

# Architect's Certificate of Building Design Compliance

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Architecture, Interiors  
Urban Design  
Project Management  
ABN 63 804 200 206  
Brewster Murray Pty Ltd



- ☐ Stage A Concept Options
- ☐ Stage B Design Development (for exempt development only)
- ☒ Stage C Development Assessment under either Part 4 or Part 5 of EP&A Act
- ☐ Stage D Tender Documentation
- ☐ Stage E Construction

**ADDRESS** 66 – 70 Pegler Avenue, South Granville

**JOB NUMBER** BGWYQ

**PROJECT DESCRIPTION** Demolition of 3 no. existing dwellings and tree removal and construction of a new two - three storey seniors housing development containing 24 units (11 x 2 bed and 13 x 1 bed), at grade parking for 11 cars and associated landscaping and consolidation of existing lots into a single title.

I, Michael Bullen being the Nominated Architect and registered Design Practitioner of "the firm" Brewster Murray Pty Ltd **certify that:**

To the best of my knowledge, information and belief this project has been designed in accordance with:

# Architect's Certificate of Building Design Compliance

Design Requirements/Statutory/Local Government Regulations	Stage	Yes	No	N/A	Comments on any changes since last stage or non-compliances
1.1 Complies with project brief	A,B,C,D	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.2 Complies with outcomes of site investigation	A,B,C,D	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.3 Complies with outcomes of Feasibility Study	A	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.4 Complies with approved Concept Option and recommendations have been incorporated	B	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.5 Complies with the approved Design Development and recommendations have been incorporated	B,C	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.6 Complies with Development Consent or Part 5 Approval and Conditions	D,E	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1.7 Consent conditions have been incorporated into drawings	D,E	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1.8 Complies with Planners Compliance Report & checklists	C	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.9 Complies with Good Design for Social Housing and Land and Housing Corporation Dwelling Requirements	A,B,C,D	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.10a Complies with relevant legislation – Design and Building Practitioners Act	D,E	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1.10b Complies with relevant legislation - State Environmental Planning Policy (Housing) 2021	A,B,C,D	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Relevant LEP/DCPS	A,B,C,D	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
State Environmental Planning Policy (Exempt and Complying Development Codes) 2008	A,B,C,D	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.11 Complies with BCA	A,B,C,D	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.12 Complies with relevant standards including AS 4299 (Adaptable Housing) & AS 1428 (Access & Mobility)	A,B,C,D	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.13 Complies with Rural Fire Services requirements	A,B,C,D	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.14 Complies with other relevant statutory requirements e.g. RMS, list as required	A,B,C,D	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

# Architect's Certificate of Building Design Compliance

2. We have checked the compatibility and proper integration of the work, including drawings and reports, of all disciplines.	A,B,C,D	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3. All other consultants have certified their own portions of the documentation with respect to their professional responsibilities as reflected in the attached certificates.	A,B,C,D,E	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4. List of relevant drawings and documents	A,B,C,D,E	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5. Soft copy of all documents including CAD files provided	A,B,C,D,E	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

## COMMENTS:

The two - three-storey proposal reflects the emerging and future development of the area. There is an existing three storey development across the road from the site, as well as three-storey developments behind the site on Blaxcell St.

The proposed building concepts are articulated with varied setbacks, articulation of stair lobbies and balconies, privacy screens and integrated landscaping.

The northern part of the building is set-down below the existing ground slightly in order to comply with the 9.5m height plane. This results in excavation being required across a significant part of the site, but only to approx. 1m max depth.

The site slopes down approx. 2m from SW to NE. A network of stormwater pits will connect to an OSD tank under the parking area and discharge to the Council network via a new pipe run to the existing pit at No 60 Pegler Ave.

Parking is provided at grade behind the building line. There is also street parking available along the frontage.

The 2 larger palm trees at the front are retained in position and the other 3 to be replanted in suitable location. New native planting will be provided including plant screening to the bin areas, taller privacy planting along the side boundaries and more significant planting in deep soil zones at the front and rear.

An electrical substation may be required (provisional location shown).



Signed \_\_\_\_\_ Date 30-06- 23 \_\_\_\_\_

**NOTE:** The wording of this certification shall not be altered without the prior approval of NSW Land and Housing Corporation, Department of Planning and Environment.

Each drawing or document's latest completion or revision date shall be shown on the list of documents and on each document or drawing.

This certification is to be submitted by the Primary Consultant to NSW Land and Housing Corporation, at the completion of relevant stage and is a requirement for each progress payment claim.

## APPENDIX 3

### Development application – recommended documentation checklist

Information required in a development application is established in Schedule 1 of the *Environmental Planning and Assessment Regulation 2000*. For residential apartment development, SEPP 65 provides additional recommendations for development application requirements.

The following table elaborates on the SEPP recommendations and is a guide that suggests more detailed and well resolved drawings to assist with demonstrating better design practice. The consent authority may also identify additional information that is required for the assessment of a residential apartment development. All plans, elevations and sections should be drawn to scale and include a graphic scale bar and true north point. A cover page with drawing list and BASIX commitments should be included.

Documentation	Required information	Provided	
		Yes (✓)	No (x)
<b>Development details</b>	A summary document that provides the key details of the development proposal. It contains information such as the:		
	• floor space ratio of the development	✓	
	• number, mix, size and accessibility of apartments	✓	
	• number of car parking spaces for use (residential, retail, accessible, visitor etc.)	✓	
	• percentage of cross ventilation and daylight compliance	✓	
<b>Statement of Environmental Effects</b>	In addition to the consent authorities requirements:		
	• An explanation of the design in terms of the design quality principles set out in Schedule 1 of <i>State Environmental Planning Policy No 65 - Design Quality of Residential Apartment Development</i>	SEE by LAHC	
	• If the proposed development is within an area where the built form and density is changing, statements about how the proposed development responds to the existing context and contributes to desired future character of the area		
	• Description of how the proposed development achieves the relevant objectives and design criteria of the Apartment Design Guide		
<b>Site analysis</b>	Prepared consistent with Appendix 1 of the Apartment Design Guide	✓	

Documentation	Required information	Provided	
		Yes (✓)	No (x)
Site plan	A scale drawing showing:		
	• any proposed site amalgamation or subdivision	✓	
	• location of any proposed buildings or works in relation to setbacks, building envelope controls and building separation dimensions	✓	
	• proposed finished levels of land in relation to existing and proposed buildings and roads	✓	
	• pedestrian and vehicular site entries and access	✓	
	• interface of the ground floor plan with the public domain and with open spaces within the site	✓	
	• areas of communal open space and private open space	✓	
	• indicative locations of planting and deep soil zones including retained or proposed significant trees	✓	
Landscape plan	A scale drawing showing:		
	• the building footprint of the proposal including pedestrian, vehicle and service access	✓	
	• trees to be removed shown dotted	✓	
	• trees to remain with their tree protection zones (relative to the proposed development)	✓	
	• deep soil zones and associated tree planting	✓	
	• areas of planting on structure and soil depth	✓	
	• proposed planting including species and size	✓	
	• details of public space, communal open space and private open space	✓	
	• external ramps, stairs and retaining wall levels	✓	
	• security features and access points	✓	
	• built landscape elements (fences, pergolas, walls, planters and water features)	✓	
	• ground surface treatment with indicative materials and finishes	✓	
	• site lighting	✓	
	• water management and irrigation concept design	✓	

Documentation	Required information	Provided	
		Yes (✓)	No (x)
<b>Floor plans</b>	A scale drawing showing:		
	• all levels of the building including roof plan	✓	
	• layout of entries, circulation areas, lifts and stairs, communal spaces, and service rooms with key dimensions and RLs shown	✓	
	• apartment plans with apartment numbers and areas, all fenestration, typical furniture layouts for each apartment type, room dimensions and intended use and private open space dimensions	✓	
	• accessibility clearance templates for accessible units and common spaces	✓	
	• visual privacy separation shown and dimensions where necessary	✓	
	• vehicle and service access, circulation and parking	✓	
	• storage areas	✓	
<b>Elevations</b>	A scale drawing showing:		
	• proposed building height and RL lines	✓	
	• building height control	✓	
	• setbacks or envelope outline	✓	
	• building length and articulation	✓	
	• the detail and features of the facade and roof design	✓	
	• any existing buildings on the site	✓	
	• building entries (pedestrian, vehicular and service)	✓	
	• profile of buildings on adjacent properties or for 50m in each direction, whichever is most appropriate	✓	
<b>Sections</b>	A scale drawing showing:		
	• proposed building height and RL lines	✓	
	• building height control	✓	
	• setbacks or envelope outline	✓	
	• adjacent buildings	✓	
	• building circulation	✓	
	• the relationship of the proposal to the ground plane, the street and open spaces particularly at thresholds	✓	

Documentation	Required information	Provided	
		Yes (✓)	No (x)
<b>Sections (continued)</b>	<ul style="list-style-type: none"> <li>the location and treatment of car parking</li> </ul>	✓	
	<ul style="list-style-type: none"> <li>the location of deep soil and soil depth allowance for planting on structure (where applicable)</li> </ul>	✓	
	<ul style="list-style-type: none"> <li>building separation within the development and between neighbouring buildings</li> </ul>	✓	
	<ul style="list-style-type: none"> <li>ceiling heights throughout the development</li> </ul>	✓	
	<ul style="list-style-type: none"> <li>detailed sections of the proposed facades</li> </ul>	✓	
<b>Solar access study</b>	Where required, graphic documentation at winter solstice (21 June) at a minimum of hourly intervals showing:		
	<ul style="list-style-type: none"> <li>number of hours of solar access to the principal communal open space</li> </ul>	✓	
	<ul style="list-style-type: none"> <li>number of hours of solar access to units within the proposal and tabulation of results</li> </ul>	✓	
	<ul style="list-style-type: none"> <li>overshadowing of existing adjacent properties and overshadowing of future potential development where neighbouring sites are planned for higher density</li> </ul>	✓	
	<ul style="list-style-type: none"> <li>elevation shadows if shadow is likely to fall on neighbouring windows, openings or solar panels</li> </ul>		✓
<b>Cross ventilation study</b>	Where required, graphic documentation of unobstructed path of air movement through dual aspect apartments and tabulation of results	✓	
<b>Material and finishes board</b>	A sample board of the proposed external materials, finishes and colours of the proposal, keyed to elevations	✓	
<b>Illustrative views</b>	<p>Photomontages or similar rendering or perspective drawings illustrating the proposal in the context of surrounding development.</p> <p><i>Note: Illustrative views need to be prepared using a perspective that relates to the human eye. Where a photomontage is prepared, it should use a photo taken by a full frame camera with a 50mm lens and 46 degree angle of view</i></p>	✓	
<b>Models</b>	<ul style="list-style-type: none"> <li>A three dimensional computer generated model showing views of the development from adjacent streets and buildings</li> </ul>	✓	
	<ul style="list-style-type: none"> <li>A physical model that shows the massing of the proposal that includes relevant context (particularly for developments of 20 apartments or more, or on contentious sites) if required by the consent authority</li> </ul>		✓

# Certificate of Design Compliance



## CERTIFICATE OF ELECTRICAL/HYDRAULIC/STRUCTURAL/LANDSCAPE/OTHER DESIGN/DOCUMENTATION COMPLIANCE (SELECT APPLICABLE)

- ☐ Concept Design Stage
- ☒ Development Application Stage
- ☐ Tender Documentation
- ☐ Construction

ADDRESS

66-70 PEGLER AVENUE SOUTH GRANVILLE NSW

JOB NUMBER

BGWYQ

PROJECT  
DESCRIPTION

SENIORS DEVELOPMENT

I, CHAU BAO LY being the Principal/Senior Partner/NSW Land and Housing Corporation Manager of GREENLAND DESIGN ("the firm/NSW Land and Housing Corporation resource") **certify that:**

1. The Electrical/Hydraulic/Structural/Landscape/other (select applicable) design/documentation prepared by the firm/ NSW Land and Housing Corporation resource has been fully checked and is adequate for the purposes of the project.

### 2. The design/documentation

	YES	NO	N/A	Comments on any changes since last stage or non-compliances
2.1 Complies with the brief provided	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.2 Complies with the provisions Design & Building Practitioners Act	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
2.2 Is compatible with the latest drawings and the information received from the Architect/NSW Land and Housing Corporation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	



# Certificate of Design Compliance

2.3 Complies with the approved Concept Design Option	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.4 Complies with Development Consent drawings and conditions	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
2.5 Complies with Council requirements (evidence attached)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
2.6 Complies with the BCA (including Essentials Services)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
2.7 Complies with applicable Australian Standards	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.8 Complies with other relevant Statutory requirements (please specify)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
3. We have advised the Architect of design changes carried out by us that could impact on the architectural design and other disciplines.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.1 List of relevant drawings and documents is attached	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

## COMMENTS:

ISSUED LANDSCAPE DRAWINGS: LA01 & LA02 (ISSUE B)

Signed



Date 06/02/2023

## NOTE:

- The wording of this certification shall not be altered without the prior approval of NSW Land and Housing Corporation.
- The list of final documents shall be by title, number and latest completion or revision date shown on each.
- The architect is responsible for lodging all project consultants' certification of compliance with the Project Officer, NSW Land and Housing Corporation, at the completion of each design stage.

# Certificate of Design Compliance



## CERTIFICATE OF STORMWATER CIVIL DOCUMENTATION COMPLIANCE

- ☐ Concept Design Stage
- ☒ Development Application Stage
- ☐ Tender Documentation
- ☐ Construction

ADDRESS

66 – 70 Pegler Avenue, South Granville

JOB NUMBER

BGWYQ

PROJECT  
DESCRIPTION

Demolition of 3 no. existing dwellings and tree removal and construction of a new two - three storey seniors housing development containing 24 units (11 x 2 bed and 13 x 1 bed), at grade parking for 11 cars and associated landscaping and consolidation of existing lots into a single title.

I, \_\_\_\_\_ Alistair McKerron \_\_\_\_\_ being the Principal/Senior Partner/NSW Land and Housing Corporation Manager of \_\_\_\_\_ Greenview Consulting Pty Ltd \_\_\_\_\_ ("the firm/NSW Land and Housing Corporation resource") **certify that:**

1. The Stormwater Civil design/documentation prepared by the firm/ NSW Land and Housing Corporation resource has been fully checked and is adequate for the purposes of the project.

### 2. The design/documentation

	YES	NO	N/A	Comments on any changes since last stage or non-compliances
2.1 Complies with the brief provided	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.2 Complies with the provisions Design & Building Practitioners Act	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	At Part 5 Stage

# Certificate of Design Compliance

2.2 Is compatible with the latest drawings and the information received from the Architect/NSW Land and Housing Corporation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.3 Complies with the approved Concept Design Option	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.4 Complies with Development Consent drawings and conditions	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	At Part 5 Stage
2.5 Complies with Council requirements (evidence attached)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See comments
2.6 Complies with the BCA (including Essentials Services)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	At Part 5 Stage
2.7 Complies with applicable Australian Standards	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	At Part 5 Stage
2.8 Complies with other relevant Statutory requirements (please specify)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
3. We have advised the Architect of design changes carried out by us that could impact on the architectural design and other disciplines.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.1 List of relevant drawings and documents is attached	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

## COMMENTS:

We received comments from Ravi Tulachan Senior Development Engineer from Cumberland City Council dated 2/11/2023 and confirming in principle the design meets Cumberland City Council's Stormwater Policies and we will just need additional detailing at Tender Stage.

Signed  \_\_\_\_\_ Date 22/11/2023

## NOTE:

- The wording of this certification shall not be altered without the prior approval of NSW Land and Housing Corporation.
- The list of final documents shall be by title, number and latest completion or revision date shown on each.
- The architect is responsible for lodging all project consultants' certification of compliance with the Project Officer, NSW Land and Housing Corporation, at the completion of each design stage.

## STORMWATER DESIGN STATEMENT

**PROJECT:** LAHC Senior Housing Project

**DATE:** 22<sup>nd</sup> of Nov 2023

**CLIENT:** Brewster Murray

**REFERENCE:** 211116

**ADDRESS:** 66-70 Pegler Avenue, South Granville

**DRAWINGS:** C01 (8) , C02 (8), C03 (1), C04 (8), C05 (1), C06 (4), C07 (4), C08 (3) & C09 (3), C10 (3) & C11 (3)

**ELEMENTS:** Stormwater Drainage Design

We confirm that the above design is in accordance with normal engineering practice and meets the requirements of the National Construction Code, and relevant Australian standards. In particular, the design is in accordance with the following:

REFERENCE	TITLE
ARR 2019	Institution of Engineers' publication "Australian Rainfall and Runoff" (2019)
	Council's "Stormwater Management DCP"
AS3500.3: 2021	Stormwater Drainage

We confirm that the computations for the design have been carried out by a practicing qualified Engineer.

Yours faithfully,

For & on behalf of Greenview Consulting,

**Prepared by:**



Ralph Camilet  
Design Engineer

**Reviewed by:**



Alistair McKerron B.E., M.I.E.(Aust.), CP Eng., NPER no 2220277  
Project Engineer



Suite 201, 531 Kingsway  
Miranda NSW 2228  
w: [www.greenview.net.au](http://www.greenview.net.au)  
Greenview Consulting Pty Ltd  
A.B.N 32 600 067 338

Brewster Murray Architects

**Date**  
30<sup>th</sup> of June 2023

**Job Number**  
211116

**Stormwater Issues for proposed residential development at  
66-70 Pegler Avenue, SOUTH GRANVILLE NSW  
Ref: OA2023/0002**

Dear Sir/Madam,

Please find following our response to Council's issues raised in their 21<sup>st</sup> April 2023 letter.

*Stormwater*

*1. The proposed driveway is likely to impact on the existing RHS outlet pipe from the neighbouring property (335 Blaxcell Road). The exact location and levels (invert level, obvert level, and the Finished surface level) should be investigated and shown on the amended stormwater plan for clarity. The conflict must be resolved with appropriate remedial measures which must be clearly outlined.*

Please refer drawings C08 & C09 for proposed relocation of discharge pipe.

*2. The OSD Cross-sectional drawing lacks detail information. The various levels (surface level invert levels), dimensions etc are missing.*

Please refer drawings C02 & C03 for additional information.

*3. The layout plan of the OSD tank with the chamber and pipe line layouts, connection are to be provided.*

Please refer drawing C02.

*4. The detail of the pipeline (long-section profile details, and any service crossing details such as invert and over levels in mAHD, sizes/offsets, type of crossings, etc. that may conflict with the proposed pipe line) along the kerb & gutter (within the public domain) up to the connection point with council's kerb inlet pit has not been provided. The pipe size within the public domain must not be less than 375mm RCC class Iv pipe. Further, the detail of the proposed new kerb inlet pit in front of the subject site and the connection detail into the downstream existing kerb inlet pit must also be provided for clarity.*

Noted, please refer revised plans.



*5. The arrangement of the OSD tank incorporating the filtration system does not appear to function as intended and the pollutants are likely to escape the treatment system. (for clarification and detail the comments outlined below in "Water Sensitive Urban Design (WSUD)" Section should be referred).*

Noted, please refer revised plans.

*6. The on-site detention (OSD) system does not appear to be designed in accordance with the upper parramatta river catchment trust's (UPRCT) design guideline.*

*The design must take account for the following:*

*a. The stormwater system must be designed in accordance with the council's stormwater policy, guidelines etc.*

Noted, please refer revised plans and specifically C02 for OSD calculations.

*b. The stormwater runoff from the site must be managed by provision of the On-site detention (OSD) system. The on-site detention system must be designed using the OSD calculation summary sheet with the site storage requirement (SSR) of 470m<sup>3</sup>/ha and the Permissible site discharge (PSD) of 80 l/s/ha as the OSD parameters. The OSD storage volume provided must be sufficient to surpass the peak storm event.*

Noted, please refer revised plans. We are proposing a minimum volume of 130m<sup>3</sup> OSD with an orifice of d80mm diameter to achieve PSD requirement of 14.29L/s (based on 1.1m MAX Depth).

*c. Unless the runoff is directed into the rainwater tank or the water quality treatment system, all the runoff from the site must be directed to the High Early Discharge (HED) control pit of the OSD system and the outflow from the OSD system must be disposed by gravity onto the appropriate council's stormwater system.*

Noted, please refer revised plans.

*d. All the runoff from the site is to be directed into the OSD system. In some very exceptional circumstances where the surface runoff may not be directed into the OSD system, up to 15% of site area is allowed to bypass the OSD system. However, the runoff from the bypassed area is still required to be managed appropriately and cannot be left to run on its own.*

Noted, please refer revised plans. Max 15% bypass has been achieved.

*e. The OSD underground tank must incorporate a HED chamber and an overflow chamber to control and maintain the top water level (TWL) within the underground OSD tank.*

Noted, please refer revised plans.

*f. The OSD system must be designed based on the Tail-water level at the point of discharge and the OSD storage adjusted accordingly. The tailwater level to be considered will be the 1%AEP flood level, if the location is being affected by flood, or the grate level of the pit if proposed to be connected into the pit.*

We note that the site does not appear to be flood affected unless Council have confirmed otherwise.

*g. The total runoff exceeding 30 l/s from the site must be discharged into the nearby stormwater pipe system. Discharging of flow exceeding 30l/s onto kerb & gutter is not permitted.*

We note we are proposing to upgrade Council's stormwater system by locating a new kerb inlet pit and pipe extension.

*h. Information on the point of disposal such as the council's stormwater system (Pipe /pit, etc.) on to which the site stormwater is intended to be discharged must be obtained from the relevant authority (Council, Sydney water, or RMS whichever is applicable) or if the information is not available then appropriate survey investigation must be carried out and the details clearly shown on the survey investigation plan. The survey investigation plan should be prepared by the surveyor and relevant supporting information must include with the plan.*

*Confirming a utility services locator has been completed at the road frontage across the pipe extension – please see revised plans for details.*

*i. A full set of stormwater plan incorporating the requirements must be submitted with the development proposal application.*

*7. Runoff from the site shall be routed through a sediment trap pit before it is discharged into Council's drainage system. Such sediment traps pits shall have a 200 mm sump below the invert level of the outlet pipe.*

Noted, please refer revised plans.

*Water Sensitive Urban Design (WSUD) measures:*

*8. The submitted documents lack sufficient information to determine the appropriateness of the water quality treatment chain/ arrangement. Nevertheless, as outlined above the water quality treatment system does not appear to function as intended. In this respect, the following should be complied with:*

*a. The Water Sensitive Urban Design (WSUD) measures must be designed in accordance with the Section 2.5 & 2.7 of Cumberland DCP2021 part G4. The development must incorporate the appropriate WSUD measures to comply with the controls outlined therein and achieve the pollutant removal targets as specified in the Table 5. The WSUD measure must accompany a MUSIC model.*

WSUD measures have been designed by Ocean Protect in line with the Cumberland DCP. We are adopting a 7x Tall (690) PSorb cartridge StormFilter system within a DN2250 StormFilter chamber, and 17 Oceanguards to pits. Please refer updated stormwater plans and MUSIC model by Oceanprotect.

*b. The surface runoff from the impervious area such as the roof, car parking area, driveway and roads must be directed to the water quality treatment systems. In this regard:*

*i. Arrangement must be made to collect and separate the first flush, i.e., the initial flow equivalent to 1 in 3 month's flows from each catchment that contains high concentration of pollutants, to be collected and treated fully without being escaped untreated. In this regard, a device known as a high-flow bypass chamber shall be employed to separate the initial flow, i.e., 1 in 3 month's equivalent flow, to be separated through a low-level flow outlet into the water quality treatment / filtration system, and the flow exceeding the rate to be discharged through the high-level overflow or outlet pipe into the OSD system.*

The footprint in the stormfilter treatment chamber is 3.8m<sup>3</sup>, much above required volume for 1 in 3 month flow of 1.2m<sup>3</sup>. Refer updated plans and MUSIC model.

*ii. The flow must be controlled by appropriate mechanism such as orifice (the flow exceeding 1 in 3 months equivalent flow must be directed into to the OSD system).*

Noted, please refer SQZ file.

*iii. Appropriate number of devices must be provided sufficient treatment rate equivalent to the flow rate of the separated flow containing concentrated pollutants and ensure that no flow escapes or overflows bypassing the treatment system.*

Oceanprotect have calculated a 7x tall PSorb cartridge StormFilter system is sufficient to meet the flow rate requirement. Please refer updated plans and MUSIC model (SQZ file).

*iv. The required provision must be shown on the drawing. In this regard, cross-sectional details of the treatment system with the respective levels, must be prepared to ensure that the HGL from the treatment system is consistent and at a higher level and that there is no backflow into the treatment system.*

Please refer to the updated stormwater plans and details.

*v. If the outflow from the treatment system, is not connected back into the OSD system then, the site permissible discharge rate must be reduced by the flow equivalent to the outflow from the treatment system, and the orifice size be adjusted accordingly.*

85% of the site is collected to the OSD, although the StormFilter is located within the bypass areas, this has been accounted for and still meets council's PSD requirements.

Please refer updated stormwater plans.

*c. The pollution removal targets must be demonstrated with the supporting documents including the MUSIC model with the input parameters and output results. Further, the removal efficiency parameters input in the model must be consistent with the manufacturer's pollutant removal efficiency.*

Please refer attached SQZ file

*d. Electronic copy of the MUSIC models must be submitted accompanying the input and output parameters/ results.*

Please refer attached SQZ file.

*e. The MUSIC model components and the layout train must be consistent with that shown on the stormwater drawing. A plot of the MUSIC model with the type of sources and their respective catchment area (pervious, impervious) must be shown on the model plot. Additional plot of the model result should also be prepared.*

Please refer attached SQZ file.

*f. A regular minor and major maintenance schedule must be implemented.*

Maintenance schedule noted on sheet C01. Please refer updated drawings.

Yours faithfully,

For & on behalf of Greenview Consulting,

**Prepared by:**



Ralph Camilet

Design Engineer

**Reviewed by:**



Alistair McKerron B.E., M.I.E.(Aust.), CP Eng., NPER no 2220277

Senior Project Engineer