p>	Yes
18. NOTIFICATION OF APPLICATIONS	The development application has been advertised in accordance with this component of the DCP. No submissions were received during the exhibition periods.	Yes
20. CAR PARKING & ACCESS	Controls for car parking and Access are outlined in the Part 4 – Development in the Liverpool City Centre.	Yes
21. WATER CONSERVATION	Controls for Water Conservation are outlined in the Part 4 – Development in the Liverpool City Centre.	Yes
22. ENERGY CONSERVATION	Controls for Energy Conservation are outlined in the Part 4 – Development in the Liverpool City Centre.	Yes
25. WASTE DISPOSAL AND RE-USE FACILITIES	Controls for Waste Disposal and re-use Facilities are outlined in the Part 4 – Development in the Liverpool City Centre.	Yes
26. OUTDOOR ADVERTISING	No advertising structures are proposed as part of the	No advertising structures are proposed as part of the application
27. SOCIAL IMPACT ASSESSMENT	<p>Comprehensive Social Impact Assessment for development of, or major changes to:</p> <ul style="list-style-type: none"> - Residential flat buildings greater than 100 units - Development that results in a reduction of affordable housing 	Refer to comments below
<p>The following recommendations are provided from Council’s Social Planner:</p> <ul style="list-style-type: none"> • Early completion of public domain improvements, including gathering spaces, street furniture and lighting, is recommended to facilitate social interaction, activation and positive perceptions of safety. • Provision of space for a community garden to facilitate access to fresh food and facilitate social interaction. • A contribution towards the implementation of community development activities in the early stages following completion, for up to 2 years. • Engagement of a local service provider to conduct community development activities, including early community garden management. • Inclusion of night time activation activities to promote surveillance opportunities and perceptions of safety. 		

PART 4 – DEVELOPMENT IN THE LIVERPOOL CITY CENTRE		
CONTROLS	PROVIDED	COMPLIES
BUILDING FORM		
BUILDING TO STREET ALIGNMENT AND STREET SETBACKS		
Street building alignment and street setbacks are to comply with Figure 3 which requires a 4 -4.5m landscaped setback to both street frontages.	600mm setback is proposed along Shepherd Street, the building façade line set back at approximately 3m. The balcony setback is reduced to a minimum of 0m at a point encroachment, closest to 32 Shepherd Street, where the lot boundary is angled.	No, refer to justification below
<p>The 600mm front setback along Shepherd Street has been proposed to create a compliant building separation between the two buildings internally due to the site constraint at the rear with the Foreshore Building Line. There is also design merit in reducing the front setback to provide a sharper, urban edge and street-wall to reflect the likely future ‘urban’ nature of the area rather than ‘suburban’, as agreed by the DEP. The reduced front setback is acceptable from a heritage and urban design perspective, and it is therefore considered satisfactory in this particular instance based on the constraint of the site.</p>		
STREET FRONTAGE HEIGHTS		
The street frontage height of buildings must comply with the minimum and maximum heights above ground level on the street front as shown in Figure 5 which requires a street frontage height to Shepherd Street and Atkinson Streets of 15-20m (5-6 storeys).		
	The proposal provides for a height of 18.6m to 21.7m (6 - 7 levels)	Yes
BUILDING DEPTH AND BULK		
500m ² maximum floor plate sizes and depth of buildings above 25m in height for residential development.	The proposed development is less than 25m high.	N/A

PART 4 – DEVELOPMENT IN THE LIVERPOOL CITY CENTRE		
Maximum 20% of total gross floor area of development permitted for areas above 25m in height.	No floor plates proposed above 25metres.	N/A
BOUNDARY SETBACKS The minimum building setbacks are to comply with the following:		
Residential up to 12m in height: <ul style="list-style-type: none"> - Habitable rooms: 6m side and rear setback - Non-habitable: 3m side; 6m rear. Residential between 12 – 25m height: <ul style="list-style-type: none"> - Habitable room: 9m side and rear - Non-habitable: 4.5m side; 6m rear. 	The proposal meets the minimum separation requirements with a 6m between the buildings of C1 and C2. The internal building separation meets the minimum requirements of 18m, as buildings are less than 25m in height. The southern boundary is provided with a minimum of 6m side setback and the northern boundary is provided with a 3 metre side setback.	Generally complies. The development provides a 3m side setback along the northern side boundary with the assumption that new development adjacent will be required to provide similar setbacks to meet the overall separation requirements
SITE COVER AND DEEP SOIL ZONES		
SITE COVER The maximum site cover for development in residential zones is 50%. DEEP SOIL ZONES 15% deep soil zone plantings should be provided.	Site Coverage (comprising buildings, driveways, parking, paths, bin & bicycle rooms) - the proposed development has a site coverage of 63% or 3736m ² . Deep soil zones – 1366m ² or 23%	Yes Yes
AMENITY		
FRONT FENCES Front fences are to be designed to not present as a solid edge to the public domain.	No front fence proposed	N/A

PART 4 – DEVELOPMENT IN THE LIVERPOOL CITY CENTRE		
<p>SAFETY AND SECURITY</p> <p>Ensure building design allows for passive surveillance.</p> <p>Maximise the number of residential front door entries at ground level.</p> <p>Provide entrances which are visually prominent positions.</p>	<p>Passive surveillance of internal areas provided by buildings overlooking ground level car park areas and pathways.</p> <p>Predominantly buildings accessed via ground level.</p> <p>Entrances designed as lobbies with visually prominent building elements.</p>	Yes
<p>AWNINGS</p> <p>Weather protection to entrances is required.</p>	<p>The main street entry to the residential buildings is the western entry of Building C2. This area will be appropriately weather protected with a canopy projecting above the entry.</p>	Yes
<p>BUILDING EXTERIORS</p>	<p>Site designed in consideration of heritage items including provision of industrial type architectural language and re-use of truss elements throughout the design.</p>	Yes
<p>CORNER TREATMENTS</p>	<p>Site designed in consideration of heritage items.</p>	Yes
TRAFFIC AND ACCESS		
<p>ON SITE PARKING</p> <p>Car Parking For Residential Development:</p> <ul style="list-style-type: none"> - 1 space per 2 studio apartments; - 1 space per 1 or 2 bedroom apartments; - 1.5 spaces per 3 bedroom; - 1 space per 10 units for visitors - 1 space per 40 units for service vehicle 	<p>A total of 140 apartments is proposed:</p> <ul style="list-style-type: none"> • 2 x studio apartments • 53 x 1-br units • 78 x 2-br units • 7 x 3-br units <p>Total Required: 157 spaces</p> <p>It is proposed to provide 161 car parking spaces within two basement levels, as follows:</p> <ul style="list-style-type: none"> • 14 accessible parking spaces (included in the 161 car parking spaces); • 1 car wash bay; and • 4 Service vehicles. <p>The proposed parking meets the minimum required spaces.</p>	Yes
<p>1 motorcycle space per 20 car spaces (8 required)</p> <p>1 bicycle space per 200m² (14,718m² GFA) = 73 spaces</p>	<p>8 motorcycle parking spaces;</p> <p>Bicycle storage proposed in secure storage areas. Total 73 spaces.</p>	<p>Yes</p> <p>Yes</p>

PART 4 – DEVELOPMENT IN THE LIVERPOOL CITY CENTRE		
ENVIRONMENTAL MANAGEMENT		
ENERGY EFFICIENCY AND CONSERVATION New residential development is to comply with BASIX	BASIX certificates and report accompany the development application.	Yes
WATER CONSERVATION New residential development is to comply with BASIX	BASIX certificates and report accompany the development application.	Yes
REFLECTIVITY New buildings reduce glare, reflectivity new materials <20%, reflectivity if extensive glazing.	Brick facades, new solid materials sheet, weatherboard, no extensive glazing.	Yes
WIND MITIGATION	A wind effects report is required for buildings over 35m.	N/A – proposal is less than 35m in height
NOISE	Site is located within an area identified as requiring a noise report or setbacks for noise (i.e. adjacent railway line or road). An acoustic report is submitted, which is considered satisfactory.	Yes
WASTE	Common waste bin areas provided to service but access to these areas to be demonstrated	Yes
FLOOD PLAIN AND WATER CYCLE MANAGEMENT	A flood report has been submitted, which has been assessed by Council's Flooding section.	Yes
CONTROLS FOR RESIDENTIAL DEVELOPMENT		
6.1 Housing Mix		

PART 4 – DEVELOPMENT IN THE LIVERPOOL CITY CENTRE		
<p>To achieve a mix of living styles, sizes and layouts within each residential development, comply with the following mix and size:</p> <ul style="list-style-type: none"> - studio and one bedroom units must not be less than 10% of the total mix of units within each development, - three or more bedroom units must not to be less than 10% of the total mix of units within each development, and <p>10% of all dwellings (or at least one dwelling – whichever is greater) must be designed to be capable of adaptation for disabled or elderly residents.</p>	<p>140 apartments proposed.</p> <ul style="list-style-type: none"> • 2 x studio apartments (1%) • 53 x 1-br units (38%) • 78 x 2-br units (56%) • 7 x 3-br units (5%) <p>10% of apartments are proposed to be adaptable.</p> <p>14 disabled parking spaces will be provided and access paths to the communal space will be suitable for disabled access.</p> <p>There are 14 proposed adaptable units with an access report provided.</p>	<p>No, 3 bedroom units being less than 10%. Refer to discussion below</p> <p>Yes</p> <p>Yes</p>
6.2 Multi Dwelling Housing	This section applies generally to town houses	N/A
Facades and setbacks.	This section applies generally to town houses	N/A
Units with ground level access: Private Open space ground-level area totaling 40 sqm.	This section applies generally to town houses	N/A
Communal open space	This section applies generally to town houses	N/A
Parking and driveways	This section applies generally to town houses	N/A
7. Controls for Special Areas		
7.1 Heritage and conservation areas	<p>The application includes an assessment of Heritage significance including submission of heritage reports:</p> <ul style="list-style-type: none"> - Statement of Heritage Impact. - Aboriginal Cultural Heritage. 	Yes

DCP Variations

The assessment has identified a number of variations, namely:

Site Coverage

Comment: The required maximum site cover is 50%. However, the development proposes 63% site coverage.

The applicant has provided an embellished common open space area, adjacent to the foreshore and in between the two buildings. It is considered that attempting to achieve compliance would result in a reduction of unit yield which considering the arguments proposed by the applicant in the design philosophy is not reasonable and consequently a variation is supported in this particular instance.

Apartment mix

Comment: The required apartment mix is 10% for 3 bedroom apartments, however, the development proposes 5% 3 bedroom units within the development.

Despite that 5% of the units are 3 bedrooms compared with the required 10%, the proposal still offers apartments with a mix of studio, one, two and three bedrooms, which appeals to a wide range of household types and budgets being on a water front property. This apartment mix is generally in accordance with the ADG and SEPP 65. The proposal still achieves 25 of the apartments to be dedicated for adaptable use for people with disabilities and are distributed throughout the buildings.

On this basis, it is considered that the proposal can be supported in this particular instance.

6.4 Section 79C(1)(a)(iia) - Any Planning Agreement or any Draft Planning Agreement

No planning agreement relates to the site or proposed development.

6.5 Section 79C(1)(a)(iv) – The Regulations

The Environmental Planning and Assessment Regulations 2000 requires the consent authority to consider the provisions of the Building Code of Australia. If approved appropriate conditions of consent will be imposed requiring compliance with the BCA.

6.6 Section 79C(1)(a) (v) – Any coastal zone management plan (within the meaning of the Coastal Protection Act 1979), that apply to the land to which the development application relates

There are no Coastal Zones applicable to the subject site.

6.7 Section 79C(1)(b) – The Likely Impacts of the Development

(a) Natural and Built Environment

Built Environment

The introduction of high residential development in this area will be met with some initial opposition as it does not reflect the historic industrial land use of the area. This section of Shepherd Street is zoned high density residential and the proposal is therefore considered consistent with the long term future character of the locality.

The proposed development will conserve and enhance surrounding heritage item at 20 Shepherd McGrath Services Centre Building, Item No. 104 (Woollen Mill).

The design creates an activated common area adjoining the Georges River and a Crime Prevention Through Environmental Design (CPTED) assessment of the development was carried out and referred to the NSW Police who raised no objections. The design allows for active and passive overlooking of the adjoining foreshore and public areas providing opportunities for surveillance throughout the site.

Natural Environment

The north-eastern corner of the site is affected by low flooding risk however the application provides for a compensatory flood storage area to mitigate adverse flooding impacts.

The site has been identified as containing known contaminants within the soil that could impact upon the groundwater and a Remediation Action Plan (RAP) has been submitted to make the site suitable for residential use. The reports submitted demonstrate that remediation is possible and consequently the redevelopment will improve and provide further protection to the groundwater thus reducing the potential for contamination leaching into the Georges River.

Council's Sustainable Environment have advised no issues raised regarding ecological or riparian matters if the DA is undertaken in accordance with comments provided by DPI Water.

On the above basis the proposal is considered acceptable as is in accordance with the type of development envisaged for the site under LLEP 2008. The development will have positive social and economic benefits in terms of creating additional resident population to support local businesses and services and will provide greater housing choice within the Liverpool local government area. The proposal does not result in any unreasonable environmental impacts and provides for a high quality architectural and urban design outcome.

(b) Social Impacts and Economic Impacts

The development is considered beneficial as it promotes high density residential development within the City Centre. The proposed is sympathetic to the historical industrial fabric of the locality.

A comprehensive Social Impact Assessment for the development was lodged, which was assessed by Council's Social Planner as satisfactory.

Liverpool Contributions Plan 2007 (Liverpool City Centre)

The Liverpool Contributions Plan 2007 provides information on the extent of anticipated new development, the extent of new public services and amenities needed to support the new development and the contributions that the new development must make to fund the public services and amenities.

The development will generate additional demand as follows:

<u>Facilities</u>	<u>Amount (\$)</u>	<u>Job No.</u>
Central Library Extensions	\$18,844	GL.10000001870.10112
Whitlam Centre Extensions	\$13,917	GL.10000001869.10110
District Community Facility upgrade (Central area)	\$17,966	GL.10000001870.10099
Woodward and Collimore Parks	\$84,544	GL.10000001869.10105
Georges River Foreshore	\$591,807	GL.10000001869.10105
Bigge Park	\$126,816	GL.10000001869.10105
Pioneer Park	\$126,816	GL.10000001869.10105
Access – car parks, bridge link, bus priority	\$0	GL.10000001868.10108
<u>TOTAL</u>	<u>\$980,708</u>	

6.8 Section 79C(1)(c) – The Suitability of the Site for the Development

The site and locality are identified for future high density urban development. This section of Shepherd Street whilst currently industrial will eventually undergo urban renewal. The site has heritage considerations and due to the past industrial activities the site has known contamination issues which can be remediated to a level that allows for residential development. In respect of remediation, an assessment of the findings has been discussed earlier in the report.

Apart from these matters, there are no other noticeable constraints and the site is relatively level, with no significant vegetation and easy access.

The proposal is generally compliant with the provisions of LEP 2008 and DCP 2008 as outlined in the report. The identified variations have been considered and are supported as they do not result in any long term adverse impacts. Overall the development is considered to satisfy the relevant controls for site selection.

6.9 Section 79C(1)(d) – Any submissions made in relation to the Development

(a) Internal Referrals

Internal Department	Status and Comments
Building	No objection, subject to conditions
Landscaping	No objection, subject to conditions
Environmental Health	No objection, subject to conditions
Land Development Engineering	No objection, subject to conditions
Traffic Engineering	No objection, subject to conditions
Flooding	No objection, subject to conditions
Community Planning	No objection, subject to recommendations
Flora/Fauna (Natural Environment)	No objection, subject to conditions and comments provided to the DA from DPI Water and NSW Fisheries
Heritage	No objection, subject to conditions
Design Excellence Panel	Recommended modifications were advised to be made to the proposal. The applicant has made some of the recommended changes in revised plans dated 1 October 2015, refer to Attachment 3. These are considered satisfactory.
City Architect /Strategic	Requested changes to be made to the building design. These changes were made and satisfactorily address the concerns raised by the City Architect.

The following comments have been received from Council's Internal Departments:

(b) External Referrals

The following comments have been received from External agencies:

External Department	Status and Comments
DPI Water	General Terms Of Approval issued
Endeavour Energy	Satisfactory subject to conditions of consent
Sydney Water	Satisfactory subject to conditions of consent
Bankstown Airport	<p>The proposal has been referred to Bankstown Airport in accordance with the requirement of Clause 8 of the Airports (Protection of Airspace) Regulation 1996 as the development may be a 'controlled activity' (a building which is proposed within 'prescribed airspace').</p> <p>To date no written comments have been provided. However, there is no impediment to determining the proposal as there is no requirement under the Environmental Planning Assessment Act or Regulation for concurrence, nor is the issue of Airport referrals an Integrated matter under S91 of the Act.</p> <p>The Bankstown Airport Obstacle Limitation Surfaces (OLS) for the site is between 130m and 140m (AHD). The subject site is 24m, which is well below the OLS.</p>

(c) Community Consultation

The development application was advertised for a period of 30 days between 29 July 2015 and 28 August 2015 in accordance with LDCP 2008. No submissions were received during this period.

6.8 Section 79C(1)(e) – The Public Interest

The proposed development is consistent with the zoning of the land and would represent a high quality development for Liverpool. The development provides additional housing opportunities within close proximity to employment opportunities and public transport.

In addition to the social and economic benefit of the proposed development, it is considered to be in the public interest.

7 CONCLUSION

In conclusion, the following is noted:

- The subject Development Application has been assessed having regard to the matters of consideration pursuant to Section 79C of the EP&AA1979 and is considered satisfactory.
- The Development Application seeks development consent for a residential development at 28 Shepherd Street, Liverpool.

- The proposal is consistent with the objectives of the R4 High Density Residential zones that are applicable to the site under the LLEP 2008. The proposal is also consistent with the objectives of the floor space ratio and building height development standards.
- The proposal substantially complies with the provisions of the LDCP 2008.
- The proposal provides an appropriate response to the site's context and satisfies the SEPP 65 design principles and the requirements of the Residential Apartment Design Guide. The scale and built form is consistent with the desired future character of the area that is envisaged under the LLEP 2008 and LDCP 2008.
- The development will be well located in relation to transport, employment, shopping, business and community services, as well as recreation facilities. It will deliver an efficient use of the site with well-designed high amenity dwellings.
- The application was referred to a number of external authorities with no objections raised, subject to imposition of conditions.
- The proposed development will have positive impacts on the surrounding area, which are largely anticipated by the zoning of the site. The development is in accordance with the zone objectives, LLEP 2008 draft amendment 65 and the master planning exercise for proposed the precinct.

It is for these reasons that the proposed development is considered to be satisfactory, the subject application is recommended for approval, subject to conditions.

8 ATTACHMENTS

- 1. Amended Plans of the proposal**
- 2. Recommended conditions of consent**
- 3. Design Excellence Panel minutes and changes by applicant**
- 4. Heritage Impact Assessment**
- 5. Aboriginal Cultural Heritage Due Diligence Assessment**
- 6. Applicant response to DPI Water issues**
- 7. Revised Riparian Assessment**
- 8. DPI Water comments and GTA**
- 9. Sydney Water comments**
- 10. Revised Design Verification Statement**
- 11. Remedial Action Plan**
- 12. Revised Apartment Design Guide Compliance Table**
- 13. Revised DCP Compliance Table**
- 14. Revised BASIX report**
- 15. Amended Statement of Environmental Effects**
- 16. Social Impact Assessment**
- 17. Acoustic Report**