



# Westfield Warringah Mall

Proposed modification under Section 96(2) to DA  
2008/1742

November 2014

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# 1 Introduction

This report has been prepared by Urbis on behalf of Scentre Group, and constitutes a section 96(2) application to modify consent DA2008/1742 pertaining to Westfield Warringah Mall at 145 Old Pittwater Road, Brookvale.

In May 2012, Warringah Council issued development consent 2008/1742 for the construction of stormwater upgrade works for Warringah Mall and watercourse bank stabilisation works. This augmented stormwater system was designed to reduce the extent of overland flow through the shopping centre site during major storm events as well as reduce the flood impacts for adjacent public and private land.

Scentre Group has conducted a thorough design review and has substantially commenced the detailed design along the entire length of the stormwater culvert alignment. Having completed the design review, an alternative design has been proposed to modify the culvert design underneath Condamine Street where it connects into the existing drainage infrastructure.

The proposed modifications to the existing culvert known as, RMS Bridge no. 54, would be in lieu of staged excavation and installation of two new box culverts across Condamine Street immediately adjacent to those existing. This proposed modification would avoid anticipated major traffic disruptions to Condamine Street and impacts on the operation of the golf course for a significant period of time.

Cardno has undertaken a flood model analysis of the proposed design and has confirmed the flood levels are not affected by this proposal.

Accordingly, this submission supports the proposed modifications to the approved stormwater augmentation works and provides the required information to assess the environmental impacts of the proposed design.

The following documentation accompanies the SEE:

- **Appendix A:** Council pre DA meeting minutes
- **Appendix B:** Site Survey prepared by RPS
- **Appendix C:** Revised Drainage Augmentation and Erosion and Sediment Plans prepared by Cardno
- **Appendix D:** Stormwater Management Plan and Report
- **Appendix E:** Brookvale Creek Water Impact Statement
- **Appendix F:** Construction Management Plan prepared by Scentre Group
- **Appendix G:** Ecological Assessment prepared by RPS
- **Appendix H:** Geotechnical Report prepared by Douglas Partners
- **Appendix I:** Structural Report prepared by Cardno
- **Appendix J:** Flood Report prepared by Cardno
- **Appendix K:** Acid Sulphate Soils Management Plan prepared by Douglas Partners

## 2 Background

### 2.1 DEVELOPMENT CONSENT 2008/1742

On 16 May 2012, Warringah Council issued development consent 2008/1742 for the construction of stormwater upgrade works for Westfield Warringah Mall and watercourse bank stabilisation works. This consent was issued with deferred commencement conditions, which are proposed to be satisfied by a separate but concurrent submission.

The key elements of the proposal can be summarised as follows:

- Alterations to the existing head wall located within the site where Brookvale Creek intersects with the Mall;
- Upstream bank stabilisation works for 90 metres north of the head wall.
- The construction of two 3.6m x 1.5m culverts running underground through the shopping centre site.
- The construction of the culverts under Condamine Street located immediately north of those existing and works with the Warringah Golf Club site to connect into the existing drainage infrastructure located in this area.
- Removal of existing landscaping along the frontage to Cross Street.
- Minor demolition works to facilitate the construction of the stormwater drainage system.
- Other drainage works around the western side of the centre including new inlets and pipes.

This approval followed after more than 3 years of careful peer review and authority assessment, consultation and modification to establish a viable solution.

### 2.2 PRE-DA MEETING

A pre-DA meeting with Warringah Council Officers was held on 29 October 2013. The purpose of this meeting was to outline the proposed alternative design solution for the downstream works. The meeting was attended by Council Officers representing a number of departments and representatives of Scentre Group and its project consultants.

Council subsequently issued minutes from the meeting and these are contained in **Appendix A**.

The minutes confirm Council's support in principle for the proposed amended proposal, subject to the required documentation and investigations into the impacts of the modified development. The minutes include an outline of the required documentation to support the required modification and the application submission documents all of the information required as specified below:

**TABLE 1 – PRE-DA MEETING REQUESTED INFORMATION**

COUNCIL REQUESTED INFORMATION	DA DOCUMENTATION REFERENCE
All information required to be submitted under Schedule 1 of the <i>Environmental Planning and Assessment Regulation 2000</i> ;	Noted
All information as required on the Development Application form checklist;	Noted
Site Analysis	Refer to Plan Package in <b>Appendix C</b> .

COUNCIL REQUESTED INFORMATION	DA DOCUMENTATION REFERENCE
Site Survey (prepared by a registered Surveyor);	<b>Appendix B</b>
Statement of Environmental Effects addressing: <ul style="list-style-type: none"> <li>▪ Section 79C of EPA Act,</li> <li>▪ All relevant sections of WLEP 2011,</li> <li>▪ All relevant sections of WDCP 2011;</li> <li>▪ Other relevant Environmental Planning Instruments;</li> <li>▪ The District Park Plan of Management;</li> </ul>	Refer to SEE
Geo-technical report;	Refer to Douglas Partners ( <b>Appendix H</b> )
Traffic Report;	Refer to section 4.1.3 of the SEE
Model of the proposed development (as discussed at the meeting, this will be required to be peer reviewed and also assessed by Council Staff);	Refer to Brookvale Creek Waterway Impact Statement Addendum ( <b>Appendix E</b> ).
Photomontages;	Refer to <b>Appendix D</b> .
Landscape Plan showing the layout of the landscaping within the site and the selection of species;	Refer to Landscape Plans forming part of existing development consent.
Waste Management Plan	Refer to Section 4.1.9 of the SEE
Stormwater Management Plan	Refer <b>Appendix D</b> .
Erosion and Sedimentation Plan	Refer to Plans <b>Appendix C</b> .
Flood Report	Refer to Cardno Report ( <b>Appendix J</b> ).
Ecological / Flora and Fauna Assessment	Refer to RPS Advice ( <b>Appendix G</b> )
Construction Management Plan	Refer to Construction Management Plan ( <b>Appendix F</b> )
Structural Engineers Report	Refer to Structural Report by Cardno ( <b>Appendix I</b> )

A further meeting was held with Council on 6 November 2014 where the inputs were further confirmed by Council in accordance with these meeting minutes.

## 3 Proposed Modifications to the Original Consent

The proposed modification to development consent 2008/1742 reflects further design development and physical modelling of the proposed stormwater augmentation project.

These modifications are described in detail in the Stormwater Management Plan provided in **Appendix D** and the revised Drainage Augmentation Plans provided in **Appendix B** and prepared by Cardno. The most significant aspects of which are described in the following subsections.

### 3.1 RE-ALIGNMENT OF THE CULVERTS ADJACENT TO PITTWATER ROAD

The approved project included a section of the new culverts located directly adjacent to the Condamine Street road reserve. It is proposed to now incorporate a setback from Condamine Street in order to accommodate a future road-widening as well as the proposed re-directed sewer.

The amended alignment will have a minimum setback of 15.5m from the existing road reserve boundary. This amended re-alignment is best illustrated by comparing the approved plan W4548-102B with the proposed amended plan **W4548-402 Rev 3**.

A further implication of the proposed alignment is that full demolition of the HCF building, Godfathers Restaurant and Bing Lee will be required. Refer to proposed amended plan **W4548-435 Rev 3** and **05.0301 Rev G**.

### 3.2 REDESIGN OF THE CONDAMINE STREET CULVERTS

The most significant element of the modification proposed is the design of the culverts under Condamine Street. The current approved design permits the construction of two new culverts to the immediate north of the existing culverts under Condamine Street. This approval required the preparation of a detailed traffic management plan and construction sequencing to address the disruption of traffic on a major arterial road.

An alternative design concept has been prepared that allows the required increase in hydraulic capacity of the new augmented system without disrupting Condamine Street. This is considered to be a significant benefit over the previously approved design.

The amended concept design involves:

- The reconstruction of Chamber C6;
- The lowering of the invert levels of the two central box culverts by 1.0m together with the lowering of the apron slab upstream of the gross pollutant trap (GPT) downstream of Condamine Street.

The concept for the lowering of the two central box culverts is illustrated in the following plan extract and image.



FIGURE 1 – EXTRACT FROM PLAN SHOWING PROPOSED ENLARGEMENT OF EXISTING BOX CULVERTS UNDER CONDAMINE STREET

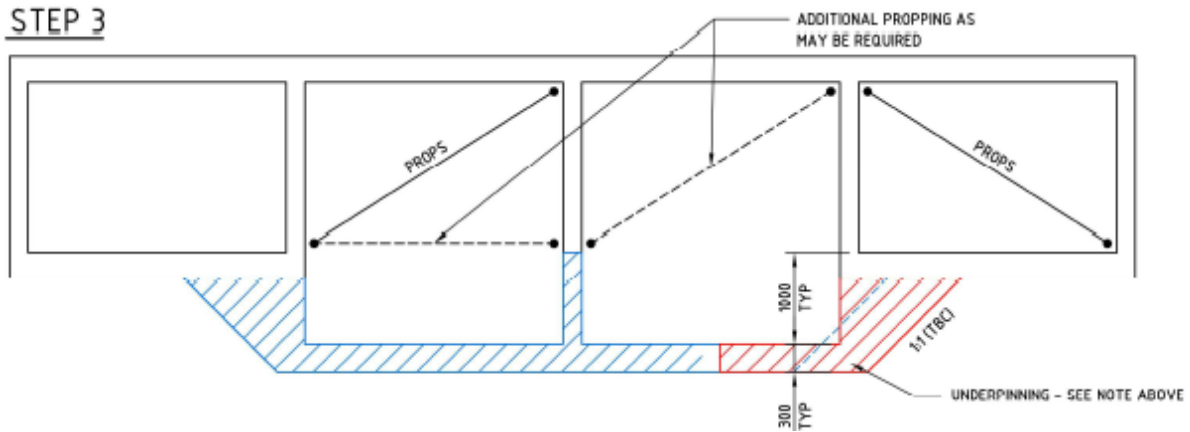


FIGURE 2 – PHOTOMONTAGE OF PROPOSED CULVERT WORKS



### 3.3 OTHER CONSEQUENTIAL AMENDMENTS TO APPROVED PLANS

The proposal incorporates other minor and largely inconsequential amendments (from a planning viewpoint) to the design of the culvert system. These changes have largely arisen through the further physical modelling of the system and the main junction points.

To ensure consistency of documentation, all plans have been reissued. While all stormwater plans have been reissued, in many cases the plans are unchanged or have no material change. To assist Council in review the revised plans, Table 2 has been prepared which summarised the changes reflected.

TABLE 2 – SUMMARY OF REVISED STORMWATER PLAN REFERENCES AND CHANGES

APPROVED PLAN	REPLACEMENT PLAN	CHANGES REFLECTED
W4548-100 Rev D	W4548-400 Rev 3	Erosion and sediment control plans added to the drawing schedule.
W4548-101 Rev G	W4548-401 Rev 4	Revised culvert alignment including increasing setback from Pittwater Road.
W4548-102 Rev B	W4548-402 Rev 3	Revised culvert alignment including increasing setback from Pittwater Road.
W4548-110 Rev D	W4548-421 Rev 3	Revised extent of excavation under access road.
W4548-111 Rev E	W4548-411 Rev 3	Amendment to section plan.
W4548-112 Rev B	W4548-412 Rev 4	Redesign of culvert at Dale Street roundabout.
W4548-113 Rev B	W4548-413 Rev 4	Revised culvert alignment increasing setback from Pittwater Road.
W4548-114 Rev A	W4548-414 Rev 3	Reflects redesign of culverts, illustrating reduced footprint of works.
W4548-115 Rev E	W4548-423 Rev 3	Shows amendments to flood wall and barrier.
W4548-116 Rev C	W4548-424 Rev 4	Minor design refinements to culvert design.  Base plan reflects design refinements to Palm Tree car park.
W4548-117 Rev B	W4548-425 Rev 3	Minor changes to landscaping profile above approved culvert alignment along Cross Street.
W4548-118 Rev E	W4548-426 Rev 3	Amendments at Cross Street roundabout.
W4548-119 Rev A	W4548-427 Rev 3	Minor technical design refinements, but substantially no change.
W4548-120 Rev B	W4548-430 Rev 3	Amendment to section plan.
W4548-121 Rev A	W4548-431 Rev 3	Amendment to section plan.
W4548-130 Rev C	W4548-435 Rev 4	Showing extent of demolition resulting from revised culvert alignment increasing setback from Pittwater Road.  Full demolition of HCF building and Godfathers.
	05.0301 Rev G.	Demolition of Bing Lee

In addition, the following new plans summarised in Table 3 below have been included in the revised Stormwater Plan package.

TABLE 3 – NEW PLANS REFLECTING FLOOD BARRIER WORKS

NEW PLAN REFERENCE	KEY ELIMENTS ILLUSTRATED
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NEW PLAN REFERENCE	KEY ELIMENTS ILLUSTRATED
W4548-420 Rev 5	Illustrates new culvert alignment across whole site with levels.
W4548-421 Rev 3	Provides detailed arrangement plan of Cross Street and Brookvale Creek.
W4548-422 Rev 3	Details of flood barriers within Woolworths loading dock.
W4548-428 Rev 3	New detail of concrete planter adjacent to Target entry.
W4548-429 Rev 3	Details of flood barrier works within David Jones loading dock.
W4548-440 Rev 3	New details of Erosion and Sediment Control for proposed works.
W4548-441 Rev 4	
W4548-442 Rev 3	
W4548-443 Rev 4	
W4548-444 Rev 4	
W4548-445 Rev 3	
W4548-446 Rev 3	

### 3.4 AMENDMENTS TO CONDITIONS

The proposed modifications require amendments to a number of existing consent conditions as follows:

- Condition 3 – Plan references to be updated as outlined in Table 2 and Table 3 above.
- Condition 4 – The General Terms of Approval issued by the RTA which are no longer relevant to the amended project and therefore this condition can be amended accordingly.
- Condition 6(b) – References will be required to the updated Construction Management Plan.
- Condition 21 – Amendments are required to this condition to reflect the updated Construction Management Plan relating to removal of Condamine Street works.
- Condition 22 – Similarly, this condition needs to be amended to reflect the updated Construction Management Plan.

## 4 Assessment under Section 96(2) of the EP&A Act

Section 96(2) of the *Environmental Planning and Assessment Act 1979* allows a Council to modify a development consent if:

- (a) *it is satisfied that the development to which the consent as modified relates is substantially the same development as the development for which consent was originally granted and before that consent as originally granted was modified (if at all), and*
- (b) *it has consulted with the relevant Minister, public authority or approval body (within the meaning of Division 5) in respect of a condition imposed as a requirement of a concurrence to the consent or in accordance with the general terms of an approval proposed to be granted by the approval body and that Minister, authority or body has not, within 21 days after being consulted, objected to the modification of that consent, and*
- (c) *it has notified the application in accordance with:*
  - (i) *the regulations, if the regulations so require, or*
  - (ii) *a development control plan, if the consent authority is a council that has made a development control plan that requires the notification or advertising of applications for modification of a development consent, and*
- (d) *it has considered any submissions made concerning the proposed modification within the period prescribed by the regulations or provided by the development control plan, as the case may be.*

Each of these heads of consideration is addressed in turn below.

### 4.1 SUBSTANTIALLY THE SAME DEVELOPMENT

The proposed modifications will result in substantially the same development as that originally approved. Specifically, the amendments proposed represent refinements to the existing stormwater management conditions upstream and downstream of the Warringah Mall site to ensure that the most suitable design with minimal environmental impacts is pursued. To this extent, the proposal will remain substantially the same development as that previously approved by way of DA 2008/1742.

### 4.2 CONSULTATION WITH MINISTER OR RELEVANT AUTHORITY REGARDING CONCURRENCE CONDITIONS

The proposed modification will seek to vary conditions imposed by the RTA (now RMS) in respect to the works under Condamine Street. These conditions are now not required as a result of the revised design.

### 4.3 NOTIFICATION PROCESS

The application will be notified and advertised in accordance with Warringah Development Control Plan 2011.

### 4.4 CONSIDERATION OF SUBMISSIONS

In accordance with section 96(2)(d) of the act, the applicant will consider and respond to any relevant submissions made concerning the proposed modification within the period prescribed by the Warringah Development Control Plan 2011.

## 5 Section 79C Considerations

Section 79C of the EP&A Act sets out the heads of consideration for any application under Part 4 of that Act. In respect to these matters, the following comments are made:

### 5.1 WARRINGAH LEP

The proposed modifications are consistent with the provisions of the Warringah LEP 2011.

The proposed stormwater infrastructure works are permitted in and consistent with the objectives of the zones affected by the works including:

- B3 – Commercial Core
- IN1 – General Industrial
- RE1 – Public Recreation
- SP2 – Infrastructure

In addition, the following additional local provisions are relevant are noted below:

CLAUSE	ASSESSMENT
<b>6.1 Acid Sulfate Soils</b>	The site is classified as Acid Sulfate Class 4 and 5. This is addressed in the accompanying acid sulfate soils management plan.
<b>6.2 Earthworks</b>	The proposed modifications include earthworks. This is addressed in the Structural Engineers Risk Assessment Report accompanying the modification application.
<b>6.3 Flood Planning</b>	The proposed works are located within the Flood Planning Level as identified under WLEP 2011. This is fully addressed in the accompanying reports prepared by Cardno.

### 5.2 WARRINGAH DCP

The proposed development is consistent with the relevant DCP provisions.

### 5.3 DISTRICT PARK PLAN OF MANAGEMENT

The District Park Plan of Management applies to Lots 2741 and 2742 in DP 752038 (Warringah Golf Course). Lot 2741 is categorised as 'General Community Use / Watercourse' under the Plan of Management. Lot 2742 is categorised as a 'Sportsground / Watercourse'.

The core objectives for management of community categorised as general community use are

*to promote, encourage and provide for the use of the land, and to provide facilities on the land, to meet the current and future needs of the local community and of the wider public:*

*a) In relation to public recreation and the physical, cultural, social and intellectual welfare or development of individual members of the public, and*

*b) In relation to purposes for which a lease, licence or other estate may be granted in respect of the land (other than the provision of public utilities and works associated with or ancillary to public utilities).*

The Core objectives for management of Community Land categorised as a watercourse are:

*(a) To manage watercourses so as to protect the bio diversity and ecological values of the insert environment, particularly in relation to water quality and water flows, and*

*(b) To manage watercourses so as to protect the riparian environment, particularly in relation to riparian vegetation and habitats and bank stability, and*

*(c) To restore degraded watercourses, and*

*(d) To promote community education and community access to and use of the watercourse, without compromising the other core objectives of the category.*

The proposed modifications will remain consistent with the objectives for the public land noting the following:

- The augmentation works will not impact on the environment downstream of Warringah Mall, with floor levels and water velocities assessed as being appropriate.
- The bio-diversity values of the site will be enhanced by the revised design which is less intrusive on the natural environment.
- The proposed modifications will also reduce the likely impact on the public recreational use of the adjacent Warringah Golf Club.

The proposed modifications are also consistent with the objectives of the District Park Plan of Management Discussion Paper recently released for comment by Council.

## 5.4 IMPACT ON THE ENVIRONMENT

The proposal will not have any adverse environmental impact as discussed in the following sections.

### 5.4.1 IMPACT ON FLOOD INUNDATION

The revised Waterways Impact Statement of Brookvale Creek has been prepared by Cardno utilising the **xpswmm2D** hydraulic floodplain model to model the implications on flood inundation along Brookvale Creek both upstream of Warringah Mall and downstream of Condamine Street.

No physical modifications to Brookvale Creek upstream of Warringah Mall in comparison to the approved DA drawings and a reduced (positive) physical impact to Brookvale Creek downstream of Warringah Mall with fewer disturbances to the existing GPT and Brookvale Creek. The model results and conclusions are summarised in the Brookvale Creek Waterway Impact Statement Addendum (**Appendix E**). The assessment concludes that the proposal will result in:

- A positive impact on flood behaviour upstream of Warringah Mall by lowering flood levels and flood velocities when compared with the approved arrangement;
- A negligible impact on flood levels downstream of the existing GPT when compared with the approved design which is located downstream of Condamine Street;
- An increase in flood velocities in some locations when compared to the existing conditions, but generally not by more than those impacts accommodated in the approved design;
- A decrease in flood velocities at most locations when compared with the existing design.
- Minor local impacts on flood velocities in the vicinity of the existing GPT with local increases adjacent to the GPT trash rack, which will be managed by the existing rock lining, and;
- Beneficial reduction in the extent of works and associated loss of vegetation in the vicinity of the existing GPT which would have otherwise occurred under the existing design.

## 5.4.2 IMPACTS ON STORMWATER DURING CONSTRUCTION

One of the implications of the augmenting of the existing culverts under Condamine Street as opposed to constructing additional culverts (as approved) is that diversions will be required for the duration of the relevant works. This is outlined in the amended Construction Management Plan (**Appendix F**).

The modelling undertaken by Cardno summarised in the Stormwater Management Plan (**Appendix D**) demonstrates that despite the temporary blocking of one or both culverts during the construction process, the flood implications will remain less than under current conditions.

Cardno has modelled scenarios for a 5 and 10 ARI event. The conclusion is that through the construction staging of the culvert augmentation works starting upstream and moving downstream (refer to the Construction Management Plan provided in **Appendix F**), even with 2 culverts blocked simultaneously in a 10 year event, impacts will be less than existing, for example upstream in Brookvale Creek, flood levels will be lower than current conditions.

It is submitted that the modelling undertaken by Cardno and the construction methodology proposed will ensure that the flood implications associated with a major rain event during the construction process will be no worse than under existing conditions.

## 5.4.3 IMPACT ON TRAFFIC

The Condamine Street culvert alternative design will result in increasing the hydraulic capacity of the existing culverts under Condamine Street, rather than constructing two new culverts immediate north of the existing culverts as approved. This is achieved through lowering the invert levels of the two existing central box culverts by 1.0 metres, as well as lowering the apron slab at the outlet by 1 metre.

As the works will occur within the footprint of the existing culverts, the alternative culvert design will remove the requirement for works to be undertaken at street level on Condamine Street. This in-turn eliminates the requirement for the diversion of traffic along Condamine Street to undertake the proposed works.

Accordingly, the revised culvert design will have a positive impact on the previously assessed traffic implications along Condamine Street. While approved as part of the DA, the proposed road diversions were anticipated to cause delays to the construction timeframe and inconvenience to road users during the process. In this regard, the revised design is far more attractive in terms of reducing the impacts on traffic during construction.

## 5.4.4 IMPACT ON FLORA AND FAUNA

The ecological impacts of the Condamine Street culvert alternative design have been assessed by RPS (**Appendix G**). This further assessment follows previous detailed flora and fauna studies including a 12 month micro bat survey.

The RPS report concludes the following:

- **Vegetation north of the culvert outfall** - As the alternative culvert design does not require the installation of new culverts, the removal of the adjacent vegetation north of the culvert outfall is no longer required. This will result in this vegetation and associated habitat being retained and is an improved outcome for biodiversity compared to that approved.
- **Implications on the Microbats** – The revised Condamine Street culvert design is less extensive than the approved design, and therefore is unlikely to result in any increase in the type, extent and magnitude of impacts compared to that assessed for the approved design.

The Section 96(2) will continue to commit to the implementation of the Microbat Management Plan (RPS 2013) pre-construction and during construction of the Condamine Street culvert augmentation works.

It is therefore concluded that the proposed modifications will have a positive impact in terms of a reduced building footprint and subsequent reduction in loss of vegetation. In respect to the likely implications of

the works on the Microbat population, the recommendations of the management plan will continue to be implemented.

#### 5.4.5 IMPACTS ON CONSTRUCTION MANAGEMENT

A revised Construction Management Plan has been prepared to reflect the proposed changes to the culvert alignment and manage stormwater flows during the construction process. This is attached in **Appendix F**.

The key elements of the Construction Management Plan are:

- Includes construction management of works to be undertaken upstream of Warringah Mall.
- Revised construction management of the Condamine Street culvert alternative design, and its reduced impact on the Warringah Golf Club land.
- Outlines process for redirecting stormwater during construction of the Condamine Street culvert alternative design.
- Includes demolition of Godfathers restaurant, HCF and Bing Lee.

The revised Construction Management Plan demonstrates that during all environmental, stormwater and traffic implications can be suitably managed during construction of the stormwater augmentation works.

#### 5.4.6 GEOTECHNICAL IMPACTS

Douglas Partners have been engaged by Westfield to undertake further investigations for the Condamine Street culvert alternative design, particularly within the existing culverts. These works will include drilling into the existing culvert slab to ensure sufficient geotechnical stability to deepen the two central culverts.

The proposed methodology for the geotechnical works is outlined in the letter prepared by Douglas Partners contained in **Appendix H**.

#### 5.4.7 IMPACTS ON ACID SULPHATE SOILS

A revised Acid Sulphate Soils Management Plan has been prepared by Douglas Partners (**Appendix K**) which outlines the findings of borehole testing, and management measures to mitigate impacts on acid sulphate soils during construction of the proposed stormwater works.

The report concludes that with the implementation of the Acid Sulphate Soils Management Plan, there will be appropriate management of potential risks to surrounding water bodies, including Brookvale Creek and local groundwater.

#### 5.4.8 IMPACT ON LANDSCAPING

Due to the revised design of the Condamine Street culvert augmentation, there is no longer a requirement to remove the existing adjacent landscaping north of the culvert outfall. Accordingly, the revised design will result in the existing landscaping north of the culvert outfall on Warringah Golf Course to remain *in situ*. Therefore the proposed culvert design will have a positive impact on landscaping within the Warringah Golf Course than compared to the existing approved scheme.

#### 5.4.9 WASTE MANAGEMENT

A waste management plan will be prepared prior to construction that will require the classification and disposal of waste in a manner that maximises recycling and minimises material going to landfill. Major materials where possible will be sorted on site to separate bins prior to removal during excavation and construction.



#### 5.4.10 STRUCTURAL IMPACTS

A structural risk assessment of the revised culvert alignment and augmentation through the Condamine Street culvert has been undertaken by Cardno (**Appendix I**). Table 1 of the assessment recommends a number of risk mitigation measures for the design of the culvert works, and during construction. With the implementation of these risk mitigation measures, no structural impacts will result from the proposed works.

#### 5.4.11 IMPACT ON EROSION AND SEDIMENT CONTROL

As part of the revised scheme, erosion and sediment control plans have been prepared by Cardno (**Appendix C**). These plans detail the erosion and sediment control measures to be established and maintained during construction of the stormwater augmentation works, to mitigate erosion and sediment impacts.

### 5.5 PUBLIC INTEREST

The proposal is in the public interest as the modifications will ensure that the development can proceed in an efficient and practical manner.

## 6 Conclusion

The proposed modifications to the approved augmented stormwater system are as a result of further design development and modelling. The amendments reflect positive changes in terms of improving the performance of the drainage system as well as enhancing constructability and reducing the extent to which disturbance to established vegetation will occur.

The above assessment demonstrates that the proposed modifications will not result in any detrimental environmental impact and indeed in a number of respects will result in positive environmental impacts. The resultant development will be substantially the same as that originally approved.

As such, it is considered that Council should approve the modifications as proposed.

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## Appendix A

## Council Pre DA minutes

# Appendix B

# Site Survey

## Appendix C

## Revised Drainage Augmentation and Erosion and Sediment Control Plans

Appendix D

Stormwater Management Plan and  
Stormwater Report



## Appendix E

## Brookvale Creek Waterway Impact Statement

Appendix F

Construction Management Plan

## Appendix G

## Ecological Assessment

Appendix H

Geotechnical Investigation

# Appendix I

# Structural Report

Appendix J

Flood Report

## Appendix K

# Acid Sulphate Soils Management Plan

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