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Director Environment and Building Policy

NSW Department of Planning and Environment
GPO Box 39
Sydney NSW 2001

Cumberland Ecology
PO Box 2474
Carlingford Court 2118
NSW Australia
Telephone (02) 9868 1933
Mobile 0425 333 466
Facsimile (02) 9868 1977
Web: www.cumberlandecology.com.au

SUBMISSION: DRAFT COASTAL MANAGEMENT STATE ENVIRONMENTAL PLANNING POLICY (SEPP)
COOK COVE, ARNCLIFFE

Dear Sir/Madam,

The purpose of this letter is to present a submission to the NSW Department of Planning and Environment (DPE), regarding the draft Coastal Management State Environmental Planning Policy ("the Coastal Management SEPP"). The Coastal Management SEPP has implications for the Cook Cove Northern and Southern Precincts due to the mapping of large areas of coastal wetlands, and associated buffer areas. This mapping erroneously includes broad areas of trees, shrubs and grass cover that are clearly not wetlands, as well as Spring Street Wetland, which we believe should not be included in the wetland mapping due to its artificial nature and degraded condition.

Our submission is provided in **Appendix A** and has been prepared with information provided by JBA consultants and is provided on behalf of John Boyd Properties.

If you have any queries, please do not hesitate to contact me on the numbers provided.

Yours sincerely

David Robertson

Dr David Robertson
Director
david.robertson@cumberlandecology.com.au

Appendix A

Submission: Draft Coastal Management SEPP

A.1 Introduction

This submission relates to the Cook Cove site which is approximately 100 hectares in area, within the suburbs of Arncliffe and Banksia in the Bayside Local Government Area (formerly Rockdale City Council). The site is located immediately west of the Cooks River and Sydney Kingsford Smith Airport. The M5 Motorway dissects the site into northern and southern precincts.

The Cook Cove site is currently owned and managed by a number of public and a private landowner for a number of purposes. The site has had a varied history from the 1880s to 1950s with sections having been previously used as a sewerage farm, market gardens, recreational space and for infrastructure purposes. The general site has also had significant changes in land form to accommodate the expansion of Sydney Airport and realignment of the Cooks River during the 1940s and 1950s.

A.1.1 Project Background

The Cook Cove project has evolved through many iterations since it was first announced by the State Government in 2002. A key component of the project involves moving the existing Kogarah Golf Club located in the Northern section of the site to land in the Southern section, which is currently heavily contaminated and under the care and control of Bayside Council.

The relocation of the golf course to a new facility will enable the development of new sporting, community and civic facilities within both the Southern and Northern Precincts in the near term, and provide new homes and jobs for the wider region in accordance with the strategic directions of the Greater Sydney Commission and the Department of Planning and Environment.

i. Cook Cove Southern Precinct

The Southern Precinct Development Application (DA) seeks approval for open space works, which includes site remediation, environmental improvements, public domain enhancements and a new golf course over an area of approximately 52ha.

This DA was submitted to Bayside Council on 18 November 2016 and includes the following components:

- The carrying out of site establishment works including demolition of existing structures (including the existing St George Soccer Stadium), tree and vegetation removal;
- Early works, including cutting, filling and acceptance/stockpiling of material;
- Site remediation works, including groundwater treatment;
- Construction and operation of an 18-hole golf course including land contouring, landscaping, waterbodies, irrigation, utility services, driving range, golf cart / pedestrian / maintenance access pathways and bridges;

- Construction of the golf course operational maintenance facility;
- Environmental improvement and alterations to the Landing Lights Wetland, and to parts of the Spring Street Drain, removal of Spring Street Wetland and planting of additional habitat including salt marshes, mangroves, reedland and future Green and Golden Bell Frog habitat/ponds;
- Upgrade and heritage conservation works to the Arncliffe Market Gardens, including subdivision and a boundary adjustment;
- Supply of recycled water for irrigation within the golf course;
- Public domain improvement works including landscaping works along sections of the Cooks River and Muddy Creek foreshores south of the M5 Motorway, shared pedestrian / cycle ways, lighting, wayfinding and interpretive signage;
- Construction of one (1) bridge, for the shared pedestrian / cycleway over Muddy Creek to Kyeemagh; and
- Provision of temporary access, driveway, parking and interim clubhouse facilities.

ii. Cook Cove Northern Precinct

The Northern Precinct Planning Proposal seeks a master planned rezoning of the former golf course into a vibrant mixed-use precinct. The precinct plans for approximately 5,000 new residential apartments, supporting commercial, retail and accommodation uses along with a waterfront entertainment precinct and sports and recreation precinct.

The Northern Precinct Planning Proposal is presently being developed in accordance with the provisions of the Bayside West Precincts Land Use and Infrastructure Strategy issued by the Department of Planning and Environment. The Planning Proposal is expected to be submitted in early 2017.

A.2 Draft Coastal Management SEPP

A.2.1 Background

The aim of the draft Coastal Management SEPP is to promote an integrated and co-ordinated approach to land use planning in the coastal zone in a manner consistent with the objects of the *Coastal Management Act 2016* by:

- Managing development in the coastal zone and protecting the environmental assets of the coast, and
- Establishing a framework for land use planning to guide decision-making in the coastal zone, and

- Mapping the 4 coastal management areas which comprise the NSW coastal zone, in accordance with the definitions in the *Coastal Management Act 2016*

Once published, the Coastal Management SEPP will be the single land use planning policy for coastal development and will bring together and modernise provisions from the existing SEPP 14 (Coastal Wetlands), SEPP 26 (Littoral Rainforests) and SEPP 71 (Coastal Protection).

The *Coastal Management Act 2016* and the draft Coastal Management SEPP define the 'coastal zone' as comprising four coastal management areas:

- Coastal wetlands and littoral rainforests area;
- Coastal environment area;
- Coastal use area; and
- Coastal vulnerability area.

Separate development controls will apply to each area and focus on achieving specific objectives.

A.2.2 Mapping of the Cook Cove Site

Under the draft Coastal Management SEPP, areas of the Cook Cove site have been mapped as Coastal environment areas, Coastal use areas and Coastal wetlands and littoral rainforest areas. No Coastal vulnerability area has been mapped on the Cook Cove site.

Mapped Coastal environment areas in the Cook Cove site include the channel of the Cook River, Muddy Creek and the Spring Street Drain, as well as a 100 m buffer either side on the land.

Mapped Coastal use areas in the Cook Cove site are exactly the same areas as the Coastal environment area; however they exclude the channel of the waterways listed above.

Coastal wetlands mapped on the Cook Cove site include the Spring Street Wetland, Landing Lights Wetland, and riparian sections of Muddy Creek (**Figure 1**). In addition to the mapped coastal wetlands, a 100 m proximity area has been mapped surrounding each. No littoral rainforests have been mapped in the Cook Cove site.

It is considered unlikely the proposed development at Cook Cove will impact on areas mapped as Coastal use areas or Coastal Environment areas such that it will conflict with the aims of these zones as identified by the draft Coastal Management SEPP. Accordingly, the designation of land within the Cook Cove site as Coastal use and Coastal Environment areas is not considered further in this submission.

This submission relates to concerns relating to the mapping of parts of the Cook Cove site as containing coastal wetlands. The issues related to the mapping of coastal wetlands in the Cook Cove site are considered further below.

A.3 Wetlands on the Cook Cove Site

The draft Coastal Management SEPP has potential to impact on the Cook Cove project because much of the site has been mapped as containing coastal wetlands or as being within the 100 m perimeter area. In particular, the draft Coastal Management SEPP maps the entirety of Spring Street Wetland as a coastal wetland, and maps larger areas of the Cook Cove site as wetlands than have been mapped previously based on field investigations (see **Figure 1**).

This submission presents that the mapping currently in the draft SEPP should be amended to take consideration of the ground-truthed extent of wetlands in the Cook Cove site, and the artificial nature of Spring Street Wetland. In particular, we submit that the mapping be revised to exclude the Spring Street Wetland from the coastal wetlands mapping, and that the mapped extent of other wetlands be amended to be consistent with ground-truthed extents of wetlands in the site.

Grounds for the proposed revision of the mapping are presented below.

A.3.1 Spring Street Wetland

We submit that Spring Street Wetland should be excluded from the coastal wetland mapping because it does not meet the criteria of a natural wetland, and does not provide wetland habitat. Spring Street Wetland is a relatively small area of mangroves that has been artificially created on polluted nightsoil deposits. It has low biodiversity owing to seepage from the nightsoil deposits and is highly degraded.

It has developed from an artificial landscape that has been recontoured when the nightsoil area was buried. It does not contain the conservation values associated with a naturally occurring wetland, and so we submit that this wetland should be removed from the coastal wetland mapping in the draft Coastal Management SEPP. Our reasons are outlined in detail below.

i. Description and Condition of Spring Street Wetland

The Spring Street Wetland was originally constructed over old landfill containing “night soil” deposits. It was intended to form an open habitat for water birds, including a large pond in the middle of the wetland with a central island, surrounded by native tree plantings on the fringes. Over time, Spring Street Wetland has become dominated by dense growths of mangroves, heavily degraded, suffering from leachate infiltration (in particular, ammonia contaminants) and rubbish dumping. Groundwater impacted with landfill leachate is likely to be migrating off site, and there are significant community issues with odour. Progressive sedimentation of the wetland has also led to the northern end of the wetland becoming anaerobic. Recent inspections of the Spring Street Wetland show that the aquatic environment is stagnant and enclosed, with very limited tidal flushing.

The Spring Street wetland is currently brackish, and dominated by a mangrove community characterised by a tall canopy of *Avicennia marina* (Grey Mangrove) between 12-15 m in height. There are very few species in the understorey; however it contains various herbaceous species, mainly indigenous species including: *Phragmites australis* (Common Reed), *Tetragonia tetragonioides* (Warrigal Greens) with smaller amounts of *Juncus* sp. and *Atriplex* sp. Exotic

species are locally common away from the most saline areas, especially *Ipomoea cairica* and *Tradescantia fluminensis* (Wandering Jew). A planted open forest adjoins the mangrove zone that is mainly comprised of *Casuarina glauca* (Swamp Oak) and *Eucalyptus robusta* (Swamp Mahogany).

Spring Street Wetland is highly degraded and currently provides little habitat for native fauna species. As described above, this wetland has become invaded by mangroves, which now dominate the wetland. This has resulted in a dramatic alteration of the habitat characteristics of this wetland which has negated the value of this area for many water birds that prefer to forage in open mudflats and saltmarsh. Historically, this wetland would have been used by wading birds, and several records of migratory wading birds have been made from this area, however due to the alteration of habitat, these species are not likely to utilise this habitat any more. Some bird species that are known to forage in mangroves may occur, but this is not likely to be important habitat for these species due to the high levels of disturbance and degradation.

Currently, the aquatic environment in the Spring Street Wetland is stagnant and enclosed, with very poor tidal flushing. It is currently considered to be of low ecological value in terms of its use by birds, fish and invertebrates.

ii. Definitions of Wetland

As outlined previously, we consider that the Spring Street Wetland should be removed from the coastal wetland mapping as it has been artificially created and currently provides few of the values associated with wetlands. We find that this is consistent with the aims of the draft Coastal Management SEPP.

Although the draft Coastal Management SEPP does not explicitly state that the Coastal Wetlands layer refers to naturally occurring wetlands, we consider that this is likely to be the intent. It is unclear what the basis for the mapping presented in the draft Coastal Management SEPP is, as it refers to the definition for coastal wetlands provided in the *Coastal Management Act 2016* which states: '*land which displays the hydrological and floristic characteristics of coastal wetlands … and land adjoining those features*'. However, no definition is provided as to what these hydrological and floristic characteristics are. Similarly, the previous SEPP 14 – Coastal Wetlands, also provided no definition of coastal wetland – just a series of maps where SEPP 14 applied.

More useful definitions of coastal wetlands are provided by the NSW Department of Primary Industries (DPI). The DPI recognises several kinds of coastal wetland, including "Mangrove and Saltmarsh swamps", which are characterised as follows (Department of Primary Industries 2016):

- *Estuarine areas subject to tidal flooding which support mangrove and saltmarsh vegetation or non-tidal basins which occur on estuarine sediments adjacent to mangrove and saltmarsh areas, as well as any mudflats and small creeks which occur within or adjacent to the community.*

- *Dependant on periodic tidal inundation. In NSW, mangroves dominate those areas inundated daily, whereas saltmarsh vegetation occurs in areas less frequently flooded.*

Wetlands within the Cook Cove site correspond relatively well to these definitions, with Spring Street Wetland comprising a mangrove swamp and Landing Light Wetland comprising a saltmarsh swamp. There is no requirement in this definition for the wetland to be naturally occurring, although it is likely to be assumed.

Further support for this assumption is provided in the NSW Wetland Policy. The NSW Wetland Policy contains a series of guiding principles that all government agencies will adopt, and all stakeholders can refer to when making decisions on wetlands management and conservation. This policy clearly refers to natural wetlands, and Principle 10 states (OEH 2016):

Natural wetlands should not be destroyed or degraded. If social or economic imperatives in the public interest result in a wetland being degraded or destroyed, the establishment and protection of a wetland offset that supports similar biodiversity and ecological functions will be needed

This indicates that it is likely that the intent of the coastal wetland mapping was to identify the extent of natural wetlands in order to facilitate their protection, and was not meant to protect degraded, polluted, artificial wetlands such as Spring Street Wetland. As outlined previously, Spring Street Wetland is an artificially created wetland that does not provide the environmental services of a wetland due to its limited tidal flushing and stagnant nature. As outlined previously, the Spring Street Wetland is substantially polluted by leachate, and removal and remediation of the wetland will be of more benefit to the wider environment than retaining it.

A.3.2 Revision of the Extent of Wetlands at Cook Cove

We submit that the coastal wetland mapping presented in the draft Coastal Management SEPP should be revised to more accurately reflect the distribution of wetlands in the Cook Cove site. The current mapping presented in the draft Coastal Management SEPP erroneously maps broad areas of trees, shrubs, and mixed exotic sedgelands and grasslands as coastal wetlands. Highly detailed mapping of the Cook Cove site has been produced by Cumberland Ecology based on extensive field investigations and the mapping presented in the draft Coastal Management SEPP should be revised to be consistent with this mapping. Our reasons are outlined in detail below.

i. Wetland Mapping for the draft Coastal Management SEPP

The wetland mapping presented in the draft Coastal Wetlands SEPP was sourced from existing and new data, in particular existing SEPP 14 maps. Mapping of coastal wetlands outside of the Sydney Metropolitan region are based on the current SEPP 14 maps and have been updated to account for natural changes in their boundaries and distribution and utilising higher resolution technology. This has resulted in some changes to the extent and distribution of mapped coastal wetlands in these areas. However, SEPP 14 has not previously mapped coastal wetlands in the Sydney Metropolitan area, and therefore the maps of this area proposed as part of the draft Coastal Management SEPP are new.

This new mapping of the Sydney Metropolitan area has apparently been completed based on aerial photography and GIS analysis, and it appears that little ground-truthing or field validation has occurred, at least not in the Cook Cove site. Although these methods can produce good results over large areas, it is difficult to produce accurate maps solely from data collected remotely and definitive boundaries should only be determined following validation in the field or ground-truthing.

Although the wetland mapping on the Cook Cove site is broadly accurate, large areas of trees, shrubs, and mixed exotic sedgelands and grasslands have been erroneously mapped as coastal wetlands in the draft Coastal Management SEPP. This is evident in a comparison between the mapped coastal wetland areas and a ground-truthed vegetation map prepared by Cumberland Ecology (see **Figure 2)**.

ii. Comparison with Field-validated Mapping by Cumberland Ecology

Cumberland Ecology has conducted extensive ecological surveys on the Cook Cove site, and has collected a wealth of data over many years. As part of this work, the extent of vegetation communities and wetlands in the Cook Cove site have been ground-truthed and mapped in detail. Detailed description of the survey methods and effort employed has been presented in the Cook Cove SIS (Cumberland Ecology 2016). Cumberland Ecology mapping shows that the draft Coastal Management SEPP has over-estimated the extent of wetland in the Cook Cove site and has mapped large areas of trees, shrubs, and mixed exotic sedgelands and grasslands as coastal wetlands. In particular, the large area of native plantings and landscaping around the Spring Street wetland has been mapped as Coastal Wetland, and mixed exotic sedgelands and grasslands around the Landing Lights wetland have been mapped as Coastal Wetland.

It would be consistent with best practice mapping methodology to accept refinements to mapping data that has been remotely acquired, from mapping that has been prepared based on extensive field validation over many years, and the mapping presented in the draft Coastal Management SEPP should be revised accordingly.

A.4 Conclusion

We believe that it is consistent with the aims of the draft Coastal Management SEPP to revise the coastal wetland mapping to remove the Spring Street Wetland, and to amend the areas of coastal wetlands to be consistent with the results of mapping prepared based on field surveys and ground-truthing.

Spring Street Wetland is not natural, and has been artificially constructed on old nightsoil deposits. It is highly degraded, and its removal and remediation will result in a net improvement in the environment and an reduction in leachate migration offsite. Accordingly, it should be removed from the coastal wetlands mapping in the draft Coastal Management SEPP.

The coastal wetland mapping presented in the draft Coastal Management SEPP has been prepared using remotely acquired data and has not been adequately ground-truthed, at least not in the Cook Cove site. Comparison with detailed ground-truthed mapping indicates large areas that have been inaccurately mapped in the Cook Cove site, and these should be

amended to better reflect the actual conditions on the ground, as is standard for any mapping process utilising remotely acquired data.

Appendix B

Figures

Coordinate System: MGA Zone 56 (GDA 94)

N

Grid North

Legend

- Subject Site
- Areas to be cleared/modified
- Coastal Wetland
- Proximity Area for Coastal Wetlands

Image Source:
Image © 2016 Google
(dated 26-11-2015)

cumberland ecology

50 0 50 100 150 200 m

I:\...\15089\Figures\RP1_SIS\20161026\Figure 5.1. Vegetation to be Removed

Figure 1. Coastal Wetlands within the Subject Site

Coordinate System: MGA Zone 56 (GDA 94)

Grid North

A

B

C

D

E

Legend

Subject Site

Draft SEPP Mapping

Coastal Wetland

Vegetation Community

- Saltmarsh
- Saltmarsh and Phragmites Reedland ecotone
- Phragmites Reedland
- Phragmites Reedland - weedy
- Mangrove
- Native plantings and landscaping
- Mixed exotic sedgelands and grasslands
- Exotic grassland

Image Source:
Image © 2016 NearMap

Data Source:
NSW DP&E (2016). Coastal Reforms.
http://www.planning.nsw.gov.au/CoastalReform

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I:\...\15089\Figures\Letter 12\20161213\Figure 2. Coastal Wetlands_Vegetation Communities

Figure 2. Coastal Wetlands mapped in relation to ground-thruthed extent

50 0 50 100 150 200 m