JRPP No	2011SYW046
DA Number	DA0147/11
Local Government Area	Ku-ring-gai Council
Proposed Development	New practice fairway, construction of new holes, various hole design changes, new water storage dam & bridge, tree removal, landscaping works and associated works to existing golf club
Street Address	556 Pacific Highway Killara
Applicant/Owner	Killara Golf Club Limited
Number of Submissions	78 plus a petition containing 130 signatures – original DA
	21 – amended proposal
Recommendation	Approval
Report by	Ross Edwards, Development Assessment Officer

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### SUMMARY SHEET

REPORT TITLE:	556 Pacific Highway, Killara
LOT & DP:	Lot 2 in DP 1109896
	Lot 1 in DP 233290
	Lot 1 in DP 518001
	Lot 9 in DP 3725
	Lot 4 in DP 404775
	Lot B in DP 412102 Lot C in DP 329128
	Lot 2 in DP 535219
	Lot 22 in DP 217659
PROPOSAL:	New practice fairway, construction of new holes,
TROFOGAE.	various hole design changes, new water storage
	dam & bridge, tree removal, landscaping works
	and associated works to existing golf club
<b>DEVELOPMENT APPLICATION:</b>	DA0147/11
WARD:	Gordon
APPLICANT:	Killara Golf Club Limited
OWNER:	Killara Golf Club Limited
DATE LODGED:	1 April 2011
ESTIMATED COST OF	\$14,350,000
DEVELOPMENT:	
ISSUES:	Landscaping, ecology, heritage, riparian, safety
PRE-DA MEETING:	Yes
SUBMISSIONS:	Yes
LAND & ENVIRONMENT COURT:	N/A
<b>RECOMMENDATION:</b>	Approval

### **LEGISLATIVE REQUIREMENTS**

Zoning	Residential 2(b), 2 (d3) and Open Space b(b) Recreation Private under Ku-ring-gai Planning Scheme Ordinance
Permissible Under	Ku-ring-gai Planning Scheme Ordinance
Relevant legislation	SEPP 55 – Remediation of land SEPP 19 – Bushland in Urban Areas SEPP (Sydney Harbour Catchment) 2005 SEPP (Infrastructure) 2007 Ku-ring-gai Planning Scheme Ordinance DCP 40 – Construction and Waste Management DCP 47 – Water Management DCP 56 – Notification
Intermeted Development	

Integrated Development Yes – NSW Office of Water and Department of Trade & Investment, Regional Infrastructure Services

### PURPOSE FOR REPORT

To determine development application No. 0147/11, which seeks consent for construction of a new practice fairway, construction of new holes, various hole design changes, new water storage dam, increasing the size of the existing dam and the construction of a new bridge, tree removal, landscaping works and associated works to the existing Killara golf course.

The application is required to be reported to the Joint Regional Planning Panel as the costs of works (CIV) exceeds \$10 million. The development application was lodged prior to 1 October 2011 when the JRPP CIV threshold was increased to \$20 million.

### HISTORY

### Site history:

Council's records indicate the subject site has been used for a golf club and golf course for approximately over 100 years.

### **Previous Development Applications**

**DA 0701/00** – This application proposed the extension of the existing roof outside the professional shop at the rear of the heritage listed building. The application was approved on 24 July 2000.

**DA 0901/00** – This application proposed construction of a 1.96m high black precoated open metal fence on the Fiddens Wharf Road frontage. The application was approved on 5 October 2000.

**DA 0171/01** – This application proposed to increase the size of an existing office within the listed heritage item by approximately 3 metres. The application was approved with on 20 March 2001.

**DA 0617/01** – This application proposed the construction of a new tennis pavilion within the Killara Golf Course. The application was approved on 6 August 2001.

**DA 1489/01** – This application proposed the alteration of the 9<sup>th</sup> hole and new associated boundary fencing. The application was approved on 22 January 2002.

**DA 0260/03** – This application proposed to enlarge the existing Honeysuckle Creek/dam and fill placement within the site. The application was refused by Council on 3 March 2004. for the following reasons:

**DA 1356/05** – This application proposed the demolition of existing sheds and construction of a new maintenance sheds within the course. The application was approved on 9 June 2006.

**MOD 0471/07** – This modification proposed amendments to the approved development under DA 1356/05. The application was approved on 20 December 2007.

**DA 0966/08** – This application proposed the demolition of the existing maintenance shed and storage bins and construction of two new maintenance buildings. The application was refused on 17 December 2008.

**REV 0002/09** – This review of determination sought to review the decision of DA 0966/08. The review resulted in the granting of development consent on 15 April 2009.

Current Development Application (DA 0147/11)

**28 September 2010** – A Pre DA Consultation took place and written advice was provided by Council.

1 April 2011 – application lodged.

7 April 2011 - integrated referrals sent.

15 April 2011 - application notified to owners of neighbouring properties.

20 April 2011 – stop the clock letter received from Office of Water.

21 April 2011 - stop the clock letter information sent to Office of Water.

**27 April 2011** – application notified to a larger notification catchment as the original notification was to only the sites around the home paddock.

**10 May 2011** – comments and conditions of consent received from Trade and Investment, Regional Infrastructure and services formally known as the Department of Fisheries.

**7 June 2011** – Engineering comments and conditions received. Email received from the Office of Water requesting a two week extension of time to submit the integrated referral.

**8 June 2011** – Draft heritage referral received, requesting further information and amendments to the proposed plans.

**9** June 2011 – Council advises applicant that the assessment of the application has commenced, albeit from a very preliminary viewpoint at that point of time. The email advised that there are missing plans, a bush fire report is to be undertaken as the Links paddock is located within bush fire prone land.

**21 June 2011** – Council Officer the applicant that the bush fire report has to be undertaken by a qualified bush fire consultant and submitted to Council so as to meet the legislative requirements. Council advised the applicant that the submissions received are available to be viewed at Council chambers once an informal request to view information has been submitted. The applicant was also advised that once all of the internal and external referrals were received and all of the issues identified, a letter would be sent to the applicant and that a meeting could be undertaken to discuss the issues.

**2 September 2011** - Comments and conditions of consent were received from Office of Water

**7 October 2011** – A preliminary assessment letter was sent to the applicant, requesting amendments and additional information.

**26 October 2011** – Council advises the applicant that they will grant an additional 14 days to provide the requested information.

**1 November 2011** – An additional preliminary assessment letter is sent to the applicant granting until 9 December 2011 to submit the requested information.

10 November 2011 – JRPP briefing was deferred to a later date.

**8 December 2011** – The applicant requests further extension of time until 16 December 2011 to submit the requested information.

**16 December 2011** – Amended plans and updated information was submitted to Council. Due to the illegibility of the submitted plans further plans were submitted 7 February 2012.

20 January 2012 – The amended application is notified.

23 February 2012 - Council Officers briefed the JRPP on the proposal.

**26 March 2012** – Council sent a letter to the applicant requesting amendments to be submitted to Council within 21 days.

**17 May 2012** - Amended plans and updated information was submitted to Council.

24 May 2012 - Council requested further information.

**6 June 2012** – Amended plans and updated information was submitted to Council.

**18 June 2012** – Amended comments and conditions were received from the NSW Office of Water.

# THE SITE AND SURROUNDING AREA

The site:

Zoning	Residential 2(b) – it is only proposed to undertake works to the existing open space areas within the portion of the site that falls under this zoning. Works for the purposes of open space are permissible within this zone, with consent.
	Residential 2(d3) – No development is proposed within this zoning.
	Open Space 6(b) Recreation Private – The proposed development is permissible within this zoning.
Visual character study category:	1920- 1945 and 1945-1968
Easements/rights of way:	Yes - An easement on the site located behind the properties of 1, 3, 5, 7 Mildura Road and 1 Golf Links Road Killara within the land of Killara Golf Course is not impacted by the proposal.
Heritage Item:	Yes – Home Paddock including the Golf club building.
Heritage conservation area:	No
In the vicinity of a heritage item:	Yes – 5 Mildura Street, 26, 41 and 10 Buckingham Road, 512 Pacific Highway, 37 and 46 Fiddens Wharf Road Killara.
Bush fire prone land:	Yes
Endangered species:	Yes – Sydney Turpentine Ironbark Forest and Bluegum High Forest. No impacts.
Urban bushland:	Yes
Contaminated land:	No

### Site description

The site is located on the eastern side of the Pacific Highway, midway between Lindfield and Killara railway stations. The golf course consists of three parcels of land which are separated by the Golf Links Road and Fiddens Wharf Road. The street address and legal property title for each parcel of land is as follows:

• Fiddens Wharf Road, Killara (Lot 2 in DP 1109896, Lot 1 in DP 233290 and Lot 1 in DP 518001).

- Pacific Highway, Killara (Lot 9 in DP 3725, Lot 4 in DP 404775, Lot B in DP 412102, Lot C in DP 329128 and Lot 2 in DP 535219).
- Golf Links Road , Killara (Lot 22 in DP 217659).

Killara golf course consists of three paddocks which are identified as follows:

- Home Paddock This is the main paddock of the golf course that contains the heritage listed clubhouse, equipment sheds, Honeysuckle Dam and the holes 1, 2, 3, 8, 17 and 18. The Home Paddock is bound by the Pacific Highway to the east (including the rear of the properties fronting the highway), Buckingham Road to the north, Golf Links Road to the west and Fiddens Wharf Road to the South.
- Links Paddock This paddock contains the holes 4 to 7 and is located to the west of Golf Links Road, east of Gurin Avenue and north of Gleneagles Avenue. Links Creek is located to the north of the Links Paddock.
- Bradfield Paddock This paddock contains holes 9 to 16 and is bound by Fiddens Road to the north, Lady Game Drive to the west, Prince Road to the east and Provincial Road to the south.

### Surrounding development:

The properties surrounding Killara Golf Course comprise one and two storey residential dwellings, with residential flat buildings and commercial buildings either side of the main entrance to Killara golf club on the Pacific Highway. The listed heritage items of 5 Mildura Street, 26, 41 and 10 Buckingham Road, 512 Pacific Highway, 37 and 46 Fiddens Wharf Road are located within the vicinity of the golf course.

### THE PROPOSAL

The application proposes the following:

### Home Paddock

- a new second hole which involves the construction of a new tee, fairway and green
- enlarging the existing Honeysuckle Dam
- a new footbridge over Honeysuckle Dam replacing the existing bridge
- a new practice fairway
- a new drainage and irrigation system
- new cart paths
- minor regrading of the existing fairways and greens
- new sand bunkers

## Links Paddock

- a new fourth hole which includes the removal of trees for the fairway, tee and green
- minor grading changes to the third and fifth fairways
- reconstruction of the third, fifth, sixth and seventh greens
- construction of new sand bunker
- installation of a new drainage and irrigation system
- new cart paths

### Bradfield Paddock

- a new dam between holes 10 and 13
- minor grading changes to the fairways
- construction of the proposed spare hole
- reconstruction of the greens
- new cart paths
- installation of a new drainage and irrigation system

### Tree removal and tree replenishment

- it is proposed to remove approximately 1230 canopy trees from the Killara Golf Course
- 1773 new canopy trees are proposed as follows:
  - Home Paddock = 636 trees
  - Links Paddock = 487 trees
  - Bradfield Paddock = 650 trees

### Amended plans dated 16 December 2011

The amended plans proposed the following changes:

• reconfiguration of fairways and greens

## COMMUNITY CONSULTATION

In accordance with Development Control Plan No. 56, owners of surrounding properties were given notice of the application. In response, submissions from the following were received.

- 1. Mr T & Mrs A Robertson, 3 Mildura Street, KILLARA NSW 2071
- 2. Mr P & Mrs J Levy, PO Box 375 GORDON NSW 2072
- 3. Mr S O`Donnell, 1 Primula Street, LINDFIELD NSW 2070
- 4. Mr I & Mrs B Plumb, 27 Gurin Avenue, KILLARA NSW 2071
- 5. Mr N & Mrs M Hosking, 29 Fiddens Wharf Road, KILLARA NSW 2071

- 6. Mr P & Mrs W Liu, 1 Mildura Street, KILLARA NSW 2071
- 7. Mr M Robertson, 12/564 Pacific Highway, KILLARA NSW 2071
- 8. Ms S J Armstrong, 7 Mildura Street, KILLARA NSW 2071
- Ms K A Bishop & Mr E J Fitzpatrick, 15 Fiddens Wharf Road, KILLARA NSW 2071
- 10. Mr R & Mrs C Kinninmont, 118 Provincial Road, LINDFIELD NSW 2070
- 11. Mr A & Mrs C Bloxham, 46 Fiddens Wharf Road, KILLARA NSW 2071
- 12. Mrs X Yan & Mr X Hu, PO Box 681, GORDON NSW 2072
- 13. Mr J D Pringle & Dr C M Silsbury, 9 Gurin Avenue, KILLARA NSW 2071
- 14. R Apps, robapps@optusnet.com.au
- 15. The Brittans, 72 Warrangi Street, TURRAMURRA NSW 2074
- 16. Ms L Stacker, lindystacker@yahoo.com.au
- 17. Mr J & Ms E Battaglia, Sydney Metropolitan Wildlife Services, 6 Ponsonby Parade, SEAFORTH NSW 2092
- 18. Ms A Bennett, annelbenn@hotmail.com
- 19. Mr/s A McGrath, <u>alex.mcgrath@live.com</u>
- 20. Ms B Young, ianbevyoung@bigpond.com
- 21. Mr D C & Mrs C M Braiding, 82 Provincial Road, LINDFIELD NSW 2070
- 22. Mr L R Draney, 1 Golf Links Road, KILLARA NSW 2071
- 23. Mrs D Kapur, 15 Gurin Avenue, KILLARA NSW 2071
- 24. Mr H L Woon & Ms L Harn, 25 Prince Road, KILLARA NSW 2071
- 25. Mr G Mitchell, 28 Carnarvon Road, ROSEVILLE NSW 2069
- 26. Mr D Payne, 11 Beaumont Road, KILLARA NSW 2071
- 27. Ms B Alexandra, Belinda Alexandra@bigpond.com
- 28. Ms K Hardy, kristenleigh64@gmail.com
- 29. Ms D Jenner, DJenner@ords.com.au
- 30. Ms J Marlow, PO Box 845, NARRABEEN NSW 2101
- 31. Mr S F & Mrs O Birchall, 6 Banyula Place, KILLARA NSW 2071
- 32. Ms A Cherry, acherry@optusnet.com.au
- 33. Mr M Brown, 1/2 Golf Links Road, KILLARA NSW 2071
- 34. Mrs B H Brown, 1/2 Golf Links Road, KILLARA NSW 2071
- 35. Mr L R Madeley & Ms C Tantrum, 7 Banyula Place, KILLARA NSW 2071
- 36. Mrs G A Clark, PO Box 842, ST IVES NSW 2075
- 37. Mr M P Johnson, 17 Gleneagles Avenue, KILLARA NSW 2071
- 38. Ms J Colyer, 2/2 Golf Links Road, KILLARA NSW 2071
- 39. Ms D Colyer, 2/2 Golf Links Road, KILLARA NSW 2071
- 40. T Arad, 15 Bowes Avenue, KILLARA NSW 2071
- 41. Mr D Arad, 15 Bowes Avenue, KILLARA NSW 2071
- 42. Dr I Weingarten, 15 Bowes Avenue, KILLARA NSW 2071
- 43. R M & M C Christie, 12 Golf Links Road, KILLARA NSW 2071
- 44. Mr R M Middleton, 10 Buckingham Road, KILLARA NSW 2071
- 45. Ms I Callahan Hon Secretary
- 46. Sydney Metropolitan Wildlife Services, PO Box 78, LINDFIELD NSW 2070
- 47. Mr S Shankar, 10 Redbank Road, KILLARA NSW 2071
- 48. Ms C Reyes, crisbrenda2003@yahoo.com
- 49. Ms P Hoffmann, philippaf1@optusnetcom.au

- 50. Mr K C & Mrs S E Sackville, 48 Fiddens Wharf Road, KILLARA NSW 2071
- 51. Ms M and Mr F Gibbons, 16 Gleneagles Avenue, KILLARA NSW 2071
- 52. Ms | Tims, irenetims@gmail.com
- 53. Mr A J & Mrs J H Coomes, 90 Provincial Road, LINDFIELD NSW 2070
- 54. Mrs S Lubbers, 8 Fiddens Wharf Road, KILLARA NSW 2071
- 55. Ms J Harwood, janetsh@optusnet.com.au
- 56. Mr/s D Green, 130A Provincial Road, LINDFIELD NSW 2070
- 57. Mrs J Coomes, Petition Initiator, 90 Provincial Road, LINDFIELD NSW 2070
- 58. Mrs S and Mr J Gillmore, 36 Chelmsford Avenue, LINDFIELD NSW 2070
- 59. Mrs J and Mr B Ward, 22 Bowes Avenue, KILLARA NSW 2071
- 60. Mrs S M Robb, 7 Coronga Crescent, KILLARA NSW 2071
- 61. Mr A F & Mrs P Saraceno, 86A Provincial Road, LINDFIELD NSW 2070
- 62. Mrs K Cowley, 1 Kenilworth Road, LINDFIELD NSW 2070
- 63. Ms O Shapiro, 96A Bent Street, LINDFIELD NSW 2070
- 64. Mr R James, 96A Bent Street, LINDFIELD NSW 2070
- 65. Mrs S K Cowan, 52 Fiddens Wharf Road, KILLARA NSW 2071
- 66. Mr A & Mrs T Cheang, 1 Gleneagles Avenue, KILLARA NSW 2071
- 67. Mr MA Zovaro & Ms CT Morgan, tcmorgan2276@gmail.com
- 68. Mr A Dixon, 106 Provincial Road, LINDFIELD NSW 2070
- 69. Mr J Levy, 5 Mildura Street, KILLARA NSW 2071
- 70. Mr K J & Mrs J M McCreanor, 21 Gleneagles Avenue, KILLARA NSW 2071
- 71. Mrs M Rope, 15 Gleneagles Avenue, KILLARA NSW 2071
- 72. Mr M A & Mrs K Williams, 3 Gleneagles Avenue, KILLARA NSW 2071
- 73. Mr P M Williamson, 5 Gleneagles Avenue, KILLARA NSW 2071
- 74. Mr A & Mrs L Woods, 11 Gleneagles Avenue, KILLARA NSW 2071
- 75. Mr E A Moorhouse, 7 Gleneagles Avenue, KILLARA NSW 2071
- 76. Mr A & Mrs C Cheang, 1 Gleneagles Avenue, KILLARA NSW 2071
- 77. Mr S M Sasse, 19 Gleneagles Avenue, KILLARA NSW 2071
- 78. Mr PW Castle & Mrs MK Castle, 9 Gleneagles Avenue, KILLARA NSW 2071

The submissions raised the following issues:

# The removal of trees from within the golf course is excessive and unnecessary.

The proposed development is a permissible development within the zoning. The applicant submits that the proposed works are necesary to improve the playability and integrity of the golf course. Council's Landscape and Ecological Assessment officers support the proposal, subject to conditions.

# The removal of the trees will have a significant impact on the local environment.

Council's Ecological and Landscape Assessment officers support the proposal and consider the impacts on the environment to be acceptable.

### The proposed development will have a significant impact on the local flora and fauna within the area that includes threatened species.

Council's Ecological Assessment officer does not consider the proposed development to have a significant detrimental impact of the local flora and fauna of the area and supports the proposed development subject to conditions of consent. Further to this the applicant provided a seven part test and Vegetation Mapping Plan that was assessed by Council's Ecological and Landscaping Assessment Officers in which they considered that the impacts on the environment are acceptable.

Concerns have been raised in regards to the safety of the neighbouring sites that are located adjacently to the proposed second hole. It has also been raised that the location of the second hole will not meet Golf NSW Guidelines on safety. A risk assessment of the second hole in regards to maintaining the safety of the neighbouring sites should be undertaken.

The applicant submitted to Council an independent risk assessment from "Golf by Design, Project Management & Land Planning". The risk assessment considered that the second hole will adequately meet the Golf NSW Guidelines on safety and that the second hole will not significantly impact the safety of the neighbouring properties.

### The proposed plantings along the boundaries of the golf course will impact the current open vistas that are currently enjoyed by the local community.

It is considered that the views enjoyed by the local community of the golf course will not be significantly impacted as a result of the proposed development. The proposal does not include solid boundary fencing that would restrict the visual outlook of the golf course.

# Concern is raised that the additional plantings within the golf course will increase the bush fire risk within the area.

The applicant has provided a bushfire report from a qualified bush fire consultant stating that the proposed development will not have a significant impact to the neighbouring sites in regard to bushfire.

# Concern is raised in regards to the noise of the machinery to undertake the proposed development.

It is conditioned as a part of the consent that works are to be only undertaken within specified hours. (Condition 53).

# Concern is raised that the proposed cart path within the golf course will impact the amenity of the neighbouring sites in regard to noise.

It is not considered that the additional golf cartpaths within the site will have a significant impact to the neighbouring sites in regards to noise impacts, as they are adequately set back from the neighbouring sites. It is also considered that the proposed additional plantings within the site will screen the golf paths from the neighbouring sites. Furthermore, the golf carts are electric and do not make a significant noise that would impact the amenity of the neighbouring sites than what already of the use of the golf carts within the golf course.

# The removal of the trees from within the golf course will impact on the privacy of neighbouring properties.

It is not considered that the proposed development will have a significant impact on the privacy of neighbouring properties as additional screen plantings are proposed within the golf course and along the boundaries.

# Concern is raised over the reinforced area in regard to the construction of the fifth green. Does this work involve the construction of a retaining wall?

There are no retaining wall structures proposed around the fifth green.

# An 8 foot wide right of way is located to the rear of the neighbouring sites located on Mildura Street adjacent to the golf course.

The existing right of way is to be maintained. No works are proposed within the right of way.

# The proposed development within the golf course will alter the view of the golf course from the public areas surrounding the golf course.

The proposed upgrading of the existing golf course will not significantly alter the view of the golf course from the public areas that surround the course, as the outlook to a golf course is being retained.

# The values of the properties neighbouring the works within the golf course will be significantly impacted.

Property values are not a relevant planning consideration and are not taken into consideration as a part of the assessment required under Section 79C of the Environmental Planning and Assessment Act 1979.

# There has been a lack of consultation between the golf course and owners of neighbouring properties in regard to the proposed development.

This is a private matter between the Killara Golf Course and owners of neighbouring properties and is not a matter for consideration under Section 79C of the Enviornmental Planning and Assessment Act 1979. The proposal has been notified in accordance with Council's Notification DCP.

# Concern is raised in regard to the stormwater runoff from the seventh hole to neighbouring properties.

Council's Development Engineer did not raise any concerns in this regard and supports the proposed development, subject to conditions of consent.

# Concern is raised that the tree debris within the site will create termite hazards.

The applicant advises that the tree debris will be removed from the site. A condition has also been recommended in this respect. (Condition 33).

### Concern is raised in regard to the safety of golf players crossing Golf Links Road from the home paddock to the links paddock.

The proposed works within the golf course will not significantly impact the current crossing method between the Home Paddock and the Links Paddock. The current crossing method at Golf Links Road is being retained and will not be affected by the proposed works within the golf course. Moreover, no issue is raised in respect of the current crossing method of Golf Links Road.

# The proposed additional plantings will overshadow neighbouring properties and will restrict the outlook on to the golf course.

It is considered that the proposed additional plantings will maintain the existing treed outlook from the public and private neighbouring sites. It is also considered that the proposed additional plantings will help sustain the biodiversity within the site of Killara Golf Course. The proposed plantings are not considered to have a significant impact to the solar access of neighbouring properties. Furthermore, consent is not required for Killara Golf Club to plant additional plantings within the golf course. The proposed plantings have been provided so as to demonstrate that the golf course will be maintaining the visual amenity of the area from the proposed works within the golf course.

# The dust created from the proposed development will impact on neighbouring properties.

A condition has been recommended to address this concern. (Condition 64).

### Objection is raised to the removal of the trees that are adjacent to the rear boundaries of the properties in Mildura Street that back on to the golf course.

The trees located at the rear of the properties along Mildura Street have been shown to be retained on the amended plans.

# Concern has been raised in regard to the stormwater drainage of the golf course to Provincial Road and Primula Road.

For the reasons stated within the report Council's Development Engineer supports the proposed development. Conditions are also recommended to ensure stormwater runoff from the golf course to the neighbouring properties and surrounding streets is appropriately managed.

# Concern is raised in regard to the visual amenity impacts from the proposed earthworks and regrading of the golf course.

After completion of the construction phase, the site will be relandscaped and the existing visual outlook of the golf course will be reinstated.

### The proposed development will create riparian impacts.

Council's Technical Officer Water & Catchments and Office of Water (NOW) support the proposed development, subject to conditions designed to maintain the integrity of the surrounding riparian corridors. (Condition 8, 16, 34, 53, 100 and 101)

# Concern is raised over the impact of the routes proposed to be taken by construction vehicles.

Council's Development Engineer raised no issues in regard to the proposed construction traffic management plan and supports the plan, subject to conditions of consent.

# The golf course may be contaminated land. Further clarification is required into this matter.

The subject site has a history of farmland and the use as a private golf course. Evidence has been provided by a limited contamination assessment that was undertaken by Consulting Earth Scientists. The assessment concluded that the site has no unreasonable levels of contamination that may significantly impact on the users of the golf course and the neighbouring residential and bushland areas. It was also determined by the study that the material to be excavated from the base of the existing dam and the proposed new dam can be reused within the site, as the material does not contain levels of contamination that will impact the health of the neighbouring residents and natural environment.

# Boundary fencing concerns. Is there a boundary fence proposed around the perimeter of the golf course?

No boundary fencing is proposed as part of this application.

### Amended plans dated 16 December 2011

The amended plans were also notified. Submissions from the following were received:

- 1. L. R. Draney 1 Golf Links Road, Killara
- 2. Phillip and Margaret Castle 7 Gleneagles Avenue, Killara
- 3. Andrew Bloxham 46 Fiddens Wharf Road, Killara
- 4. Kathy Cowley 1 Kenilworth Road, Lindfield
- 5. Jonathan Levy 5 Mildura Street, Killara
- 6. Sarah Armstrong 7 Mildura Street, Killara
- 7. Sydney Birchall 6 Banyula Place, Killara
- 8. Margaret Rope 15 Gleneagles Avenue, Killara
- 9. Mark and Kyoko Williams 3 Gleneagles Avenue, Killara
- 10. Peter Williamson 5 Gleneagles Avenue, Killara
- 11. Adrian and Linda Woods 11 Gleneagles Avenue, Killara
- 12. Mr and Mrs Johnson 17 Gleneagles Avenue, Killara
- 13. Eric Moorhouse 7 Gleneagles Avenue, Killara
- 14. Aaron and Christina Cheang 1 Gleneagles Avenue, Killara
- 15. Stephen Sasse 19 Gleneagles Avenue, Killara
- 16. Kevin and Joan McCreanor 21 Gleneagles Avenue, Killara
- 17. Anthony Dixon 106 Provincial Road, Lindfield
- 18. Louis Madeley and Cathryn Tantrum 7 Banyula Place, Killara
- 19. Trevor Robertson 3 Mildura Street, Killara
- 20. D. C. Braiding 82 Provincial Road, Lindfield
- 21. Barbara and Ian Plumb 27 Gurin Avenue, Killara

These submissions raised the following issues:

# Concern is raised over the removal of trees labelled H5-68 and 69 which will impact on the privacy and safety of 27 Gurin Avenue.

It is considered that the privacy and safety of the neighbouring property of 27 Gurin Avenue will be retained as it is conditioned that the trees labelled H5-68 and 69 are to be retained. (Condition 47)

# The removal of trees from within the golf course is excessive and unnecessary.

It is proposed to remove 1230 canopy trees from within the site and replace approximately 1773 canopy trees within the site. These works are permissible development and will improve the playability of the existing golf course while maintaining its integrity and the visual character of the area.

# Concerns have been raised in regard to the safety of the neighbouring sites that are located adjacently to the proposed second hole.

The applicant submitted to Council an independent risk assessment from "Golf by Design, Project Management & Land Planning". The risk assessment considered that the second hole will adequately meet the Golf NSW Guidelines on safety and will not significantly impact the safety of the neighbouring properties.

# Concern is raised over the works impacting on the right of way appurtenant to 3 Mildura Street, Killara.

No works are proposed within the existing right of way.

### Concern is raised from golf balls being hit from the 5<sup>th</sup> tee and entering Provincial Road and properties along Provincial Road.

The proposed works within the existing fifth tee and fairway are not considered to impact on the safety of neighbouring properties to a greater degree than is presently the case from the playing of the existing fifth tee and fairway.

# Concern is raised that the rough along the seventh hole and fairway will be altered from grass to woodchip.

Killara golf course does not require development consent to alter the rough from grass to woodchips.

# The Killara Golf Club land has been categorised as a Core 1 Riparian Land category and an area of biodiversity significance and, as such, the development application must be assessed against the standards in the Draft LEP.

The proposed development has been assessed against the controls of the Draft LEP. Council's Technical Officer Water & Catchments and Ecological Assessment Officer support the proposed development for the reasons stated within the report.

### Concern has been raised that the safety report prepared for the

#### construction of Hole 2 by Cashmore is not an independent report.

The applicant has provided an independent report from Golf by Design, Project Management & Land Planning that addresses the safety concerns of the proposed second hole.

#### **INTERNAL REFERRALS**

### Heritage

Council's Heritage Advisor has commented on the proposal as follows:

#### Amended plans

Amended plans were received by Council on 16 December 2011. It is now proposed to retain the Pin Oaks near No 5 Mildura Avenue. The landscape plans submitted with the amended application show removal of the group of trees near the clubhouse and the trees to the west of No 46 Fiddens Wharf Road. A heritage report submitted with the amended plans recommends that a condition of consent should be applied to ensure most of the trees in the group closest to the clubhouse be retained but 2 Hoop Pines and 1 Bunya Pine be removed and the palms should be removed or relocated. It also recommends retaining 4 Cypress trees near the western boundary of No 46 Fiddens Wharf Road.

#### Heritage Impact Statement (HIS)

The applicant has submitted a Heritage Impact Statement (HIS) prepared by an experienced consultant. It is a detailed document and generally follows the format for a HIS as recommended by the NSW Heritage Council. It concludes that the proposed development will not have a significant impact on the heritage significance of the items or their setting but acknowledges that the group of trees near the clubhouse are important to its setting and some should be retained. It also recommends that several trees near No 46 Fiddens Wharf Road should be retained for amenity reasons.

#### Clubhouse

The report has considered the development of the golf course and the clubhouse. The land was acquired in separate parcels. The Home Paddock was the original site and the Bradfield Paddock was acquired via the purchase of two lots, one in 1909 and one in 1911. The Links Paddock was acquired later, but there is no discussion about its history.

The existing clubhouse was opened in 1933 and represents the forth clubhouse facility on the site. The earlier building was constructed in 1909 but destroyed by fire in 1932. The photograph of it when opened shows it is set in a grassed setting with no large plantings limiting the view from the terrace. However, there are large trees in the background. The 1934 aerial photographs show the Home Paddock is largely grassed with groups of trees between the fairways and some

plantings along the boundaries of the site. The series of aerial photographs clearly shows that plantings have increased in both number and density. The report states that a revised course layout in the 1960s led to additional plantings and most of them were planted from the early 1970s. It appears that most of the group of trees near the clubhouse were not planted until the late 1960s or early 1970s although there is evidence that the palm trees are earlier plantings.

#### No 46 Fiddens Wharf Road

The report states the item – "The Meadows" was built in 1906 to a design by the noted architect James Peddle. It claims the land was an isolated lot which adjoined farmland and there was no direct connection with the golf course. It claims the golf club acquired the surrounding land in two purchases, one in 1909 and one in 1911 and the surrounding landscape has remained largely open. The report largely relies upon aerial photographs from 1934 to demonstrate the development of the golf course and the garden to the item at No 46 Fiddens Wharf Road. In 1934 the Bradfield Paddock was largely devoid of trees apart from a grouping along Fiddens Wharf Road to the north east of the house and a few trees around the street boundaries of the golf course. The aerial photographs show that by 1972, the southern part of the property had been subdivided and several houses constructed. The trees on the golf course are maturing, however the setting to the south west and the street is still generally open. The trees to the east side are mature and dense in 1972.

Currently, the item is heavily screened by trees on all its boundaries, particularly the south western boundary with the golf course. The dense group of trees to the east of the house has thinned out and a cart track has been constructed under the roadway connecting the Bradfield and Home Paddocks.

The heritage impact statement makes an argument that for most of its history the item was visible from all directions and largely unrestricted by vegetation. It claims the existing treed setting did not develop until the 1970s and the current reclusive character is a result of screening by trees on the golf course rather than the item itself. It states the existing garden on the item is of little significance, has been highly disturbed and does not retain the authentic relationship of the building to the road, to the surrounding landscape or the setting in which it was conceived. The heritage impact statement concludes it is not necessary to retain the trees proposed for removal on heritage grounds as they are part of the golf course and were designed and planted by the golf club in the 1960s to compliment the 11<sup>th</sup> green. The heritage impact statement then concludes that the proposed removal of trees is largely an amenity issue, not a heritage issue but could be mitigated by retaining 4 Cypress trees near the boundary of the item.

#### Comments

The amended plans now propose retaining the Pin Oaks near 5 Mildura Avenue. This is now acceptable as the value of the trees to its immediate setting will remain.

It is acknowledged that the group of trees near the Clubhouse do contribute to its heritage significance and setting and most should be retained. The HIS recommends removal of 2 Hoop Pines, 1 Bunya Pine and relocation or removal of the palms. From a heritage point of view, this is acceptable. The final decision on management of this group of trees should be made by Council's Landscape Officers on the basis of their health, form and life expectancy.

The main unresolved heritage issue is removal of trees along the western boundary of 46 Fiddens Wharf Road. The HIS mainly relies upon an analysis of aerial photographs from 1934. It states the item has always enjoyed an open setting isolated from other houses in what was a former farming area but provides no evidence that that is the case. Certainly, the retention of the house and development of the surrounding land as a golf course from about 1911 has resulted in an unusual setting to it. The historical links between the former owners of the house and the golf club have not been explored. The development of the landscape around the item has occurred since the 1960s (now 50 years) and represents a significant part of its history. When listed as a heritage item in 1989, the landscape provided by the plantings on the golf course was a strong feature in its setting. The description of it in the inventory information notes its intactness and "its setting adjacent to the beautiful Killara Golf Course". From a historical point of view the isolation of this house with a golf course surrounding it may have been accidental (there is insufficient evidence that this is the case) but this contributes to its existing character and setting.

It is recommended that the trees to the west of the item and its location adjacent to the golf course provide a significant setting. Thus retention of 4 Cypress trees, removal of the other Cypress trees and the Cedar would have adverse heritage impacts on its setting and is not supported.



View of Cypress trees and Cedar forming a significant setting to the item behind.



View of 46 Fiddens Wharf Road from golf course through trees.

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#### **Conclusions and recommendations**

There is no objection to most of the works in the amended plans...

The retention of trees (Pin Oaks) adjacent to No 5 Mildura Avenue is now acceptable and supported.

The landscape drawings show the group of trees close to the clubhouse to be removed. However, the heritage impact statement recommends that they contribute to the aesthetic character and are important to the setting of the clubhouse and some trees should be retained. The heritage impact statement recommends a condition should be attached to any future approval that the palms should be relocated or removed and 2 Hoop Pines and 1 Bunya Pine shall be removed. This is considered to be appropriate and such a condition is recommended.

The amended landscape drawings show that the Cypress trees and Cedar to the western side of the item at No 46 Fiddens Wharf Road are to be removed. The heritage impact statement in the amended scheme takes the view that there is no heritage reason to retain the trees on the golf course but acknowledges they have some amenity value to the item and recommends a condition could be applied to retain 4 Cypress trees. Council's Heritage Advisor does not agree with this view as the trees immediately adjoining the western boundary of the item has aesthetic and historical values and are considered to be important to its existing setting. In respect of this it has been conditioned so as to retain the row of Cypress trees and the Cedar. (Condition 44)

In conclusion Council's Heritage Advisor does not object to the proposed development, subject to conditions.

### Landscaping

Council's Landscape and Tree Assessment Officer commented on the proposal as follows:

#### Site characteristics

It is proposed to undertake extensive modifications to the existing golf course including; the realignment of tees, greens and fairways, the deepening of the existing dam, the construction of a new dam/lake, regrading across the site, the creation of two new holes, the creation of new practice fairways, a new irrigation system and the construction of additional golf cart pathways.

The proposed works include substantial tree removal (approximately1200 trees) across the course. The existing golf course is characterised by an established landscape character with mature trees delineating and framing the fairways, greens and tees, creating an urban parkland enjoyed by the club membership and the surrounding community.

The site is made up of three 'paddocks' which are separated by residential streets. The early golf course was limited to the Home Paddock and later expanded to include the Links/Foy and Bradfield Paddocks. The site is surrounded on all sides by residential development which enjoy and benefit from views over the course. The area immediately surrounding the existing clubhouse, including the clubhouse building and an area partially made up of the 1<sup>st</sup> tee and fairway and the 18<sup>th</sup> fairway and green is heritage listed. Other heritage properties adjoin the site and/or gain significant amenity with expansive views across the course.

The setting of the golf course has changed during its history from an open landscape character with remnant tree groupings and young tree plantings, to a mature parklike landscape setting with established trees that define the course layout, providing a treed backdrop and horizon line which is viewed from the surrounding area.

Abbreviations have been utilised throughout this report. They include; AS4970-2009 – Australian Standard: Protection of trees on development sites SRZ – Structural Root Zone TPZ – Tree protection zone SBGHF – Sydney Bluegum High Forest STIF – Sydney Turpentine Ironbark Forest SULE – Safe useful life expectancy

Initial site inspections were undertaken the week of June 21<sup>st</sup> 2011 (winter solstice) when shadowing across the course is at its greatest. Tree numbering and hole association is as per the tree removal plans. Additional site visits have been undertaken during February/March and May 2012 to enable assessment of amended plans.

#### Tree impacts

The application proposes to remove approximately 1200 trees across the golf course comprising approximately 33% of the existing trees located on site (by the applicant's calculations). Trees vary in size, maturity and significance and include native and exotic species and remnant indigenous trees and vegetation. Due to the expansive tree removal proposed, the tree removal has been broken down to each hole (tee, fairway and green) in numeric order and the main parts of the development works. It is noted that some tree plantings have been previously removed.

Justification for the extent of tree removal is based on the use of the site as a private golf course and is not reliant on the health and condition of the trees. Reasons and justification for tree removal include; overshadowing, maintenance of tees, fairways and greens, moisture retention/drying out of areas of play, realignment of course, aesthetics and direction of play away from boundaries/residences. The majority of the trees located on the golf course are in good health and condition. Justification for the change in the landscape aesthetic is based on the desire of the golf course architect and the Killara Golf Club.

Hole 1 Home Paddock (Stage 3)

The most significant and dominant tree grouping proposed for removal includes a grouping of Araucaria bidwillii (Bunya Pine) and Araucaria cunninghamii (Hoop Pine) located to the south of the 1<sup>st</sup> tee between the 18<sup>th</sup> green and 1<sup>st</sup> tee area (refer Figure 1). The trees are identified as H1-202 – 209 and include mature palm plantings on the southern side (H18-160 – 164) refer **Figure 2**. The trees and palms form part of a dominant grouping that visually frame the clubhouse when viewed from the course (refer Figure 3). Justification for the removal of the tree grouping include; opening the vista of the course/Home paddock from the clubhouse, reducing maintenance and shadowing over the 18<sup>th</sup> fairway and green, to enable the relocation of the 18<sup>th</sup> green to the north (to the highest possible design standard) and improve safety conditions. The trees are located within the identified heritage listed area associated with the clubhouse. Refer to the Heritage Advisor's comments.

As the trees have grown as a larger grouping, individual trees, while in excellent health, have poorer, partially suppressed structural forms, particularly their lower canopies, as many of the trees are one sided.

The grouping of trees provides valuable visual amenity for neighbouring properties in Fiddens Wharf Rd screening the clubhouse, its outdoor terrace and dining room from view (refer **Figure 2**). Objections have been received regarding the proposed tree removal and the loss of amenity, particularly in conjunction with the removal of Trees H18-155, & 156.



**Figure 1**: Hoop and Bunya Pine grouping between 1<sup>st</sup> tee and 18<sup>th</sup> green as viewed from clubhouse terrace looking south.

The tree grouping is located to the south and down slope of the 1<sup>st</sup> tee and do not affect play or the growing conditions to the 1<sup>st</sup> tee area. Safety is raised as a justification for removal of the grouping but no detail is provided as to what the safety issue is.

#### Tee



**Figure 2**: Hoop and Bunya Pine grouping between 1<sup>st</sup> tee and 18<sup>th</sup> green as viewed from 18<sup>th</sup> fairway looking north.



**Figure 3**: View to clubhouse looking northeast from 18<sup>th</sup> fairway. Grouping of Bunya/Hoop pines visually frames the clubhouse on right hand side.

The applicant's heritage consultant in their report (December 2011) has recommended the retention of the tree grouping as the removal of all the conifers would have a significant impact. They contribute to the aesthetic character that emerged since the 1970's and are in the focal area in front of the clubhouse. The heritage consultant supports the removal of H1-206, H1-208 and H1-209 but has not stated why. The applicant's arborist has stated that thinning of the group (by selective removal of individuals) is not an ideal alternative to complete removal as remaining trees are unlikely to regain balanced branch and crown spread. The trees are assessed as being in good health and condition with a negligible or minor hazard rating by the applicant's aborist's. Safety has been raised as justification for the removal of the tree grouping but as they have a negligible hazard rating and their location is within a garden bed in an area out play on sloping land, the perceived safety issue is not accepted. Due to heritage, landscape significance and the good health of the trees, their retention is recommended. It has been conditioned for the trees to be retained, in addition to the deletion of a proposed bunker which conflicts with the tree grouping. (Conditon 45).

#### NOTE:

- The trees are located within a proposed planting area which includes sub canopy tree species (>10m) with an understorey planting. These trees and plantings when mature will recreate the existing constraints used as justification for the existing trees to be removed.
- The irrigation plans indicate a cart path through the tree grove which is inconsistent with other submitted plans.

#### Fairway

Another prominent grouping of Araucaria cunninghamii (Hoop Pine) and Araucaria bidwillii (Bunya Pine) H1-188 – 200, located between the 1<sup>st</sup> and 18<sup>th</sup> fairway is proposed for removal. The trees, while not as prominent as the previous grouping when viewed from the clubhouse (refer **Figure 4**), are of similar age and height and delineate the area between the two fairways and direct play along each hole. Justification for the removal of these trees has been given to widen the fairway and to improve playability. It is noted that the trees are located within a proposed planting area that includes sub canopy trees and understorey plantings that will have the same influence upon the playability of the course when mature. Selected removal of trees within the grouping can be considered but, as the trees have grown as a grouping, although healthy and in good condition, they have a poorer structure being primarily one sided. The trees have been assessed by the applicant's heritage consultant as not having heritage significance or context to the clubhouse. It is recommended that the trees be retained. This has been conditioned as a part of the consent.

The bulk of the tree removal associated with Hole 1 is the removal of a stand of existing trees adjacent to the southern side of the fairway. The majority of these trees are Pinus patula (Mexican Pine) grown as a large grove (refer **Figure 5**) stretching for over 100m. The tree grouping is a significant visual element within the course particularly when viewed from the existing  $2^{nd}$ ,  $3^{rd}$ ,  $17^{th}$  and  $18^{th}$  holes.



**Figure 4**: View over 1<sup>st</sup> and 18<sup>th</sup> fairways from clubhouse terrace with lower Bunya/Hoop pine grouping centre.



*Figure 5*: Grove of Mexican Pines between the 1<sup>st</sup> fairway and proposed practice fairways.

The trees are in fair health and reaching the end of their safe useful life expectancy (SULE). As the trees have grown as a large grove, individually they have poor form and structure. No objection is raised to their removal. Their removal will be subject to replenishment plantings being undertaken to maintain the treed horizon line and landscape character.

The proposed landscape works include replanting along the length of the first fairway, which includes sub canopy tree replenishment (as per planting matrix plans). To replenish the tall tree canopy it is recommended that an additional ten (10) canopy trees be included within the southern side of the fairway planting area within the existing slope. It is also recommended that tree sizes at planting be increased to a minimum 5 litres for landscape amenity. This has been conditioned. **(Condition 46)** 

Other trees including Agathis robusta (Kauri Pine), Syzigium paniculatum (Magenta Lillypilly) and Stenocarpus sinuatus (Qld Firewheel Tree) located adjacent to the northern side of the Mexican Pine grove are also proposed for removal to open up the fairway and the approach to the green, improving the playability of the hole. Many of these trees are excellent specimens and their retention is preferred, however given their location, their retention will hinder the play of the hole and their removal therefore is supported.

H1-67 Lophostemon confertus (Brushbox) located adjacent to the northern site boundary on the right hand side of the 1<sup>st</sup> fairway, is part of an avenue planting that follows the vehicular entry route to the bowling greens. The tree is located within a proposed planting area, beyond the rough and does not hinder the playability of the hole. No specific justification has been provided to support removal. The tree is in good health and condition with a very minor hazard rating, providing valuable screening and amenity to the neighbouring residential property. It is conditioned the tree be retained to maintain landscape amenity and the avenue planting. (Condition 45)

Green

Tree removal as nominated surrounding the green can be supported. None of the trees are considered significant within the broader landscape setting.

H1-129 is a mature Eucalyptus scoparia (Wallangarra White Gum) located to the south of the 1<sup>st</sup> green. The tree is over mature, in poor health and condition with bracket fungi and dieback. It is recommended the tree be removed. (Condition 85)

Hole 2 (proposed) Home Paddock (Stage 1)

This is a new hole adjacent to the northern site boundary/north western site corner of the Home Paddock and includes the identified Bush Area.

Tee, fairway and green

The nominated tree removal can be supported as trees proposed to be removed are not considered significant within the broader landscape setting.

Hole 3 (existing hole 6) Links Paddock (stage 1)

Tee

A new tee is proposed for Hole 3. The tee has been repositioned 8m to the south to improve the direction of play and sighting of the hole. The nominated tree removal is acceptable.

#### Fairway

Numerous trees are proposed for removal along the length of the fairway, primarily on the southern (upper side). The removal of trees along the length of the fairway can be supported. While these trees provide internal amenity, they do not have broader landscape significance and their removal will improve the playability of the hole, improve airflow and reduce shadowing of the course. In addition the removal of these trees has been identified to facilitate regrading of the hole and to improve playability of the hole from the left of the fairway.

#### Green

On approach to the green there is a cluster of trees H6-90 – 98 that block the approach to the green. Within this tree grouping is a mature Waterhousia floribunda (Weeping Lillypilly) H6-96 in excellent health and condition and a semi mature Brachychiton rupestris (Bottle Tree) H6-94. <u>H</u>6-94 is an unusual species in Ku-ring-gai and is recommended to be transplanted and utilised on site. This has been conditioned as a part of the consent.(Condition 89)

It is noted that an additional area adjacent to the western site boundary is to be cleared of existing trees to enable the revegetation of the threatened Darwinia spp that is located on site. The area contains a Bower Bird's bower.

### Hole 4 (proposed) Links Paddock (Stage 1)

Is a new hole proposed through an existing natural area that contains endangered plant species. As this is a naturalised area, it is pertinent that the assessment of the impacts of the construction of the new hole be undertaken by the assessing ecologist. Refer to Council's Ecological Assessment Officer's assessment.

#### Green

The approach to the proposed green requires the removal of numerous small trees that have been planted and are not part of the natural bushland area. No objection is raised to the nominated tree removal as the trees are not considered significant within the broader landscape setting and can be replenished with endemic species as part of the landscape works

It is noted that the proposed 4<sup>th</sup> green and surrounding area is located within the identified riparian corridor of Links Creek. Further comment and assessment of the proposed works has been undertaken by council's assessing technical officer and ecological Assessment Officer.

The 4<sup>th</sup> green and surrounds is identified as bushfire prone with the site partially identified as flame zone. Refer fire report comments.

Hole 5 Links Paddock (Stage 1)

Tee

No trees are proposed to be removed.

Fairway

Amended plans indicate the removal of numerous trees adjacent to the northern side of the fairway within the identified riparian corridor. The trees are all Salix babylonica (Weeping Willow) which are exempt species within council's tree preservation order (TPO). No objection is raised to their removal.

Replenishment planting is proposed. As this area is a Category 1 Environmental/riparian corridor, riparian planting will be undertaken beyond the existing fairway to maintain and enhance the riparian corridor, including the planting of additional trees and understorey as per the VMP (Vegetation Management Plan). Refer to assessment by Council's technical officer and Ecological Assessment Officer.

#### Green

The 5<sup>th</sup> green is located adjacent to the north-east site corner of the Links paddock adjacent to Links Creek in a natural hollow. The green is surrounded by mature endemic trees that shadow the green (refer **Figures 6 and 7**). Proposed tree removal for the hole includes H5-197 a mature Jacaranda mimosifolia (Jacaranda) and H5-200 Eucalyptus microcorys (Tallowood) located within the riparian corridor and to the north of the green. No objection is raised regarding the removal of the Jacaranda as it is a species that seeds prolifically when mature. The retention of the Tallowood is recommended. (Condition 41)



**Figure 6**: Grouping of remnant Syncarpia glomulifera (Turpentine) and Angophora costata (Sydney Redgum) located to the north of the 5<sup>th</sup> green within the riparian corridor of Links Creek.



*Figure 7*: View looking east of 5<sup>th</sup> green and remnant tree grouping H5-195, 196, 200-204.

H5-184 is a remnant Eucalyptus pilularis (Blackbutt) located adjacent to the southern side of the 5<sup>th</sup> green (refer **Figure 8**). The tree is in excellent health and condition and considered significant within the broader landscape setting. The tree is assessed by the applicant's consultants as having a 'very high retention value' and a 'negligible' hazard rating. The tree's high canopy does not hinder the playability of the hole or approach to the green. The tree is proposed to be pruned up to 15% on its southern side to accommodate high approach shots to the

relocated green. The redesign and relocation of the green has not taken into consideration the existing retaining wall and cart path which conflict with the proposed bunker and green. It therefore has been conditioned for the existing retaining wall and cart path to be retained and the proposed bunker and green redesigned/relocated to accommodate the existing structures (Condition 42). Pruning of the tree will as per the arborist's recommendations has been conditioned. (Condition 78)



**Figure 8**: Tree H5-184 is an excellent specimen of a remnant Eucalyptus pilularis (Blackbutt) located adjacent to the 5<sup>th</sup> green.

Hole 6 Links Paddock (Stage 1)

Tee

H4-181A, 183 &184 is a small grouping of mature Araucaria cunninghamii (Hoop Pine) and Araucaria bidwillii (Bunya Pine) located adjacent to the eastern site boundary adjacent to the tee (Tree H4-181A is not shown on plan), at the corner of Mildura St and Links Rd (refer Figure 9). The trees are in excellent health and condition and visually significant within the Links Rd streetscape. It is proposed to remove trees H4-183 and H4-182 is identified as being dead or previously removed. Site inspections have confirmed that Tree H4-182 has previously been removed. Tree H4-181A has been tagged/identified as H4-181 on site which is the same identification used for the Eucalyptus sideroxylon (Red Ironbark), and therefore has been referenced in this report as H4-181A. The arborist's reports identify this tree as H4-182 which has also been identified as previously been removed. The removal of Tree H4-183 is acceptable due to maintenance issues regarding the size and hazard of the cones and overcrowding. The removal of H2-183 Araucaria bidwillii (Bunya Pine) will allow the two Araucaria cunninghamii (Hoop Pine) to properly develop while improving airflow and morning sun to the tee.



*Figure 9*: Trees H4-181A, 183 & 184 in background and H4-181 in foreground on right hand side.

H4-181 is a mature Eucalyptus sideroxylon (Red Ironbark) located adjacent to the proposed tee within a proposed planting area (refer foreground of **Figure 9**). The tree is outwardly in good health and condition, has a 'very high retention Value', and has previously been under pruned to maintain playability. The tree is located within a proposed planting area, with a 14m setback from the tee and due to its high canopy does not hinder play. The tree be retained. **(Condition 41)** 

#### Fairway

H4-96 is a mature Harpephyllum caffrum (Kaffir Plum) located midway along the 6<sup>th</sup> fairway on the southern side (refer **Figure 10**). The tree is in good health and condition and within a proposed planting area. No specific justification has been provided for its removal, as the tree is a good specimen of the species which does not hinder play, it is recommended the tree be retained. (Condition 41)



*Figure 10*: H4-96 a mature Harpephyllum caffrum (Kaffir Plum) located midway along the 6<sup>th</sup> tee.

The removal of other trees along the length of the fairway can be supported. While these trees provide internal amenity, they do not have broader landscape significance, and their removal will improve the playability of the hole, improve airflow and reduce shadowing of the course. In addition, the removal of these trees has been identified to improve playing safety of Hole 7, by opening up the fairway to enable the direction of play away from the southern boundary and neighbouring residential properties. Select trees within proposed planting areas in good health and condition that do not hinder play and have low hazard ratings eg H4-81 has been conditioned to be retained. (Condition 41)

Green

No trees are proposed to be removed.

Hole 7 Links Paddock (Stage 1)

Тее

No trees are proposed to be removed adjacent to the tee area.

#### Fairway

The trees proposed to be removed adjacent to the northern side of the 7<sup>th</sup> fairway have been assessed as part of Hole 6. These trees are proposed to be removed to improve safety of Hole 7 by directing play away from the southern site boundary. Refer comments for Hole 6. A small number of trees adjacent to the southern side of the fairway are proposed for removal. No objection is raised to the nominated tree removal as the trees have lesser landscape significance and do not adversely impact upon the amenity of neighbouring residential properties.

#### Green

No trees are proposed to be removed.

Hole 8 Home Paddock (Stage 3)

Tee

No objection is raised to the nominated tree removal adjacent to the tee area to open the area for play.

Fairway (plantings below Honeysuckle Dam)

Plantings of mature palms H8-161 – 182, are proposed for removal within the riparian area of Honeysuckle Creek below the existing dam wall. The palms are all in good health and condition, with a negligible or very minor hazard rating, and contribute positively to the streetscape/landscape character of Links Rd. No specific justification has been provided for the removal of the palms. As the palms pose no threat or conflict with play, their retention is recommended. (Condition 45

#### Green

H8-232 Eucalyptus pilularis (Blackbutt) located adjacent to the western side of the green. The tree is in poor health and condition and assessed as having a medium hazard rating. The tree has numerous hollows which may provide habitat for native fauna. Refer Ecological assessment for clarification of this matter.

Hole 9 Bradfield Paddock (Stage 2)

#### Tee

A grouping of Metatsequoia glyptostroboides (Dawn Redwood) H9-180 – 184 are proposed to be removed. The trees while providing internal amenity and separation between current fairways are located within the proposed 9<sup>th</sup> fairway. Although the trees are in good health and condition, no objection is raised to their removal to accommodate the fairway redesign.

#### Fairway

Numerous trees adjacent to the northeast site boundary are proposed for removal eg H9-47, H9-48. Justification for tree removal has been given that realignment of the hole away from the site boundary, redirecting the line of play is required for safety reasons. The removal of healthy trees adjacent to the northeast (site) boundary conflicts with the justification provided. As the trees are located within proposed planting areas and do not hinder play, their retention is recommended for landscape and neighbour amenity. **(Condition 43)** 

Generally, the proposed removal of trees located adjacent to the south western side of the fairway can be supported to enable widening of the fairway and redirect play away from the northeast site boundary. It is noted that these trees although visible from neighbouring properties in Prince Rd, their removal does not directly adversely impact the residential properties. Existing views will be broadened in the short term until proposed perimeter plantings mature.

H9-99 is an over mature Pinus radiata (Radiata Pine) located adjacent to the northeastern site boundary on the final approach to the 9<sup>th</sup> green. The tree is in declining health. Its removal is supported.

#### Green

Tree H9-113 Eucalyptus pilularis (Blackbutt) located adjacent to the south-eastern site boundary behind the green outside of the field of play is proposed to be removed. The tree is considered to be a remnant specimen and visually significant within the broader landscape. Further arboricultural assessment has been undertaken with active termites discovered. The tree has large diameter deadwood in the crown, bark changes (separation and obvious longitudinal splitting) and swellings extending from ground level to 5m indicating serious cambial disruption. The tree's ongoing viability is poor and it is recommended for removal on arboricultural grounds. The assessing landscape officer concurs with the arborists findings and can support the trees removal.

Council's mapping identifies the tree as being part of a broader tree corridor following the Provincial Rd site boundary that is part of the endangered Sydney Turpentine Ironbark Forest plant community. Refer also to Council's Ecology Assessment Officer's assessment.

Hole 10 Bradfield Paddock (Stage 2)

Tee

The nominated tree removal adjacent to the 10<sup>th</sup> tee can be supported to widen the field of play. There are no trees of broader landscape significance or environmental value proposed for removal.

#### Fairway

No objection is raised for the majority of the nominated tree removal along the length of the 10<sup>th</sup> fairway. Majority of the trees nominated for removal are associated with the proposed new dam/lake and the associated regrading of the area.

H10-16 Pinus patula (Mexican Pine) is a mature specimen in poor health and condition (refer **Figures 11 and 12**). The tree is proposed for retention, but it is recommended due to its poor health that the tree be removed. (Condition 44)


*Figures 11 & 12*: View of tree H10-16 showing poor form and structure and detail showing trunk decay.

#### 52 Fiddens Wharf Rd (residential battleaxe allotment)

Numerous trees located to the southeast of Fiddens Wharf Rd have been identified for removal. The trees are located in proximity to residential property, approximately two thirds along the length of the fairway on the northern (RHS) side. The trees are part of a larger grove of mixed species with the majority located outside of the proposed field of play and within a proposed planting area.

To widen the fairway and to enable direction of play around the proposed dam/lake, no objection is raised to the removal of the line of existing Liquidambars (adjacent to the edge of play) and selected removal of trees within the grove that are in poor health and condition. Trees located beyond the field of play within the existing and proposed planting area, which are in good health are conditioned to be retained (Condition 44). The existing trees provide valuable amenity to the dwelling and also prevent wayward golf balls from entering the property. The removal of the majority of the trees as proposed is likely to create a safety issue to the dwelling and its private open space, which in turn may result in a permanent structure (high wire fence) being required, which is not a desired outcome. Appropriate tree retention/removal has been conditioned. (Condition 44)

The proposed landscape work in this area includes additional native endemic understorey plantings. No objection is raised to the proposed landscape works in association with the existing trees to be retained. H10-125 Sequoia sempervirens (Californian Redwood) located adjacent to the northern side of the fairway is an excellent specimen in good health and condition. It is recommended the tree be retained (Condition 44). The trees retention will require the relocation of a proposed bunker outside of the tree's TPZ which has also been conditioned. (Condition 44)

H10-201, 202, 205-207 Agathis robusta (Kauri Pine) is a prominent tree grouping located on the south-western side of the fairway. The trees are assessed as being in good health and condition with a negligible or very minor hazard rating. No specific justification has been given for the tree removal, and it is assumed that their removal is proposed to widen the fairway. Some of the trees are within a proposed planting area. It is recommended that with the retention of H10-125 the tree groupings removal can be supported to widen the fairway. **(Condition 44)** 

#### Green

Two trees located behind the 10<sup>th</sup> green are proposed for removal. No objection is raised. The largest tree proposed for removal, H10-90 Pinus radiata (Radiata Pine) is a mature specimen located to the west of the green where a bunker is proposed. The pine is part of a larger grouping/grove that is over mature, and in poor health and condition. No objection is raised to its removal. Further discussion about the pine grove is provided as part of Hole 13.

Proposed landscape works include the planting of endemic canopy trees and understorey planting between fairways.

Hole 11 Bradfield Paddock (Stage 2)

# Tee

Numerous trees are proposed for removal adjacent to the 11<sup>th</sup> tee. The trees located behind the tee are associated with the changes to the 12<sup>th</sup> fairway and will be discussed as part of that hole. The most significant tree associated with the 11<sup>th</sup> tee proposed for removal is H11-34 Pinus caribea (Cuban Pine). Like the neighbouring Radiata Pines the tree is over mature and in fair to poor health and condition. No objection is raised to the tree's removal to improve the playability of the hole.

#### Fairway

There are numerous trees proposed for removal along the length of the short fairway which are also part of the 12<sup>th</sup> hole. These trees cast heavy shade across the 11<sup>th</sup> fairway and severely crowd the line of play. These trees have been discussed in greater detail as part of Hole 12.

# Green

Numerous visually prominent trees are proposed to be removed surrounding the 11<sup>th</sup> green. Tree H11-1 is a mature Cedrus deodar (Himalayan Cedar) refer Figure 13, is in good health and condition located 12.0m to the south of the green within a

proposed planting area that is out of play. Justification for the tree's removal is that the tree 'crowds' the playing area and blocks necessary sunlight that the green needs to be adequately maintained. The justification removal is unfounded as the tree is located to the south of the green and therefore there is no overshadowing, and the tree's location within a proposed planting area therefore is not within the field of play. It is recommended that the tree be retained. **(Condition 44)** 



*Figure 13*: Tree H11-1 Cedrus deodar (Himalayan Cedar) located to the south of the 11<sup>th</sup> green

Trees H11-2 to H11-10 is a mature planting of Cupressus torulosa (Bhutan Cypress) located behind the 11<sup>th</sup> green adjacent to the site boundary (refer **Figures 14 and 15**). These trees provide a distinctive backdrop to the green and screen and provide valuable visual quality to the neighbouring properties including the heritage item at 46 Fiddens Wharf Rd. Justification for the trees removal states that 'If any of the trees are to be retained they will appear out of character with the remainder of the golf course and may impact upon the aesthetics of the hole, and the characteristics of these trees block necessary sunlight and air movement'. The reasoning provided is considered to be unfounded as the trees are located to the south and east of the green with a minimum setback of 10.0m from the edge of the green. While it is acknowledged that some early morning sun is currently lost, overshadowing of the green primarily comes from tree H11-12 a mature and significantly prominent Ficus obliqua (Small leafed fig), which is proposed to be retained. With the exception of two of the trees, the remainder are located within proposed planted areas which do not impact play. The aesthetics of the green are

distinctive, but is not out of character with the broader landscape setting and it is noted that other exotic species, including pines are being retained eg between the 10<sup>th</sup> and 13<sup>th</sup> holes. Due to the visual significance, good health and amenity the trees provide, their retention is recommended. **(Condition 43)** 



**Figure 14**: View looking east over 11<sup>th</sup> green showing the distinctive planting of Cupressus torulosa (Bhutan Cypress) located behind the 11<sup>th</sup> green



Figure 15: View looking northeast over 10th fairway to 11th green

Hole 12 Bradfield Paddock (Stage 2)

Tee

Substantial tree removal is proposed adjacent to the 12<sup>th</sup> tee and fairway. This is discussed as part of the fairway tree removal.

Tree H12-11 Araucaria cunninghamii (Hoop Pine) is a mature specimen adjacent to the north-west (Fiddens Wharf Rd) site boundary. The tree is in good health and condition and does not hinder play as it is located immediately adjacent to the site boundary within a planted area. No specific justification has been provided for its removal. Its retention is recommended. (Condition 43)

# Fairway

The 12<sup>th</sup> fairway is to be significantly altered with the removal of the existing line of trees along the south-eastern side of the fairway (refer Figure 16). These trees are visually significant within this part of the course and the trees are prominent when viewed from Fidden's Wharf Rd and the heritage property at 46 Fidden's Wharf Rd (refer Figure 17). Justification for the tree removal is to improve safety along Fidden's Wharf Rd by directing play away from the site boundary as much as possible. The hole is narrow and removal of the trees enables the widening of the hole and the redirection of play away from the boundary. It is also noted that the density of the existing trees casts a heavy shadow over the 11<sup>th</sup> fairway, impacting the quality of the playing surface.

The first main grouping of trees is a mature grove of predominantly Ficus microcarpa var. hillii (Hill's Weeping Fig) and Araucaria cunninghamii (Hoop Pine), strongly delineating the two fairways. The trees provide a dense canopy and direct the line of play. The trees are generally in good health and condition. As previously mentioned, the trees dominate this part of the course (refer **Figures 16 and 17**).



**Figure 16**: Looking south-west along the length of the 12<sup>th</sup> fairway showing the line of trees to be removed.

The constraints of the hole, the safety concerns raised, and the realignment of play away from the site boundary with Fiddens Wharf Rd leave little option but for the removal of the line of trees. While not a desired outcome, the removal of the trees is supported on this basis.



**Figure 17**: Looking south-west along the 12<sup>th</sup> fairway from the front garden of the heritage property at 46 Fiddens Wharf Rd.

The removal of the juvenile plantings of Agathis robusta (Kauri Pine) adjacent to the Fiddens Wharf Rd site boundary is supported. The trees are juvenile and do not have any broader landscape significance. Their removal maintains airflow and reduces shadowing of the fairway with their future growth.

The realignment of the hole away from the site boundary and the widening of the fairway on approach to the green, results in the removal of a grouping of mature palms of mixed species and Metasequoia glyptostroboides (Dawn Redwood) located adjacent between the 12<sup>th</sup> fairway and the 13<sup>th</sup> tee (refer Figure 18). The plantings are distinctive as they are located within an open part of the golf course, and there are few mature palm plantings within the golf course. These trees are all in good health and condition however it is noted that some of the palms are exempt species under Council's Tree Preservation Order. While it is preferred to retain the grouping, their removal is supported to accommodate the realignment of the hole.



**Figure 18**: Looking south-west along 12<sup>th</sup> fairway on approach to the green. Tree H13-12 Metasequoia glyptostroboides (Dawn Redwood) proposed for removal is shown in the foreground with the palm grouping behind.

#### Green

The nominated tree removal adjacent to the green is supported. One tree is a palm which is exempt under council's Tree Preservation Order and the other is not considered significant within the broader landscape setting.

# Hole 13 Bradfield Paddock (Stage 2)

The 13<sup>th</sup> hole is a long hole that traverses through the centre of the Bradfield Paddock. The hole in association with Hole 10 is proposed to be realigned to accommodate the proposed lake/dam, resulting in large numbers of trees being removed.

# Tee

Numerous trees are proposed to be removed to accommodate the relocation of the tee, realignment of the 12<sup>th</sup> fairway and realignment of the 13<sup>th</sup> fairway. H13-146 is a mature Eucalyptus pilularis (Blackbutt) forward of the proposed tee within the line of play. The tree is in good health and condition and is likely to be a remnant specimen, part of the endangered Sydney Turpentine Ironbark Forest plant community. The largest trees proposed to be removed in the vicinity of the tee are two Ficus microcarpa var. hillii (Hill's Fig), H13-145 and H13-163. Both trees are

mature and are in good health and condition. The trees have grown as one larger canopy and if one is removed the other has poor structural form and shape. H13-145 is in the area of play with the realigned hole and is proposed to be removed. To enable the realignment of the fairway and the 12<sup>th</sup> hole, the nominated tree removal is supported.

## Fairway

To accommodate the realignment of the fairway a large number of trees require removal, predominantly along the southern side of the fairway. H13-112 to H13-123 is a row planting of Melaleuca quinquenervia (Broad leaf paperbark) that is nominated for removal to direct and broaden the field of play around the proposed lake (refer Figure 19) The trees are outwardly in good health and condition and contribute to the landscape amenity within the golf course, although the trees do not have broader landscape significance. To enable the broadening of the fairway the removal of the nominated tree removal in this part of the fairway is supported.



**Figure 19**: View of lineal planting of Melaleuca quinquenervia (Broad leaf paperbark) adjacent to the southern side of the 13<sup>th</sup> fairway proposed for removal.

As proposed, the fairway realignment will result in the removal of an avenue planting of mature Araucaria cunninghamii (Hoop Pine) H13-101 – H13-111 (refer Figure 20), which delineate the inward curve on the southern side of the 13<sup>th</sup> fairway. The trees form a majestic and dominant avenue planting which is a significant landscape element within the Bradfield Paddock and with other subsequent tree removal will be visible from the public domain. The trees are in good health and condition, have a long SULE, with singular trunks and an upright form typical of the species. The removal of this avenue planting is not supported due to the health and significance of the planting within the broader landscape setting. It is recommended the trees be retained. Therefore a slight realignment of the fairway to the north is required which has been conditioned. (Condition 43)



*Figure 20*: View of the Araucaria cunninghamii (Hoop Pine) avenue planting that delineates the 13<sup>th</sup> fairway

In response to Council's preliminary assessment, the applicant has stated that the Trees 13-101-104 need to be removed to construct the dam and distribute the fill on site. The dam is located approximately 36m from the closest tree, H13-101 (having no impact) and the distribution of fill can be manipulated outside of the identified TPZ to enable retention of the trees. The applicant also states that shots to the green would be unplayable with the retention of Trees H13-105-114. I disagree with this statement as the fairway is approximately 35m wide. While it is acknowledged that the trees are positioned adjacent to the right hand side of the fairway, they do not make shots to the green unplayable – they are part of the challenge of playing the hole. As to sighting the green from the tee, the length, topography and curve of the hole prevents this irrespective of whether or not the trees are retained. Council does not accept the justification provided for the removal of such a significant and healthy avenue planting. It is recommended that the trees be retained. (Condition 43)

Opposite the avenue planting of Hoop Pines, on the northern side of the 13<sup>th</sup> fairway is a grove of over mature Pinus caribaea (Cuban Pine) located between the 10<sup>th</sup> green, 11<sup>th</sup> fairway and the 13<sup>th</sup> fairway (refer Figure's 21 & 22). As the trees have been planted and grown as a grove, individually they have poor structure and form with large amounts of deadwood. The trees are shown to be retained, but it is considered that as the avenue planting of Araucaria cunninghamii (Hoop Pine) has greater landscape significance and a longer SULE, the removal of the Cuban Pine grove is favourably considered to enable the realignment of the fairway further to the north. This enables the retention of the avenue of Hoop Pines, without impacting upon the play of other realigned holes.



Figure 21: Broad view of Cuban Pine grove showing poor form and structure of individual trees



**Figure 22**: Detail view of one of the Cuban Pines showing high percentage of deadwood and proximity of adjacent tree canopies.

# Green

Three trees are proposed to be removed at the rear of the 13<sup>th</sup> green. No specific justification has been provided for their removal. It is assumed that the nominated tree removal is proposed to open up the green to improve playability. No objection is raised to the nominated tree removal surrounding the green as the trees are not considered to be significant within the broader landscape setting and spatially conflict with other native tree species.

# Hole 14 Bradfield Paddock

The majority of tree removal associated with the 14<sup>th</sup> hole is associated with the distribution of fill proposed across the 13<sup>th</sup>, 14<sup>th</sup> and 15<sup>th</sup> fairways from the excavation of the lake/dam. The disposal of the excavated material on site has been justified by the applicant due to cost for removal off site, efficiency and being more environmentally sustainable.

Other tree removal has been justified to broaden the area of play, improving the playability and to introduce strategy into the hole.

Tee

A grouping of Corymbia maculata (Spotted Gum) H14-240, 241 and 242, located adjacent to the tee area on the northern side of the cart path are proposed to be removed. The trees are mature, in good health and condition, and located within a proposed planting area, outside of the field of play. No specific justification has been provided for their removal and it is assumed that removal is proposed to reduce maintenance (leaf drop) to the tee area. The area is not proposed to be regraded to accommodate excavated material from the proposed dam/lake. As the trees are in good health and condition and their location does not impact the playability of the hole, the retention of the tree grouping is recommended. (Condition 43)

H14-245 Eucalyptus pilularis (Blackbutt) located adjacent to the tee and the cart path/turning area (refer Figures 23-25). The tree is outwardly in good health, with good vigour and a healthy canopy. The tree has previously been lopped and has a large cavity/hollow evident half way up the trunk. In response to Council's previous concerns, the tree is now to be retained.



**Figure 23**: Tree H14-245 Eucalyptus pilularis (Blackbutt) located adjacent to the 14<sup>th</sup> tee

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*Figures 24 & 25*: View showing numerous lopping sites and detail of large cavity/hollow.

## Fairway

As mentioned above and stated by the applicant, the majority of tree removal associated with the 14<sup>th</sup> fairway is a result of the proposed distribution (spreading) of excavated material from the proposed lake/dam across the 14<sup>th</sup> and 15<sup>th</sup> fairways within the existing valley. The Casuarinas that dominate the 14<sup>th</sup> and 15<sup>th</sup> fairways provide a distinctive landscape character for this part of the golf course. At the time of inspection, it was noted that the extent of tree planting significantly shades the fairways that were damp in the mid afternoon (particularly in the hollow). As stated by the applicant, the growth of the trees has significantly impacted upon the playability of the hole with play only being able to be directed down the centre of the fairway. The removal of the trees will significantly widen the playing corridor allowing strategy to be incorporated with the inclusion of additional bunkers. The area is also proposed to be regraded to accommodate excavated material from the dam/lake. The removal of the Casuarinas is supported.



**Figure 26**: View looking west across the 14<sup>th</sup> fairway at the groupings of Casuarina's that define the fairways. The area is proposed to be regraded (filled) with excavated material from the proposed dam/lake.

Green

Numerous trees are proposed for removal surrounding the 14<sup>th</sup> green to accommodate the proposed spare hole. No objection is raised to the majority of the nominated trees removal as the trees are either suppressed and in poor health and/or poor structure and form. Tree removal for the spare hole is discussed separately. The following trees are required to be retained.

H14-52 Jacaranda mimosifolia (Jacaranda) located adjacent to the 14<sup>th</sup> green within a proposed planting area behind the 15<sup>th</sup> tee (refer Figure 28). The tree in association with H14-52 provides valuable screening and amenity for the course and neighbouring residential properties. It is assumed that the tree's removal is due to seasonal maintenance of the 15<sup>th</sup> tee. It is recommended the tree be retained. (Condition 44)

H14-72 Quercus palustris (Pin Oak) The tree is the dominant tree in good health and condition, assessed as having a high retention value and negligible hazard rating, located within a proposed planting area. No specific justification has been provided for the tree's removal. It is recommended the tree be retained. (Condition 44)

H14-103 & 104 Corymbia maculata (Spotted Gum) located behind the green within a proposed planting area. The trees (refer **Figure 27**) are in good health and condition and are part of the backdrop planting to the green. It is recommended the trees be retained. (Condition 44)



**Figure 27**: View looking south-west to trees H14-103 & 104 which provide a treed backdrop to the 14<sup>th</sup> green.



**Figure 28**: View of tree H14-52 Jacaranda mimosifolia (Jacaranda) located adjacent to the 14<sup>th</sup> green within a proposed planting area behind the 15<sup>th</sup> tee.

The tree in association with H14-53, provides valuable screening and amenity for the course and neighbouring residential properties. It is assumed that the tree's removal is due to seasonal maintenance of the green.

# Hole 15 Bradfield Paddock

The 15<sup>th</sup> hole is a long straight hole that runs parallel to the southern (Provincial Rd) site boundary. The majority of proposed tree removal is associated with the proposed area that is to accommodate the excavated material/fill from the proposed lake/dam. Refer to comments as part of Hole 14. Trees discussed for removal relating to Hole 15 are primarily located adjacent to the site boundary.

Tee

Refer comments H14-52 (14<sup>th</sup> Green)

#### Fairway

H15-76 is a mature Eucalyptus globoidea (White Mahogany) located at the southern edge of the existing fairway within a proposed planting area (refer Figure 30) which is part of a treed corridor of indigenous remnant trees that is evident from submitted aerial photographs dating back to 1930. Council's mapping identifies the tree corridor as being part of the endangered Sydney Turpentine Ironbark Forest (STIF) plant community. H15-76 requires selective pruning of limbs that have structural defects (refer **Figure 31**).



*Figure 30*: H15-72 Angophora costata (Sydney Redgum) (LHS) & H15-76 Eucalyptus globoidea (White mahogany) (RHS).



**Figure 31**: Detail of branch H15-76 which is recommended to be pruned.

Trees H15-107 & 108 are mature specimens of Agathis robusta (Kauri Pine) located adjacent to the southern edge of the fairway (refer **figure 32**). The trees are in good health and condition and visually significant. Their location adjacent to the southern right hand side of the fairway helps direct play away from the site boundary and Provincial Rd. It is recommended the trees be retained. (Condition 43



Figure 32: H15-107 & 108 Agathis robusta (Kauri Pine) located adjacent to the southern side of the 15<sup>th</sup> fairway

## Green

The nominated tree removal immediately surrounding the 15<sup>th</sup> green is considered acceptable. None of the trees are considered significant within the broader landscape setting.

Hole 16 Bradfield Paddock

Tee

No trees are proposed to be removed immediately surrounding the 16<sup>th</sup> tee.

Fairway

The removal of trees along the length of the 16<sup>th</sup> fairway has been justified for the widening of the fairway and the realignment of the 9<sup>th</sup> hole away from the

Prince Rd site boundary. No objection is raised regarding the majority of proposed tree removal. The proposed landscape work includes the planting of Eucalypts and Angophoras within proposed planting areas where existing established trees are proposed for removal between the 9<sup>th</sup> and 16<sup>th</sup> fairways. It is recommended that existing trees, particularly where planting areas are proposed, be retained to maintain the established landscape character. (Condition 43 and 44)

H16-85 & 88 are two semi mature Lophostemon confertus (Brushbox) located within a proposed planting area on the western side of proposed bunkers and cart path outside of the field of play (refer Figure 33). The trees provide valuable visual amenity when viewed from the heritage item at 46 Fiddens Wharf Rd (refer **Figure 34**). The trees do not hinder play, and are sufficiently set back from the fairway to not cause significant overshadowing from the west. No justification has been provided for their removal. It is assumed that the trees were planted as part of the replenishment tree plantings when the pedestrian tunnel under Fiddens Wharf Road was constructed. It is recommended that the trees be retained. (Condition **43**)



*Figure 33*: View looking east from existing cart path of Trees H16-85 on LHS and H16-88 on RHS. Smaller sapling in centre proposed to be retained.



*Figure 34*: View looking east from pool enclosure within 46 Fiddens Wharf Rd to trees H16-85 and H16-88. Note that the trees provide a treed horizon line and outlook from the heritage item.



**Figure 35**: View looking west from beneath canopy of trees H16-85 & 88 of heritage item at 46 Fiddens Wharf Road. Note expansive cart paths and lack of upper storey screen planting to filter views of upper levels of the heritage item.

# Green

Two trees, H16-89 and H16-92 both Melaleuca styphelioides (Prickly Paperbark) is proposed to be removed behind the green, presumably to accommodate the proposed bunker and to expand views from the ancillary café. The tree does not provide any external amenity and no objection is raised to its removal.

## Hole 17 Home Paddock

# Fairway

Numerous small trees eg H17-92, 93, 99, 100, 102 and 103 appear to have been previously removed. The trees proposed for removal adjacent to the northern side of the fairway H17-86, 87, & 91 and W18-25 are juvenile plantings which were planted as part of the workshop development works. These plantings are maturing and providing a valuable screen for the car park and maintenance shed. It is recommended that these plantings be retained. (Condition 43)

#### Green

A grouping of Lophostemon confertus (Brushbox) and Syncarpia glomulifera (Turpentine) to the north of the existing cart path between the 17<sup>th</sup> green and 18<sup>th</sup> tee are proposed for removal. All trees are located within a proposed planting area. The trees vary in significance and structure and prominence as they have grown together as part of a larger grove. Removal of some of the trees can be supported to open up the area and allow greater amounts of sunlight onto the green. The following trees are recommended to be retained as they have greater visual significance and their canopies do not interfere with play; H17-66, & 70. (Condition 43)

## Hole 18 Home Paddock

Tee

Trees proposed for removal adjacent to the 18<sup>th</sup> tee have been assessed as part of the 17<sup>th</sup> green.

## Fairway

H18-165, 166, 167, 168, 169, 170 are a grouping of exotic evergreen and deciduous tree species, in good health and condition, with heights up to 22m. The trees are located within a proposed planting area and do not impact play. No justification has been provided for the removal of the trees, beyond a desired change in landscape character. Proposed landscape works replace these trees with tall native canopy trees. As the area is to be maintained as a planted area and the trees are in good health, their retention is recommended. Proposed planting of endemic trees can be accommodated to the north of existing plantings within the planting area. (Condition 45)

H18-143, 145, 149, & 150 are two groupings of planted trees adjacent to the southern site boundary. No objection is raised to their removal as the trees are small and do not have broader landscape significance.

H18-154 Melicope elleryana (Pink Eudia) located adjacent to the southern site boundary. Refer comments H18-155, 156.

H18-155 Jacaranda mimosifolia (Jacaranda) and H18-156 Cedrus deodar (Himalayan Cedar) located adjacent to the southern site boundary, in good health and condition (refer **Figure 36**). The trees are considered significant within the broader landscape setting and provide valuable visual amenity and screening to both the clubhouse and neighbouring properties. Justification for their removal is to allow shots to the right side of the green. The arborist has also stated that reconstruction of the 18<sup>th</sup> green and bunker is likely to have a significant impact on the root zone of H18-156. The submitted regrading plan does not indicate any regrading of the 18<sup>th</sup> green.

As the course is being remodelled it is possible for the green to be remodelled and relocated to the north-west to accommodate the retention of the tree/s, maintaining play to the right hand side of the green. Given their, good health and significance their retention is recommended. It should be noted that if the grouping of Hoop and Bunya Pines adjacent to the 1<sup>st</sup> tee are removed, these are the only trees that screen and provide visual privacy to the residents from the clubhouse. Objections have been received regarding the removal of these trees. (Condition 45)



*Figure 36*: Tree H18-156 (centre) and H18-155 viewed from 1<sup>st</sup> tee looking south over 18<sup>th</sup> green. Not partial screening and filtering of views provided by the existing trees.

#### Green

H18-158 Eucalyptus saligna (Sydney Bluegum) located adjacent to the east of the green. The tree has poor structural form but is outwardly in good health and condition. Cavities are identified that provide habitat for local fauna. The tree is identified for retention, with the initial the arborist report recommending removal of the tree due to the high risk of failure, high target area, and to its proximity to the 18<sup>th</sup> green. After additional aerial investigations of the tree, the arborist's amended report recommends the tree be retained as a managed stump. The tree is considered to be part of the critically endangered Bluegum High Forest (BGHF) plant community and is significant within the broader landscape setting. Pruning of

the tree canopy as per the arborist's recommendations has been conditioned. **(Condition 79)** 

H18-159 Eucalyptus saligna (Sydney Bluegum) located to the east of the green. The tree is considered to be part of the critically endangered Bluegum High Forest plant community and is significant within the broader landscape setting. The project arborist has stated that there should be no disturbance within 12m unless advised by an AQF5 arborist, although the bunker is located within the 12m setback. It has been conditioned for existing ground levels and grades to be retained within the 12m setback. Selected pruning as recommended by the project arborist has been conditioned (Condition 79)

Carpark (guest car park adjacent to clubhouse)

#84, 86 Jacaranda mimosifolia (Jacaranda) located behind the 18<sup>th</sup> green. The trees are part of an understorey planting and have grown as one canopy in conjunction with tree 85. The trees together are in outwardly good health, although individually they have poor structure. The trees are located within an existing and proposed planting area and do not hinder play. No justification has been provided for their removal. The submitted landscape plan indicates this area is to be planted with Bluegum High Forest plant species. The removal of the Jacaranda's is supported due to understorey planting being undertaken as part of the landscape works.

## Spare Hole

The proposed spare hole is located adjacent to the southwest corner of the Bradfield paddock in an area that is currently well vegetated with a variety of native and exotic tree species which, with the exception of a small detention basin, maintain an interconnecting tree canopy. The majority of the proposed tree removal can be supported to create the additional playing hole. The removal proposal is to thin this group of trees. Many of the trees are suppressed due to insufficient light and the dominance of other trees. Other trees identified for removal eg H13- 184 (transplant), H14-72, 112, and 136, are required to be retained as they are located outside of the field of play within proposed planting areas, for landscape amenity.

## Practice fairway/s

Numerous practice fairways are proposed within the centre of the Home Paddock where the existing 2<sup>nd</sup> and 3<sup>rd</sup> holes are located. The area is to be extensively regraded to accommodate the proposal resulting in the substantial removal of trees. The area is a broad valley/swale that is the main catchment area for surface runoff to Honeysuckle Dam, and is located over the location of Honeysuckle Creek (piped).

H2-63 & 64 Eucalyptus saligna (Sydney Bluegum) located adjacent to the existing  $2^{nd}$  green and adjacent to a proposed practice green, refer Figure 37. Amended plans indicate the trees to be retained, and have been identified as having a very high retention value by the applicant's arborist. The trees are assessed and identified within the ecological assessment as being remnant specimens and are

part of the critically endangered Sydney Bluegum High Forest (SBGHF). The trees are considered to be significant within the broader landscape setting and provide valuable amenity.



**Figure 37**: Trees H2 63 & 64 Eucalyptus saligna (Sydney Bluegum) which are part of the critically endangered Sydney Bluegum High Forest (SBGHF) plant community.

During the interval between amended plans being prepared and assessment of the application, H2-63 has dropped a very large diameter co-dominant stem caused by decay around the point of attachment. The project arborist has raised concern with suspected cavity and strength of attachment of the remaining co dominant stem and has recommended an aerial inspection and pruning of deadwood if the tree is to be retained.

Further amended plans have satisfactorily addressed previous concerns raised regarding potential tree impacts.

H3-132 Nyssa sylvatica (Tupelo) located adjacent to the 3rd fairway and Honeysuckle Dam (refer Figure 38). The tree is outwardly in good health and condition and has a typical form for the species. The tree provides valuable landscape amenity and it is preferred to retain the tree. However, the trees location conflicts with the line of play and its removal is therefore is supported.



*Figure 38*: View looking south west towards tree H3-132 Nyssa sylvatica (Tupelo). Note workshop/maintenance sheds in background.



**Figure 39**: View looking northwest over existing 3<sup>rd</sup> fairway with avenue planting of mature Agathis robusta (Kauri Pine) delineating the 2<sup>nd</sup> and 3<sup>rd</sup> fairways.

H2-74, 76, H3-1, 3, & 7 Agathis robusta (Kauri Pine) refer Figure 39, form an avenue delineating the 2nd and 3<sup>rd</sup> fairways, that cross the proposed practice hole/s area. Although the trees are considered significant due to their mature size, they do not have broader landscape significance beyond the two fairways. Their removal is supported to accommodate the proposed practice hole area.

# Proposed dam

The proposed dam/lake is located centrally within the Bradfield Paddock within the regraded 'natural' valley between the 10<sup>th</sup> and 13<sup>th</sup> fairways, where the original watercourse (now piped) would have been located, refer **Figures 40 and 41**.



*Figures40 & 41:* Looking south from 10<sup>th</sup> fairway to proposed dam site. Note visual significance of Tree H10-53 Eucalyptus microcorys (Tallowood) on left hand side. All trees located in the foreground are proposed to be removed.

Tree H10-53 Eucalyptus microcorys (Tallowood) is a mature specimen approximately 25m high with a 30m canopy spread and very high retention value. The tree is visually significant within the central part of Bradfield Paddock with its canopy rising above the remaining tree canopy line. The tree is identified to be removed. The tree is co-dominant (twin trunks) and is identified as having included bark. No further detailed arboricultural assessment has been undertaken, with justification for the tree's removal being its location within the preferred site for the dam, which is conceptual only. An inspection of the tree reveals an inclusion at the co-dominant trunk union. Due to the obvious defects within the tree's trunk, the tree's removal without further investigation is supported. The construction of the proposed dam requires the relocation of the sewer main that traverses the Bradfield Paddock. As proposed the sewer relocation spatially conflicts with the avenue planting of Araucaria cunninghamii (Hoop Pine) refer Figure 20, which is a significant landscape element adjacent to the 13<sup>th</sup> fairway. This will have a detrimental impact upon the avenue planting which is recommended to be retained. Discussions with Council's Development Engineer raise no objection to the relocation of the sewer main to the eastern side of the proposed dam. This has been conditioned as a part of the consent. (Condition 39)

# Honeysuckle dam

Refer to Hole 8 comments regarding tree removal below dam wall.

To enable the deepening of Honeysuckle Dam the existing dam will be drained. The draining of the dam will alter (lower) the water table while the dam is empty. As per councils request an assessment of the potential impacts to the surrounding trees has been undertaken by the consulting arborist. Cautionary recommendations have been made by the applicant's arboristregarding soil moisture testing and supplementary watering undertaken if necessary as a result of the findings of moisture levels. Recommendations made by the consulting arborist have been conditioned. (Condition 58)

# Maintenance Workshop and Car park

Numerous trees are proposed for removal adjacent to the southern side of the car park which adjoins the maintenance workshop. It is noted that numerous trees have already been removed. No specific justification has been provided for the removal of the trees which are located within a proposed planting area. The trees, most of which are juvenile, provide valuable screening and protection to the car parking area and effectively screen the maintenance workshop/shed from view. As the tree plantings are located within a proposed planting area their retention is recommended. This has been conditioned as a part of the consent. (Condition 43)

**Arborist Report** – The amended Arboricultural Development Impact Report by Urban Forestry Australia, dated December 2011, and subsequent adendums provides further clarification and detail regarding proposed tree removal, and is to be read in association with the previously submitted arborist's report by Australian Tree Consultants, dated 25 February 2010. The arboricultural reports do not individually assess development impacts to existing trees identified for retention and do not provide analysis against AS4970-2009 eg amount/percentage of encroachment. Where appropriate the recommendations made by the project arborist relating to arboricultural supervision, tree removal methods, tree protection, and landscape works, have been conditioned. (Condition 77)

**Tree protection plan** – amended tree protection plans have been submitted. The plans provide recommendations for arboricultural supervision and the location of proposed fencing. Tree protection measures have been conditioned. It is noted that the tree protection plans state that due to the large scale of the site, tree protection fencing of all trees to be retained on site is impractical and expensive. This statement is noted however the plans do not indicate where site access is proposed throughout the site thus ensuring that tree protection is appropriate for differing access purposes. Tree protection conditions will be based on the internal site access report and works proposed for each development stage. Where truck movements are proposed within existing tree groves to be retained where there is

no current vehicular access, site construction access will be conditioned to be undertaken outside the TPZ of existing trees within the fairways. (Condition 37 and 38)

# Construction traffic management plan

An on site construction traffic management plan (CTMP) has been submitted as requested by council's officers. The submitted report and plans have provided sufficient material to enable an assessment of the necessary tree protection requirements.

# Heritage properties

There are numerous properties that are heritage listed (including the Killara Golf Club Clubhouse and surrounds) that either adjoin, or are in close proximity to the golf course including; 46 Fiddens Wharf Rd, 37 Fiddens Wharf Rd, 5 Mildura St, and 88 Provincial Rd. The heritage sites all enjoy views to and from the golf course which forms part of their visual curtilage. The proposed removal of numerous trees within the vicinity of the heritage items significantly changes and impacts views to and from the heritage items. An amended heritage impact assessment report has been submitted. Refer to Council's Heritage Advisor's comments.. The amended heritage report recommends the retention of the group of Hoop and Bunya pines adjacent to the clubhouse. Refer Hole 1 assessment.

## Cart paths

Numerous new cart paths are proposed throughout the course. Cart paths as proposed are located within the SRZ and TPZ of trees to be retained. No individual arboricultural assessment of the extent of impact as per AS4970-2009 has been undertaken. The consulting arborist has stated that close arboricultural supervision of cart path construction works is necessary to avoid unnecessary disturbance or cutting of tree roots. The consulting arborist has also stated that the ATC report provides the TPZ offsets and that these offsets are to be used to guide the final path layouts, and once determined shall be approved by an AQF 5 arborist prior to works commencing. These requirements have been conditioned. (Condition 56)

No construction detail has been provided as to what the proposed cart paths are to be constructed of. Existing cart paths are either concrete or decomposed granite. It is conditioned that proposed cart paths be constructed of a porous material such as decomposed granite where located within the TPZ of retained trees. (Condition 56)

# Grading plans

Amended grading plans have been submitted. Generally, no objection is raised to the regrading of the tees, fairways and greens where regrading is located outside of the identified TPZ of existing trees as per AS4970-2009, that are identified for retention. The scale of the Overall Grading Plan at 1:2000 is illegible.

The consulting arborist has identified numerous holes where level changes/regrading is likely to impact existing trees to be retained. The arborist has simply stated that these works will require on site assessment, advice and supervision by an AQF5 arboriculturist and that works are to be avoided within the TPZ of the subject trees. It has been conditioned that no regrading is to occur within the TPZ of retained trees. (Condition 77, 80 and 81)

# Landscape plan/tree replenishment

Amended landscape plans have been received to address concerns raised by Council regarding the proposed endemic planting areas.

The landscape work, as previously discussed, proposes to alter the existing landscape character from a mix of exotic, native and remnant endemic species to a replanted modified indigenous landscape setting. Justification has been provided simply that it is the 'desire' of the golf course architect and the golf club to alter the established landscape setting. The existing landscape character provides a mature parklike setting which is viewed from surrounding streets and private residences and underpins the broader landscape character of this part of Killara.

The setting of the golf course has changed during its history from an open landscape character (after timber getting) with remnant tree groupings and young tree plantings, to a mature parklike landscape setting with established trees that define the course layout, providing a treed backdrop and horizon line which is viewed from the surrounding area. The change in landscape character to a contrived native setting with understorey plantings is not a desired future landscape character as envisaged by council's policies.

Council's policies recognise the diverse biodiversity of the landscape character that is defined historically by retained indigenous tall canopy trees, and exotic canopy trees with an understorey of exotic plant species. While it is noted that differing areas of the municipality have a greater or lesser extent of remnant bushland vegetation, the extent of bushland is generally limited to the valleys, watercourses, bushland reserves and national parks.

The golf course property extends from the ridge of the Pacific Highway to the watercourse valley and encompasses a diverse landscape character. The proposed landscape character change does not consider the value of the existing established landscape setting and its context to the surrounding urban and cultural environment which includes numerous heritage properties and the Killara Golf Club premises. It is considered that, in conjunction with required retention of significant exotic tree plantings, as conditioned, the proposed landscape works are in keeping with Council's policies for a diverse landscape character.

Tree replenishment for the site is extensive with the application proposing 1773 tall canopy trees to be planted across the site. To enhance an established landscape character after initial tree removal, it is conditioned for the sub canopy tree plantings to have a minimum pot size of 5L. (Condition 42, 44 and 46)

# Stormwater plan

The Stormwater Management Plan indicates the location of the relocated sewer main within Bradfield Paddock. The location of the proposed pipe conflicts with existing trees required to be retained (refer 13<sup>th</sup> fairway comments). The trees to be retained are considered to be significant within the broader landscape setting. It is recommended that the sewer main design/location be amended to enable the retention of the Hoop Pine avenue planting. This requirement has been conditioned to be undertaken prior to the issue of the Stage 2 Construction Certificate. **(Condition 39)** 

# Irrigation plans

The existing irrigation network is to be upgraded resulting in a more water efficient irrigation system. Part 3.1.2 of the SEE states that the current watering irrigation system is outdated and uses a central line down the middle of the fairways. Modern systems use less water and normally have water lines down each side of the fairway, and by introducing a more modern irrigation system for the golf course water is targeted to specific areas around greens and tees making them more water efficient.

The consulting arborist has stated simply that all irrigation works within the TPZ of existing trees being retained will require arboricultural supervision. This has been conditione. (Condition 57)

Works to upgrade irrigation lines within council's road reserves will require separate approval under the Roads Act.

#### Riparian

There are three identified watercourses that traverse the site including, Links Creek (adjacent to the northern side of Links/Foy Paddock), Honeysuckle Creek (centrally located within Home Paddock) and a piped watercourse that traverses Bradfield Paddock. Refer to the assessment reports of Council's technical officer and ecological Assessment Officer for further information and assessment.

**Note:** NSW Office of Water (NOW) have provided their 'General terms of approval' which includes the requirement of a minimum 5.0m vegetated buffer adjacent to Links and Honeysuckle Creeks.

# Fire

Part of the site (Links/Foy Paddock) is identified as bushfire prone land (flame and buffer zone). An amended report by the applicant's consultant has been received after discussion with Council officers.

The amended fire report dated 03/05/2012 states that the development application does not require a formal assessment against Planning for Bushfire Protection (PBP) due to the type and nature of the development, including the landscape works as they are consistent with the intent of PBP. The KGC grounds have been assessed as managed lands and therefore will not create additional significant bushfire hazards within the golf course itself or increase the overall level of bushfire risk to the adjoining residential dwellings and associated assets.

# Conclusion

The application to upgrade and improve the playability of the existing golf course is supported on landscape grounds. It is acknowledged that any realignment of the course will result in tree removal, which will increase with each hole that is altered. While the nominated removal of trees across the course is not supported in its entirety, the removal of the majority of trees proposed for removal is acceptable considering the existing and future use of the site.

# Engineering

Council's Development Engineer commented on the proposal as follows:

The application is for the enlargement of the Honeysuckle Creek Dam (from 12.5Ml to 21Ml), construction of a new dam (capacity 11Ml) in the area between Fiddens Wharf Road and Provincial Road and various ancillary works such as hole realignment. The main purpose of the works is to improve the Club's water storage capacity with a view to becoming self-sufficient.

It is proposed to carry out the development in three stages, with works on the two dams at Stage 2.

The following documents have been reviewed:

- GHD Stormwater Management Plan dated March 2011;
- GHD Statement of Environmental Effects dated March 2011;
- GHD Geotechnical Review dated February 2011;
- GHD Outline Construction Environmental Management Plan dated April 2011;
- GHD Traffic Assessment and Construction Management Plan dated 22 March 2011;
- Douglas Partners Geotechnical Report dated May 2010;
- Grading Plans by Cashmore;
- Services plans by SKM;
- Civil works plans by GHD.

# Water management

Honeysuckle Creek Dam is a Prescribed Dam under Schedule 1 of the Dams Safety Act 1978.

The NSW Dams Safety Committee (DSC) has produced revised guidelines, dated June 2010. DSC1A states "...all dams over 15m high, or with populations downstream, or containing toxic materials, should be referred for DSC consideration regardless of potential failure consequences." The new dam will also have a population downstream and may also therefore be prescribed.

The DCS Guideline DSC2B Documentation and information flow over Dam Life Cycle states "The DSC normally takes its first formal interest in a dam project when a final decision is made by the owner to proceed to construction following approvals by planning and environment authorities".

The Guideline goes on to state that the DSC then requires information on the design programme as well as the design team, before giving approval to the design team. The DSC has a regulatory role at the design stage to ensure major design detail requirements are adequately covered.

For this reason, it is considered that conditions of consent imposed by Council, in the event that the subject application is to be approved, may be limited to requiring the detailed design, construction, commissioning and operation of the two dams to be carried out in accordance with the requirements of the NSW Dams Safety Committee. (Condition 35, 95 and 99) With regard to stormwater flows, from a purely technical view, the enlargement of the existing dam and the construction of the new dam would either reduce peak flows downstream or have no effect. Therefore, the works are supported by Council's Development Engineers.

The Stormwater Management Report by GHD states that stormwater pipe to be connected to the new dam is 300mm diameter and is a Sydney Water asset. If anything, the pipe is a Council asset, since it is conveying runoff from Prince Road. Council's records indicate that it is actually 750mm diameter. The discrepancy may be due to the fact that on the SKM Drawing Service Information Drawing EN02906-007 Rev. A, the lettering for the pipe diameter seems to be 800, but is not clear and may have been mistaken for 300.

Nevertheless, Council's Drainage Assets Engineer has indicated that there are no technical objections to the works along this pipeline.

# Construction traffic management

Dilapidation survey of all roads surrounding the golf course are conditioned **(Condition 13)**, regardless of the construction traffic route which is ultimately selected. This would be in the interest of the Golf Club, as existing damage would be recorded.

The traffic report contains several potential routes for construction vehicles, with a route via Lady Game Drive, Delhi Road and Epping Road favoured. This is acceptable. A detailed Construction Traffic Management Plan with Traffic Control Plans for site entry and exit will be required before commencement of any works. **(Condition 14)** 

The report estimates that up to 70 truck movements per day would occur for a peak period of approximately 2 weeks (excavation period).

The report also addresses traffic movements during other periods of construction including effects on flow in the surrounding streets. The findings of the traffic report are acceptable.

There should be ample space within the Golf Course for construction employee parking, so a condition is recommended accordingly. (Condition 14)

#### Geotechnical investigation

Excavation for works to both dams will encounter strong sandstone. Both reports contain recommendations for excavation methods to minimise vibrations, particularly near the existing Honeysuckle Creek dam wall, but also in relation to residential properties in the vicinity. These recommendations are incorporated in the conditions of consent. (Condition 67)

It is not possible at this stage to individually specify which if any private properties may require dilapidation survey, however the recommended conditions require the detailed design of the dams to include this information. (Condition 65, 66 and 67)

# Section 73 Certificate

The proposed development does not seem to fall into any of the categories listed by Sydney Water (no increase in use of mains water or discharge of trade waste proposed), so conditions would not be recommended requiring a Section 73 Certificate to be obtained.

# Ecology

Council's Ecological Assessment Officer has commented on the proposal as follows:

## Vegetation

During the site inspections Sydney Turpentine Ironbark Forest (STIF) listed as an Endangered Ecological Community (EEC) under the Threatened Species Conservation Act 1995 (TSC Act) was identified within Home, Links and Bradfield Paddocks.

The Sydney Turpentine Ironbark Forest within Golf Course is comprised mostly of large remnant trees: Syncarpia glomulifera (Sydney Turpentine), Eucalyptus paniculata (Grey Ironbark) & Eucalyptus resinifera (Red Mahogany) & Eucalyptus globoidea (White Mahogany) scattered amongst exotic planted trees. The understorey within the STIF was dominated by exotic pasture species. There are small linear areas of Sydney Turpentine Ironbark Forest that adjoin Provincial & Golf Links Road that contain scattered native groundcovers.

Blue Gum High Forest (BGHF) a Critically EEC listed under the TSC Act was identified within Home Paddock. The Blue Gum High Forest comprised of a canopy dominated by Eucalyptus saligna (Sydney Blue Gum) & Eucalyptus pilularis (Blackbutt) interspersed with exotic planted trees. The ground storey within the BGHF was dominated by exotic pasture species; very few native groundcovers were recorded.

Sydney Sandstone Ridgetop Woodland (SSRW) and Sydney Sandstone Gully Forest (SSGF) both of which are non-threatened communities were identified from Links Paddock.

Sydney Sandstone Ridgetop Woodland was identified on the northern side of the existing 3<sup>rd</sup> green and partially along the northern side of the 3<sup>rd</sup>fairway. Sydney Sandstone Gully Forest was identified on the northern side of the existing 5<sup>th</sup> tee and partially along the northern side of the 5<sup>th</sup> fairway within Links Creek.

# Table 1

Distribution of threatened communities within the Killara Gold Course	
STIF	BGHF
Home Paddock	
<ul> <li>Eastern side of the 8<sup>th</sup> hole fairway adjacent to Golf Links Road</li> </ul>	• Northern side of the 1 <sup>st</sup> hole fairway
<ul> <li>Southern side of the 17<sup>th</sup> Fairway and green</li> </ul>	• Southern side of the 2 <sup>nd</sup> hole fairway
Western side of the maintenance shed	<ul> <li>Small patches along the northern side of the 18<sup>th</sup> fairway and surrounding the 18<sup>th</sup> Green</li> </ul>
	Eastern and northern side of the maintenance shed
	Northern side of dam
Links P	addock
<ul> <li>Eastern and southern side of 3<sup>rd</sup> tee</li> </ul>	- None observed
Southern side of 5 <sup>th</sup> green	- None observed
<ul> <li>Northern, southern and eastern sides of 7<sup>th</sup> green</li> </ul>	- None observed
Bradfield	Paddock
<ul> <li>Southern side of the 15<sup>th</sup> fairway adjacent to Provincial Road</li> </ul>	- None observed
<ul> <li>Southern and eastern side of the 9<sup>th</sup> green</li> </ul>	- None observed
On the western side of 9 <sup>th</sup> fairway	- None observed
<ul> <li>North and eastern side of the 13<sup>th</sup> green</li> </ul>	- None observed
<ul> <li>Small patch just north-east of the 10<sup>th</sup> tee</li> </ul>	- None observed

# Fauna

All native vegetation within the Golf Course provides suitable habitat for a range of threatened species, including microbats, Powerful & Barking Owl that have been recorded within the locality (10km) radius. The seasonal flowering eucalyptus species provide a suitable foraging resource for the threatened Grey-headed Flying-Fox.

Some of the large remnant native trees within the Golf Course contain hollows which provide suitable roosting sites for threatened hollow-dependent microbats species such as the Greater Broad-nosed Bat and the Yellow-bellied Sheathtail Bat.

There is also suitable foraging habitat for the threatened Powerful Owl and Barking Owl. Habitat for threatened species is mostly confined to remnant native vegetation (Hole 4 & Links Creek) within the Golf course that can support small birds & mammals e.g. Brush-tailed Possum & Ring Tailed Possums which are the preferred food species for the Powerful Owl.

# **Threatened flora**

One threatened plant species known as Darwinia biflora listed as a vulnerable under the Threatened Species Conservation Act 1995 and under the Environmental Protection & Biodiversity Conservation Act 1999 was identified within the northwestern corner of Links Paddock within the location of the new Hole 4. Three Darwinia biflora specimens were identified during my field inspections within the proposed Hole 4. The Darwinia biflora specimens occur within Sydney Sandstone Ridgetop Woodland a non-threatened vegetation type. The population of Darwinia biflora is of high ecological significance as the population is the most southern population within this species range. This population is not known to be interbreeding with any other populations within the locality of the site. The population is to be retained and protected.

## Impacts from the proposal

The ecological impacts are associated with the removal of native planted & naturally occurring native trees within an exotic grassland setting.

Native trees can be defined as a species which occur naturally within Ku-ring-gai area and comprise part of the natural vegetation community assemblages. All other native trees which are not part of the natural vegetation communities on this site have been considered and assessed for removal by Council's Landscape Assessment Officer.

As a number of native indigenous trees have been planted within the Golf Course each of these trees was inspected in order to determine whether that individual had been planted. The following considerations below were made in determining those trees which had been planted from those that occur naturally within the Golf Course.

- aerial photographic interpretation, a review of aerial photograph from 1936 & 1945 where reviewed extensively when assessing if a native species had been planted
- spatial location within the Golf Course e.g. where the trees amongst similar species or intermixed with other non-indigenous species to the area e.g. Tallowoods & Spotted Gums
- remnant native trees surrounding
- size of the individual tree in context of surrounding land use and spatial arrangement within treed areas
- other considerations made were suppression, impacts & disease

Table 1 below presents the number (native, planted & dead) trees which are proposed to be removed and those which are supported for removal.

A total of 79 planted native + 42 naturally occurring + 31 dead trees are proposed to be removed from the Golf Course. Of the 42 native endemic species proposed to be removed, 5 trees form part of Sydney Turpentine Ironbark Forest. No Blue Gum High Forest trees are proposed to be removed as a result of the proposed development.

Thirty-nine naturally occurring trees, which comprise part of non-threatened Sydney Sandstone Ridgetop Woodland, are proposed to be removed for the new Hole 4. The vast majority of the 42 naturally occurring trees nominated for removal for the new Hole 4 are in a state of decline many of which are over-mature Allocasuarina littoralis (Black She-oak). The Black She-oak is a relatively short lived tree species.

As well as the proposed tree removal there are number of trees which are impacted by the installation of proposed irrigation lines, fairway regrading and construction of sand bunkers within tree protection zones (TPZ). A number of encroachments within the TPZ of native trees have been identified. The Landscape Assessment Officer has provided conditions to ensure the long-term viability of these trees.

Site areas	Trees proposed to be removed
HOME PAL	DDOCK
Workshop	6 Planted
Hole 1	23 Planted
Hole 2 (existing/proposed Practice Area)	5 Planted
Hole 3 (existing/proposed Practice Area)	6 Planted
Hole 8	6 Planted + 1 Native + 2 Dead
Hole 17 (existing/proposed)	7 Planted
Hole 18 (existing/proposed)	1 Planted
Hole 19 (proposed)	1 Planted
	55 Planted + 1 Native + 2 Dead
LINKS PAD	DOCK
Hole 4 (proposed Hole 6)	6 Planted +1 Dead
Hole 5 (existing and proposed 4th)	3 Planted + 19 Native + 17 Dead
Hole 6	11 Planted + 20 Native + 8 Dead
	20 Planted + 39 Native + 25 Dead
BRADFIELD P	ADDOCK
Hole 9 (existing/proposed)	1 Native + 1 Dead
Hole 13 (existing/proposed)	3 Planted + 2 Dead
Hole 14 existing/proposed)	1 Planted + 1 Native
Hole 15 (existing)	1 Native + 3 dead
	4 Planted + 2 Native + 4 Dead
TOTAL	79 Planted + 42 Native + 31 Dead

# Table 1 Summary of tree proposed to be removed

# **Ecological Impacts**

# Endangered ecological communities

No trees which comprise part of critically endangered Blue Gum High Forest are proposed to be removed. Two Sydney Blue Gum (Eucalyptus saligna) identified as H18-158 & H18-159 are proposed to be pruned due to structural defects. H18-158 & H18-159 have both been identified by the arborist as having structural defects that significantly affect tree stem strength and represent a high risk of failure. Pruning of H18-158 will remove the canopy and retain the tree and the cavities (hollows) which provided suitable nesting & roosting habitat for native fauna species. The pruning of abovementioned trees is supported due the hazard that they currently present to golf players on the 18<sup>th</sup> Green.

Six trees which comprise part of the onsite endangered Sydney Turpentine Ironbark Forest are proposed for removal these are: H8-232, H9-113, H15-79, H14-143, H13-160 & H13-161. The removal of the abovementioned STIF trees is supported and is not likely to result in local extinction of the endangered Sydney Turpentine Ironbark Forest community.

# **Threatened flora**

A small area of sub-optimal habitat for threatened Darwinia biflora is proposed to be modified for the creation of the new Hole 4. Impacts upon the three threatened Darwinia biflora specimens have been significantly reduced through amendments to the Hole 4 design. The re-design includes the retention of all known Darwinia biflora specimens and the better quality Sydney Sandstone Ridgetop Woodland community which provides habitat for this species within the golf course. No significant impacts upon this species are likely to occur as a result of the proposal. All weeds are proposed to be removed within the Darwinia biflora habitat which will improve the condition of the habitat for this species.

# Fauna habitat

Seventy-three trees have been identified by the applicant's flora & fauna consultant GHD as containing hollows which could provide suitable roosting & nesting habitat for threatened & non-threatened species. The current proposal proposes the removal of 4 hollow-bearing trees which contains 5 hollows.

The number of hollows proposed to be removed has been significantly reduced through amendments to the proposed golf course to retain remnant trees which comprise part of the STIF & BGHF communities. Hollows within the Golf Course are of high ecological value due to their shortage and the native species which they support. A total of 68 hollows are to be retained within the golf course. Tree H18-158 is to be retained as a habitat tree as it contains numerous hollows.

Hollows identified for removal occur within the following trees: Way point 139 (328728E 6261956N) 1 hollow 15cm size, Way point 143 (328466E 6261865N) 2 hollows 10 & 15cm in size, H6-190 Eucalyptus punctata (Grey Gum) 1 hollow 10cm in size & H1-82 Syzygium paniculatum (Magenta Lillypilly) 1 hollow 15cm in size which provide a suitable nesting/ roosting habitat for small native fauna species e.g. small mammals and birds. No large hollows are proposed for removal.

Various types of nest boxes have been conditioned to compensate the loss of the four hollow-bearing trees and to provide habitat for native fauna species.

## Review of flora and fauna assessment

An amended flora and fauna assessment was prepared which includes an impact assessment (7-part test) for the Sydney Turpentine Ironbark Forest and threatened flora and fauna species. The impact assessment is considered satisfactory and is accordance with section 5a of the Environmental Planning & Assessment Act 1979.

## Review of landscape plans

The amended landscape plans propose extensive native planting of groundcovers, shrubs, sub-canopy trees and canopy trees throughout Home, Bradfield and Link Paddocks. Proposed native planting will enhance the remnant endangered Blue Gum High Forest & Sydney Turpentine Ironbark Forest communities & vegetation across the Golf Course providing greater foraging opportunities for native threatened and nonthreatened species.

# Review of vegetation management plan

The amended vegetation management plan is considered to be acceptable provided that NSW Office of Water endorsement of the VMP. The VMP is considered to enhance Links Creek through weed suppression and revegetation of native species within areas containing endangered Sydney Turpentine Ironbark Forest and Sydney Sandstone Gully Forest a non-threatened vegetation type.

## **Conclusion:**

The application is acceptable and appropriate ecological conditions have been recommended.

# Riparian

Council's Riparian and Water Officer commented on the proposal as follows:

#### Matters considered:

**Enlargement of existing dam** – The GTAs from the NSW Office of Water (ERM2011/0403) appear sufficient to manage potential issues relating to the enlargement of the existing dam. However, it is preferable that the vegetation management plan also include the area around and downstream of the existing Honeysuckle Creek Dam. This has been conditioned. **(Condition 8)** 

**Vegetation works along links creek** – The vegetation management plan has been amended to include 'riparian' species for planting along the channel – however, the plan itself does not specify where these 'ephemeral' plantings should be located. The plan should be further revised to provide certainty that species are located in appropriate areas – this should differentiate between planting along and immediately adjacent to the channel and that higher up along the slopes. This has been conditioned. (**Condition 8**)

Links Creek in this location is identified as a Category 1 Riparian zone in Council's Riparian Policy (2004) and on the draft map of riparian lands 2011. This is due to the size of the creek (not ephemeral but semi permeant/intermittent) and the significant link to surrounding bushland areas. The existing fairway is already within the nominal
core riparian land and buffer distance (40m + 10m) and this was taken into consideration for the assessment.

#### **Conclusion:**

The proposed development is acceptable subject to conditions of consent.

### **EXTERNAL REFERRALS**

#### **Rural Fire Services**

In accordance with the provisions of section Part 1(b) of Section 79BA of the Environmental Planning and Assessment Act 1979, Council has been provided with a bushfire risk assessment report and certificate by a person who is recognised by the NSW Rural Fire Service as a qualified consultant in bush fire risk assessment stating that the development can conform to the relevant specifications and requirements. As such, the application does not require a referral to NSW Rural Fire Services.

Council has considered the measures to be taken with respect to the protection of persons, property and the environment from danger that may arise from a bush fire in conjunction with the bushfire risk assessment report. Appropriate conditions that adopt the recommendations of the bush fire risk assessment report have been recommended. (Condition 52 and 98)

### **NSW Office of Water**

Under the provisions of section 91A of the Environmental Planning and Assessment Act 1979, the proposal is integrated development on the basis that it requires development consent from Ku-ring-gai as well as consent from the NSW Office of Water for the water use approval, water management work approval and the activity approval as stated under Part 3 of Chapter 3 of the Water Management Act 2000 for the works being undertaken to the existing dam within the Home Paddock, the replacement of the existing bridge across the creek and the construction of the new dam within the Bradfield Paddock.

Accordingly, the development has been referred to the NSW Office of Water for comment. Their response is as follows:

The NSW Office of Water (NOW) has reviewed the various supporting documents from consulting geotechnical engineers and geologists GHD in relation to the construction of a proposed 10.9 megalitre stormwater harvesting dam on Lot 1 DP 233290 and the enlargement of the existing licensed dam from 12.2 megalitres to 21.3 megalitres on Lot 2 DP 535219.

Please note that Killara Golf Club Ltd held surface water licence 10SL049263 under the Water Act 1912. The licence authorised a 150mm pump on the Lane Cove River and an overshot dam and two (2) pumps on an Unnamned Watercourse on Lot 2 DP535219 for the conservation of water and water supply for recreation (greens and tees) purposes and the *irrigation of 10 hectares. An annual entitlement of 150.0 was afforded to this licence.* 

With the commencement of the Water Sharing Plan (WSP) for the Greater Metropolitan Region Unregulated Water Source on 1 July 2011, surface water licence 10SL049263 has been replaced by access licence 10AL103422 and combined approval 10CA103423.

NOW has determined that an amended water supply works approval is required under Section 92 of the Water Management Act 2000 to authorise the enlargement of the existing dam on Lot 2 DP 535219 and the proposed dam on Lot 1 DP 233290.

The NOW is prepared to grant an amended water supply works approval and has attached its amended General Terms of Approval (GTA) as required under the Environmental Planning and Assessment Regulations Division 3. It must be noted that this approval is subject to the pump on the Lane Cove River being decommissioned and works are undertaken during excavation to isolate the surface water stored within the impoundments from the underlying shallow groundwater system. All the conditions must be included in any consent granted by the consent authority. Additional mandatory conditions will be implemented in the future consistent with the rules in the WSP once these have been developed.

In accordance with the Environmental Planning and Assessment Act 1979 and Regulation 1994 (as amended) the NOW has an approval role in relation to Development Application DA 0147/11 Ku-ring-gai Council.

Based on the details disclosed in the development application, an amended work approval under Section 92 of the Water Management Act 2000 is required to authorise the 10.9 megalitre stormwater harvesting dam on Lot 1 DP 233290 and the enlarged 21.3 megalitre dam on Lot 2 DP 535219.

The Office of Water subsequently received a letter on 23 December 2011 from the Killara Golf Club Limited in relation to the use of the existing pump on the Lane Cove River and condition 2.9 in the General Terms of Approval relating to the buffer zone condition.

The Office of Water has reviewed the continued use of the existing pump on the Lane Cove River. The Lane Cove River is now subject to the Water Sharing Rules fro the Lane Cove River Management Zone. The pumpsite is located on lands administered by the former National Parks and Wildlife Service.

Provided the Club meets the cease to pump access rules from the Lane Cove River Management Zone and can demonstrate ongoing permissive occupancy from the owner of the pumpsite, the Office of Water has agreed that the pump on the Lane Cove River can remain. Reference is made to condition 2.9 within the letter from the Office of Water dated 31 August 2011. It has been confirmed that the distance from the high bank of the watercourse to the fairways on the golf course vary from a minimum distance of 5.0 metres. This condition is a standard condition designed to improve water quality and health of catchments. After consideration, the Office of Water has agreed to amend condition 2.9 to read "A vegetated buffer of not less than 5.0 metres must be maintained..."

Accordingly pursuant to the Water Management Act 2000, the NOW, having reviewed the documentation associated with the Development Application, proposes to grant an approval to DA 0147/11 (as presented). The general terms of approval have been included as a part of the conditions of consent. (Condition 101)

#### Department of Trade & Investment, Regional Infrastructure & Services

Under the provisions of section 91A of the Environmental Planning and Assessment Act 1979, the proposal is integrated development on the basis that it requires development consent from Ku-ring-gai Council as well as a permit from the Department of Trade & Investment, Regional Infrastructure & Services under the Fisheries Management Act 1994, due to it involving alterations works to the existing dam and the replacement of the existing bridge across the creek.

Accordingly, the development has been referred to the Department of Trade & Investment, Regional Infrastructure & Services for comment. Their response is as follows:

DTIRIS-Fisheries is responsible for ensuring that fish stocks are conserved and that there is no net loss of key fish habitats upon which they depend. To achieve this, DTIRIS-Fisheries ensures that developments comply with the requirements of the Fisheries Management Act 1994 (namely the aquatic habitat protection and threatened species conservation provisions in Parts 7 and 7A of Fisheries Management Act, respectively), and the associated Policy and Guidelines for Aquatic Habitat Management and Fish Conservation (1999). In addition, DTIRIS-Fisheries is responsible for ensuring the sustainable management of commercial and recreational fishing and aquaculture within NSW.

DTIRIS-Fisheries has reviewed the proposal in light of those provisions and has no objections to the proposal, subject to the proponent meeting the General Terms of Approval that follow:

1. Prior to any works, the proponent must obtain a Part 7 permit from DTIRIS-Fisheries under s.201 of the Fisheries Management Act, or a Controlled Activity Approval from the NSW Office of Water. Contrary to the Statement of Environmental Effects (SEE) for the proposal, only one of those authorisations is required, not both;

- 2. Prior to any works, and regardless of which approval referred to in GTA 1 is sought, the proponent is to submit and receive written approval from DTIRIS-Fisheries for a Safe Works Method Statement for dewatering Honeysuckle Dam. The SEE suggests the pest fish Gambusia australis is present in the dam, but did not describe the dewatering process and/or endpoint for that water. DTIRIS-Fisheries seeks appropriate measures to ensure Gambusia are not deposited into adjacent waterways;
- Environmental safeguards (e.g. erosion control fences, sediment bunds etc.) must be used to ensure sediment does not alter adjacent waterways. Such sediment has the potential to have a significantly negative impact on the biotic (e.g. fish) and abiotic (e.g. flow paths) components of adjacent waterways;
- 4. All other relevant authorities have no objections to this proposal. (Condition 100)

# STATUTORY PROVISIONS

## State Environmental Planning Policy No. 55 – Remediation of Land

The provisions of SEPP 55 require Council to consider the potential for a site to be contaminated. The subject site has a history of farmland and the use as a private golf course. Evidence has been provided by the limited contamination assessment that was undertaken by Consulting Earth Scientists that the site has no unreasonable levels of contamination that may have a significant impact to the users of the golf course and to the neighbouring residential and bushland areas. It was also considered by the limited contamination assessment that was undertaken by Consulting Earth Scientists that the material to be excavated from the base of the existing dam and the proposed new dam can be reused within the site, as the material does not contain levels of contamination that will impact the health of the neighbouring residents and natural environment. In this respect, it is considered that the proposed development meets the aims and objectives of SEPP55.

# State Environmental Planning Policy No 19 – Bushland in Urban Areas (SEPP19)

The subject site is positioned adjacent to an allotment of land zoned for public open space purposes. This allotment contains remanent bushland. As such, SEPP19 requires Council to consider the likely impact of the proposed development upon this bushland and any that remains on the subject site, particularly with regard to the erosion of soils, the siltation of streams and waterways and the spread of weeds and exotic plants within the bushland.

The general aim of SEPP 19 is to protect and preserve bushland within urban areas. The proposed works within the existing golf course are not considered to have a significant impact on the adjoining land zoned for public open space purposes, as the works within the golf course are conditioned so that the adjoining open space areas including the waterways are not impacted by siltation and the spread of weeds. Additionally Council's Landscaping Assessment Officer, Ecologcal Assessment Officer and Riparian and Water Officer support the proposed development, subject to appropriate conditions of consent. Furthermore, Council's Ecological Assessment Officer has recommended conditions as a part of the consent so as to protect and maintain the vitality of the existing remanent bushland located within the subject site.

In respect of these factors, the proposal is deemed to adequately satisfy the provisions of SEPP 19.

## State Environmental Planning Policy Infrastructure 2007

It is noted that the subject site has a frontage to a classified road, being the Pacific Highway. Due to the fact that no works are proposed within the subject site that will have an impact on the classified road, a referral seeking concurrence with the Roads and Maritime Services is not required.

# Sydney Regional Environmental Planning Policy (Sydney Harbour Catchment) 2005

Matters for consideration under SREP 2005 include biodiversity, ecology and environmental protection, public access to and scenic qualities of foreshores and waterways, maintenance of views, control of boat facilities and maintenance of a working harbour. Suitable conditions of consent have been recommended so as to protect the biodiversity, ecology and the natural environment of the site and surrounding area. Therefore, in this respect it is considered that the proposed development meets the aims and objectives of the control.

## Ku-ring-gai Planning Scheme Ordinance

#### Clause 23 – Permissibility

The subject site is zoned Open Space - Recreation Existing 6(b) and Residential 2(b) as defined by Clause 23 of the KPSO. Subject to development consent, these zonings permit the use of the land as a "Recreational area".

The relevant definition provided by the KPSO states:

"Recreation area" means:

- (a) a children's playground;
- (b) an area used for sporting activities or sporting facilities;
- (c) an area used to provide facilities for recreational activities which promote the physical, cultural or intellectual welfare of persons within the community, being facilities provided by:
  - (i) the Council; or

(ii) a body of persons associated for the purpose of promoting the physical, cultural or intellectual welfare of persons within the community, but does not include a racecourse or a showground.

No works are proposed within the part of the site that is zoned 2(d3), that being the car park located in the eastern part of the site adjacent to the Pacific Highway.

## Clause 33(a)

In relation to clause 33(a) of the KPSO, Council has taken into consideration the probable aesthetic appearance of the land. The proposed development will not have a significant visual impact as the visual amenity of the golf course to the surrounding areas will be retained. Furthermore, it is noted that there are no solid fencing structures proposed that would restrict the visual outlook of the golf course to the neighbouring sites.

## Clause 61D – Development of heritage items

In relation to Clause 61D of the KPSO, Council has taken into consideration the heritage value of the Killara Golf Course Home Paddock. Council's Heritage Advisor has raised no heritage issues in relation to the proposed development.

# Clause 61E – Development within the vicinity of heritage items

In relation to Clause 61E of the KPSO, Council has taken into consideration the proposed development within the vicinity of the heritage items of 46, 37 Fiddens Wharf Road, Killara, 512 Pacific Highway, Killara, 10, 26, 41 Buckingham Road, Killara and 5 Mildura Road, Killara. Council's Heritage Advisor has raised no heritage issues in relation to the proposed development and its likely relationship with the heritage items in the vicinity.

## Draft Local Environmental Plan No. 218.

Draft LEP 218 has been prepared and exhibited and as such is a matter for consideration in the assessment of the application. The draft LEP would insert provisions into the KPSO addressing biodiversity and riparian land as well as heritage conservation. Of relevance to the assessment of this application, the DLEP would take into consideration the biodiversity and riparian land of the site. The proposed development is considered to be acceptable in this regard for the reasons stated within the report by Council's Ecological Assessment Officer and Riparian and Water Officer.

## Schedule 9 – Aims and objectives for Residential zones

- 1. The general aims of this Ordinance in relation to the land within Zones Nos 2(A), 2(b), 2(c), 2(d), 2(e), 2(f), 2(g) and 2(h) are –
- (a) to maintain and, where appropriate, improve the existing amenity and environmental character of residential zones; and
- (b) to permit new residential development only where it is compatible with the

existing environmental character of the locality and has a sympathetic and harmonious relationship with the adjoining development.

The proposed works within the Home Paddock that is partially zoned Residential 2(b) are not considered significantly impact on the environmental character of the area and will be harmonious with the existing adjoining development, as the overall appearance and use of the golf course is being retained.

## Privacy

The privacy of neighbouring properties will not be significantly impacted by the proposed reconfiguration of the existing golf course as its use as a private golf course is not intensified. As indicated on the landscape plans, additional planting is proposed along the boundaries of the site so as to maintain the privacy and amenity of the neighbouring properties that back onto the golf course. The proposed development meets the underlying aims and objectives of the control.

## Safety

The proposed works within the existing holes and fairways are not considered to impact on the safety of neighbouring properties to a greater degree than is presently case from the playing of the existing fairways and greens within the golf course. It is noted that Killara Golf Course has existed in its current location for well over 100 years and that a certain level of wayward shots are to be expected. It is considered that the existing and proposed plantings within the course along the side of the fairways and the boundaries that adjoin neighbouring residential properties will assist in reducing the likelihood of the stray golf balls from significantly impacting the neighbouring sites.

It is not considered that the construction of the spare hole within the Bradfield Paddock will significantly impact the safety of the neighbouring properties, as the short par 3 hole is screened from the neighbouring properties and Provincial Road by the established plantings within the site that will help restrict golf balls from leaving the site and entering the road reserve of Provincial Road. Further, it is considered that Provincial Road adds an additional area between the golf course and the dwellings located along Provincial Road that provides further separation so as to maintain the safety of the neighbouring residents.

The applicant has provided an independent assessment of the likely safety risk posed the use of the proposed Hole 2. The report was prepared by "Golf by Design, Project Management & Land Planning" and comments on the 2<sup>nd</sup> hole proposal as follows:

The Killara Golf Club Committee hope to implement a number of course upgrades as detailed in a new, member - sanctioned master plan developed by Antony Cashmore and Associates Pty. Ltd (hereafter referred to as Cashmore).

Following the Club's lodgement of the requisite Development Application to Ku-ring-gai Council, neighbouring residents of the golf course engaged the

services of another golf course architectural company, Kruse Golf, to assess the potential safety impact upon their properties in the event that Council approves the construction of a new 2nd hole as proposed in the new master plan. The neighbouring properties include 1, 3, 5 and 7 Mildura Road Killara. Kruse Golf raised concerns about the proposed new 2nd hole on the grounds that it would significantly reduce the amenity for these residents as well as pose a heightened safety risk through an increased number of errant balls into these properties.

Golf by Design (GBD) has been commissioned by Killara Golf Club to independently review the potential safety issues arising from the construction of the new 2nd hole. For this reason, GBD has been provided with a copy of the report undertaken by Kruse Golf, a copy of the Cashmore master plan and a letter from Cashmore presenting the rationale behind their siting of the new green in terms of safety setbacks.

GBD is a Sydney based golf course architectural consultancy with an international clientele founded by James Wilcher. James has in excess of 25 years experience designing golf courses throughout Australasia - a pedigree ably underpinned by his team's collective 35 years of experience designing, constructing and landscaping golf courses (a GBD project resume is supplied as an addendum to this document for the Committee's reference). Many of GBD's commissions involve the planning of golf courses in and around residential communities and as such we are experienced in managing safety issues posed by such developments. Also, of note, GBD has advised various clients on how to manage existing safety related issues. They include:

- Pennant Hills Golf Club
- Beverley Park Golf Club
- The Coast Golf Club

Following is a review of contemporary golfing industry standards pertaining to safety combined with an assessment of whether the new 2nd hole proposed in the Cashmore master plan satisfies these theoretical standards and our knowledge of what works in practice. Broadly speaking, we have concluded that the 2nd hole proposed by Cashmore is fundamentally acceptable from a safety standpoint.

Unlike much of the property development arena, golf course development is not strictly governed by safety legislation. Instead safety disputes are typically reconciled on a case-by-case basis on the strength of judicious argument, which, sometimes, leverages guidelines advocated by various golfing authorities. Indeed, both Cashmore and Kruse Golf refer to various safety guideline protocols; in particular, those outlined by the Australian Golf Course Architects Society, the European Institute of Golf Course Architects and Golf NSW.

We acknowledge the use of the word "guidelines" and emphasise that, in our experience, the interpretation of these guidelines is heavily context dependent. That said we concur with the overarching principle implicit in these guidelines;

specifically, that it is near impossible to retain 100% of golf balls within a golf course where they abut residential precincts. Nevertheless, it is something that should be strived for.

To this end, we adhere to conventional wisdom and generally aim to ensure minimum setbacks from a green / hole centreline of 55 metres, even though ideally we would deliver greater setbacks if our clients' financial metrics accommodated this. Setbacks aside, there are a number of other factors that can impinge on the safety of holes located adjacent to residences and we aim, where applicable, to give due weight to each of these in our designs as well. They include:

- 1. Angle of play relative to adjacent boundary;
- 2. Elevational differences between golf hole and adjoining properties;
- 3. Length of hole;
- 4. Detailed design of the hole I positioning of hazards;
- 5. Vegetation screen between hole and properties;
- 6. Prevailing winds;
- 7. Whether the hole is on the 'hook' or 'slice' side (for right handers);
- 8. Variation in teeing location; and
- 9. Location of safety fences.

We note that historically there has been a concern about the incidence of golf balls leaving the Killara Golf Club and being deposited in the yards of 1, 3, 5 and 7 Mildura Avenue from a spare, presently unused hole. In fact, a safety fence was installed and remains in place close to the property at No.3 Mildura Avenue, presumably, in an attempt to prevent this from happening.

In the new Cashmore master plan it is proposed that the tee site on the existing (presently unused) spare hole will be recommissioned in some form for the new 2nd hole. It is our understanding that neighbouring residents are concerned that the proposed new 2nd hole will generate similar safety issues to those experienced when the existing spare hole was last played.

To assess the risk associated with the proposed new 2nd hole the following factors bear consideration:

#### **Green** location

We note that the new centre of the green is proposed to be 55 metres from the boundary of adjoining landowners. Whereas the centreline of the green on the spare hole that was subject to complaints when in play some time ago was around 25 metres. Thus the new hole delivers an increase of the order of 30 metres or around 120% and hence satisfies "guidelines".

### Angle of the hole relative to the alignment of the adjacent properties

The angle of the centreline of the proposed new hole with the alignment of the property boundary is in excess of 20%. This compares favourably with the

situation associated with the original hole, which was around 10% and again seems to satisfy "guidelines".

#### The length of the hole

As the hole is a maximum of 145 metres it reduces enormously the potential of golf balls leaving the site. It is with the driver in hand (a club that can travel as much as 250 metres for better golfers) that greater latitude for errant golfers needs to be made. Clearly, at 145 metres this proposed hole represents a much safer alternative to if the hole was 250 metres in length.

#### Detailed design of the hole

The detailed design of a golf hole can influence greatly the way it is played and the ideal line of play from a tee for golfers of varying abilities. For instance, if the danger on a golf hole is on its right hand side then a greater proportion of golfers (particularly those of more conservative ability) are likely to attempt to play away from the danger. Danger would typically be in the form of lakes, wetlands or other golfing hazards such as bunkers. By incorporating these into the detailed design of a golf hole, the way a hole is played can be greatly influenced.

In much the same way as hazards such as bunkers can influence a golfer's line of play we have, on several occasions, removed or relocated bunkers to avoid "skulled" shots from causing harm. Skulled shots are where a bunker shot for instance is hit 'thin' and flies a great deal further than intended. Therefore, siting bunkers on the non-neighbours side of a green can introduce the risk of this happening, particularly if bunkers are not particularly deep. Thus avoiding doing this may well prove instrumental in minimising safety risks.

# Size, dimension and scale of the vegetation screen between the hole and the adjoining properties

The existing trees sited between the new hole and the subject properties are of a size that will reduce the likelihood of golf balls leaving the property. That said, there is a significant opportunity to increase the amount of trees in this area with new plantings and in so doing strengthen the screening afforded by them. The problem with this is that any additional tree planting will take some years to be effective. Please note that below an assessment of other holes on the course would suggest that a screen of mature trees is a very effective safety barrier.

# Size, scale and location of safety screens between the hole and the neighbouring properties

The existing safety screen behind No.5 Mildura Street, whilst being an effective screen in stopping balls from finding their way into the back yard of No.5, does little to reduce the potential of this happening to balls heading into adjacent properties.

#### **Prevailing winds**

The prevailing wind would be considered to be a nor-Easterly and this should assist in pushing balls away from the adjoining properties and not toward them.

#### Elevational changes between the tee and the green

The hole is relatively flat and therefore this issue is not applicable to the situation. It is only a concern if the tee is particularly elevated.

#### Variance of teeing location

In the case of the proposed hole the tees are aligned which means that balls hit from them are more easily contained by the strategic location of screening trees and safety barriers.

#### Whether the boundary is on the hook or slice side of the hole

Ideally the property boundary would be on the left hand side of the hole as statistically this reduces the potential of golf balls leaving the site. It does so because the greater number of modest golfers 'slice' the ball and as 87% of golfers are right handed this means that the right hand side of the hole is more likely to attract miss-hit shots.

The proposed new 2nd hole should not be assessed in isolation given that it is a component part of an established context - the greater golf course! Accordingly, we have assessed several existing holes at Killara where they abut roads or residences and note the following:

Hole 7 - We note that the distance from the centreline of the hole to the neighbouring property ranges from 45 metres to approximately 37 metres, well short of the 55-metre guideline. Thus theoretically this should present a high level of risk, particularly given that the hole typically calls for a driver from the tee and that the neighbouring properties are on the right-handed slice side. However, we are led to believe that there are in fact few issues associated with balls leaving the course from this hole.

Hole 8 - We note that the distance form the centreline of the hole to the boundary of the golf course is approximately 35 metres. Again, theoretically this should pose a heightened level of risk for the Golf Club but we understand that this not the case. In addition, unlike the proposed 2nd hole, this hole is not angled away from the property boundary as would be the preference. Hole 9 - We note that the centreline of this hole ranges from 23 to 35 metres. This is a problematic hole for the Golf Club as it calls for a driver from the tee and the proximity of the boundary to the hole falls well short of the ideal. Moreover, the tee is elevated which further exacerbates the safety issue. It is our understanding and expectation that this hole does pose a risk from errant balls leaving the course.

Hole 12 - The centreline of the hole ranges from 15 metres (at the green end) to 27 metres in the fairway. Again, the boundary is on the 'slice' side of the hole so in theory this should be a particularly problematic hole in terms of safety. Whist not sufficient to require changes to the hole the proximity of the hole centreline from the course boundary does have a record of balls leaving the site.

Hole 15 - The centreline of this hole ranges from 35 to 38 metres. Again, this boundary is on the non-preferred 'slice' side of the hole, which increases the chance of the balls leaving the course. However, due almost entirely to the robust vegetative screen between the hole and the boundary this situation does not pose any out-of-bounds problems.

Each of the above cases would suggest that the safety setbacks allowed for in the planning of the proposed new 2nd hole are far superior to those nominated above. That these holes are considered to present acceptable safety risks tends to support the notion that the new hole has been sensibly thought through and relative to other holes, could be expected to be acceptably safe.

No golf course is ever 100% safe, however we believe that Cashmore's design for the new 2nd hole is a workable proposal for the reasons outlined above.

For the reasons stated in the above independent safety risk assessment it is considered that the proposed second hole is unlikely to significantly impact the safety of the neighbouring properties along Mildura Road that back onto the Killara golf course. Additional plantings are proposed along the second hole and around the tee so as to provide additional measures to screen the play of golf from the neighbouring sites. In this respect the proposed development is considered to be acceptable.

#### Noise

It is not considered that the noise levels currently produced from the use of the golf course will significantly increase due to the proposed works. However, this use is restricted to only day time hours, as the playing of golf is not permitted after sunset. In this respect the proposed works to the existing golf course are acceptable.

# POLICY PROVISIONS

### **Development Control Plan 31 – Access**

The existing disabled accessibility to the Killara golf course is not being altered in anyway and will be retained.

# Development Control Plan 40 – Construction and Demolition Waste Management

The key objectives of DCP 40 is to encourage building design and construction techniques which will minimise waste generation, implement the principles of the waste hierarchy of avoiding, re-using and recycling building and construction materials, household-generated waste and industrial/commercial waste. Minimise the environmental impacts of waste and promote the principles of ecologically sustainable development.

Conditions have been recommended to ensure that the proposed works comply with the objectives of DCP 40.

#### **Development Control Plan 43 – Car Parking**

The existing use of the site is not considered to be intensifying in such a manner that additional parking spaces are required within the subject site. Council's Development Engineer has raised no issues in regard to the proposed development, subject to conditions of consent. In this respect the proposed development would meet the underlying aims and objectives of the control.

#### **Development Control Plan 47 – Water Management**

To minimise impacts on adjoining land, stormwater must generally be directed to a public drainage system comprising gutters, streets, pipes, box culverts, trench systems and channels owned and operated by the Council. Council's Development Engineer has raised no issues in relation to the proposed stormwater management of the site. Conditions of consent have also been recommended requiring compliance with DCP 47.

#### **Riparian Policy 2004**

The Aims of Council's Riparian Policy 2004 are to conserve, enhance and protect existing riparian corridors. Council's Riparian and Water Officer considers that the proposed development meets the aims and objectives of Council's Riparian Policy subject to appropriate conditions of consent.

#### **Open Space Strategy for Ku-ring-gai 2005**

The Open Space Strategy for Ku-ring-gai, (OSSK) adopted by Council in 2005, seeks to set the direction for the management and use of open space within Ku-ring-gai. The OSSK contains strategies relating to the accommodation of sporting needs that are expected to result as an outcome of population growth, through the

reconfiguration, embellishment and/or extended use of existing facilities (including the alteration of field lay outs, the introduction of floodlighting and changes in operating hours). The OSSK also seeks to ensure the upgrading of open space reserves is compatible with the existing natural landscape.

As outlined within the consideration of the proposal against the SKS, the proposal represents an appropriate use of a current private facility of the golf course. The proposed works to the existing golf course will not unduly impact upon the surrounding natural landscape as for the reasons stated within the report.

Therefore, the proposed alteration to the layout of the Killara golf course facility is assessed as being satisfactory having regard to the aims set out by the OSSK.

# SUITABILITY OF THE SITE

The site is considered to be suitable for the proposed development as for the reasons stated within the report.

#### ANY SUBMISSIONS

All submissions received have been considered in the assessment of this application.

## **PUBLIC INTEREST**

The approval of the application is considered to be in the public interest for the reasons stated within the report.

#### CONCLUSION

Having regard to the provisions of section 79C of the Environmental Planning and Assessment Act 1979, the proposed development is considered to be satisfactory. Therefore, it is recommended that the application be approved, subject to conditions of consent.

#### RECOMMENDATION

# PURSUANT TO SECTION 80(1) OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979

THAT the Sydney West Joint Regional Planning Panel, as the consent authority, grant development consent to DA 0147/11 for the construction of a new practice fairway, the construction of new holes, various hole design changes, new water storage dam, increasing the size of the existing dam and the construction of a new bridge, tree removal, landscaping works and associated works to the existing golf course on land at 556 Pacific Highway Killara, for a period of two (2) years from the date of the Notice of Determination, subject to the following conditions:

# CONDITIONS THAT IDENTIFY APPROVED PLANS:

# 1. Approved architectural plans and documentation (new development)

The development must be carried out in accordance with work shown in colour on the following plans and documentation listed below and endorsed with Council's stamp, except where amended by other conditions of this consent.

Plan no.	Drawn by	Dated
LA01 Issue D	Taylor Brammer	30/04/2012
LA02 Issue B	Taylor Brammer	30/02/2012
LA02-01 to 18 Issue C	Taylor Brammer	30/04/2012
LA03 Issue B	Taylor Brammer	30/04/2012
LA03-01 to09 Issue C	Taylor Brammer	30/04/2012
LA04 Issue B	Taylor Brammer	30/04/2012
LA04-01 to 18 Issue C	Taylor Brammer	30/04/2012
LA05 Issue D	Taylor Brammer	04/06/2012
LA05-1 to 18 Issue C	Taylor Brammer	30/04/2012
LA06 Issue D	Taylor Brammer	04/06/2012
LA06-01 to 09 Issue C	Taylor Brammer	30/04/2012
LA07 Issue D	Taylor Brammer	04/06/2012
LA07-01 to 18 Issue C	Taylor Brammer	30/04/2012
LA08 Issue C	Taylor Brammer	30/04/2012
LA09-1 Issue D	Taylor Brammer	04/06/2012
LA09-2 Issue A	Taylor Brammer	04/06/2012
LA09-3 Issue A	Taylor Brammer	04/06/2012
LA10-1 Issue D	Taylor Brammer	04/06/2012
LA10-2 Issue A	Taylor Brammer	04/06/2012
LA10-3 Issue A	Taylor Brammer	04/06/2012
LA11-1 Issue D	Taylor Brammer	04/06/2012
LA11-2 Issue A	Taylor Brammer	04/06/2012
LA11-3 Issue A	Taylor Brammer	04/06/2012
G.HPF - Practice Fairway Grading Plan	Cashmore	May 2012
Hole 2 Revised grading plan	Cashmore	April 2012
21-19814-S003 Revision A	GHD	03/03/2011
21-19814-C000 to C006Revision A	GHD	03/03/2011
Proposed lake – Grading using fill on site	Cashmore	February 2011
Proposed lake (Volume 10.9ML)	Cashmore	February 2011
Proposed lake (Volume 10.9ML) Cross Section 1	Cashmore	1 April 2011
Proposed lake (Volume 10.9ML) Cross Section 2	Cashmore	1 April 2011
Proposed lake (Volume 10.9ML) Cross Section 3	Cashmore	1 April 2011
Proposed lake (Volume 10.9ML) Cross Section 4	Cashmore	1 April 2012
Staging plan	Cashmore	March 2011

Document(s)	Dated
Amended Requirements for a Bushfire Protection Assessment	3 May 2012
for Killara Golf Club – Eco Logical Australia	,,

**Reason:** To ensure that the development is in accordance with the determination.

# 2. Inconsistency between documents

In the event of any inconsistency between conditions of this consent and the drawings/documents referred to above, the conditions of this consent prevail.

**Reason:** To ensure that the development is in accordance with the determination.

# 3. Approved landscape/planting plans (Stage 1)

Stage 1 landscape works shall be carried out in accordance with the following landscape/planting plan(s), listed below and endorsed with Council's stamp, except where amended by other conditions of this consent:

Plan no.	Drawn by	Dated
LA05 'D'	Taylor Brammer	04/06/2012
LA05-4 'C'	Taylor Brammer	30/04/2012
LA05-5 'C'	Taylor Brammer	30/04/2012
LA05-9 'C'	Taylor Brammer	30/04/2012
LA06 'D'	Taylor Brammer	04/06/2012
LA06-1 'C'	Taylor Brammer	30/04/2012
LA06-2 'C'	Taylor Brammer	30/04/2012
LA06-3 'C'	Taylor Brammer	30/04/2012
LA06-4 'C'	Taylor Brammer	30/04/2012
LA06-5 'C'	Taylor Brammer	30/04/2012
LA06-6 'C'	Taylor Brammer	30/04/2012
LA06-7 'C'	Taylor Brammer	30/04/2012
LA06-8 'C'	Taylor Brammer	30/04/2012
LA06-9 'C'	Taylor Brammer	30/04/2012
LA09-1 'D'	Taylor Brammer	04/06/2012
LA09-2 'A'	Taylor Brammer	04/06/2012
LA09-3 'A'	Taylor Brammer	04/06/2012
LA11-1 'D'	Taylor Brammer	04/06/2012
LA11-2 'A'	Taylor Brammer	04/06/2012
LA11-3 'A'	Taylor Brammer	04/06/2012

**Reason:** To ensure that the development is in accordance with the determination.

# 4. Approved landscape/planting plans (Stage 2)

Stage 2 landscape works shall be carried out in accordance with the following landscape/planting plan(s), listed below and endorsed with Council's stamp, except where amended by other conditions of this consent:

Plan no.	Drawn by	Dated
LA05 'D'	Taylor Brammer	04/06/2012
LA05-4 'C'	Taylor Brammer	30/04/2012
LA05-5 'C'	Taylor Brammer	30/04/2012
LA05-9 'C	Taylor Brammer	30/04/2012
LA05-10 'C'	Taylor Brammer	30/04/2012
LA05-11 'C'	Taylor Brammer	30/04/2012
LA05-15 'C'	Taylor Brammer	30/04/2012
LA05-16 'C'	Taylor Brammer	30/04/2012
LA05-18 'C'	Taylor Brammer	30/04/2012
LA07 'D'	Taylor Brammer	04/06/2012
LA07-1 'C'	Taylor Brammer	30/04/2012
LA07-2 'C'	Taylor Brammer	30/04/2012
LA07-3 'C'	Taylor Brammer	30/04/2012
LA07-4 'C'	Taylor Brammer	30/04/2012
LA07-5 'C'	Taylor Brammer	30/04/2012
LA07-6 'C'	Taylor Brammer	30/04/2012
LA07-7 'C'	Taylor Brammer	30/04/2012
LA07-8 'C'	Taylor Brammer	30/04/2012
LA07-9 'C'	Taylor Brammer	30/04/2012
LA07-10 'C'	Taylor Brammer	30/04/2012
LA07-11 'C'	Taylor Brammer	30/04/2012
LA07-12 'C'	Taylor Brammer	30/04/2012
LA07-13 'C'	Taylor Brammer	30/04/2012
LA07-14 'C'	Taylor Brammer	30/04/2012
LA07-15 'C'	Taylor Brammer	30/04/2012
LA07-16 'C'	Taylor Brammer	30/04/2012
LA07-17 'C'	Taylor Brammer	30/04/2012
LA07-18 'C'	Taylor Brammer	30/04/2012
LA10-1 'D'	Taylor Brammer	04/06/2012
LA10-2 'A'	Taylor Brammer	04/06/2012
LA10-3 'A'	Taylor Brammer	04/06/2012
LA11-1 'D'	Taylor Brammer	04/06/2012
LA11-2 'A'	Taylor Brammer	04/06/2012
LA11-2 'A'	Taylor Brammer	04/06/2012

**Reason:** To ensure that the development is in accordance with the determination.

# 5. Approved landscape/planting plans (Stage 3)

Stage 3 landscape works shall be carried out in accordance with the following landscape/planting plan(s), listed below and endorsed with Council's stamp, except where amended by other conditions of this consent:

Plan no.	Drawn by	Dated
LA05 'D'	Taylor Brammer	04/06/2012
LA05-1 'C'	Taylor Brammer	30/04/2012
LA05-2 'C'	Taylor Brammer	30/04/2012
LA05-5 'C'	Taylor Brammer	30/04/2012
LA05-6 'C'	Taylor Brammer	30/04/2012
LA05-7 'C'	Taylor Brammer	30/04/2012
LA05-8 'C'	Taylor Brammer	30/04/2012
LA05-9 'C	Taylor Brammer	30/04/2012
LA05-11 'C'	Taylor Brammer	30/04/2012
LA05-12 'C'	Taylor Brammer	30/04/2012
LA05-13 'C'	Taylor Brammer	30/04/2012
LA05-14 'C'	Taylor Brammer	30/04/2012
LA05-15 'C'	Taylor Brammer	30/04/2012
LA05-16 'C'	Taylor Brammer	30/04/2012
LA05-17 'C'	Taylor Brammer	30/04/2012
LA05-18 'C'	Taylor Brammer	30/04/2012
LA10-1 'D'	Taylor Brammer	04/06/2012
LA10-2 'A'	Taylor Brammer	04/06/2012
LA10-3 'A'	Taylor Brammer	04/06/2012
LA11-1 'D'	Taylor Brammer	04/06/2012
LA11-2 'A'	Taylor Brammer	04/06/2012
LA11-3 'A'	Taylor Brammer	04/06/2012

# **Reason:** To ensure that the development is in accordance with the determination.

# CONDITIONS TO BE SATISFIED PRIOR TO DEMOLITION, EXCAVATION OR CONSTRUCTION:

# 6. Road opening permit

The opening of any footway, roadway, road shoulder or any part of the road reserve shall not be carried out without a road opening permit being obtained from Council (upon payment of the required fee) beforehand.

**Reason:** Statutory requirement (Roads Act 1993 Section 138) and to maintain the integrity of Council's infrastructure.

# 7. Threatened species mitigation

All mitigations measures outlined in section 5 of the flora and fauna assessment report prepared by GHD, dated December 2011 are to be implemented throughout the duration of works.

**Reason:** To ensure protection of threatened and non-threatened species & endangered ecological communities.

# 8. Amendments to approved vegetation management plan

Prior to the issue of the stage 1 Construction Certificate, the Principal Certifying Authority shall be satisfied that the approved vegetation management plan, listed below and endorsed with Council's stamp, has been amended in accordance with the requirements of this condition as well as other conditions of this consent:

Plan no.	Drawn by	Dated	
21/198140/8/1734	GHD	November 2011	

The above vegetation management plan shall be amended in the following ways:

1. The Vegetation Management Plan is to identify the minimum 5m vegetated buffer from the top of bank of southern side of Links Creek which is required to be vegetated in accordance with the General Terms of Approval issued by the NSW Office of Water.

Any part of the 5m buffer which is currently not vegetated is to be planted and managed in accordance with the amended vegetation management plan. The 5m vegetated buffer is in addition to those areas already proposed to be retained and planted in accordance with the vegetation management plan. The entire area up to the top of the upper bank is to be planted with native locally occurring species as per the vegetation management plan. The vegetation management plan is to be managed in accordance with the following points.

- All works detailed within the vegetation management plan -revegetation, weed removal (Table 1) weed techniques (Appendix C), environmental protection measures and proposed planting are to be carried out in accordance with the vegetation management plan.
- All planting to be undertaken within the riparian area of the site are to be species in accordance with the vegetation management plan (Figure002). Plantings are to be sourced locally within (10km) of the site.
- All noxious and environmental weeds (Appendix C) are to be removed from the riparian area within the site.
- All works within the riparian area are to be conducted by a suitably qualified bush regenerator. The minimum qualifications minimum qualifications and experience (for site supervisor) are a TAFE Certificate 2 in Bushland Regeneration and one year demonstrated experience (for other personnel). In addition the site supervisor is to be eligible for full professional membership of the Australian Association of Bush Regenerators (AABR).
- **Reason:** To ensure the protection and enhancement of the riparian area and fauna habitats within the site.

# 9. Fauna protection – Stage 1

Hollows have been identified as occurring within the following trees identified as Way point 139 (328728E 6261956N), 1 hollow size 15cm Way point 143 328466 6261865 2 hollow size 10 & 15cm, H6-178 *Eucalyptus punctata* (Grey Gum) which

provide suitable nesting/ roosting habitat for native fauna species. Prior to the removal of hollow-bearing trees an ecologist is to locate and install three nest boxes within close proximity to the area in which the hollow-bearing trees is being removed. A suitable sized nest box comparable to the type of hollow to being removed is to be installed prior to tree removal.

A qualified ecologist is to inspect/investigate hollow-bearing trees prior to there removal. The ecologist is to supervise the relocation of any fauna found with the abovementioned trees in accordance with appropriate licensing requirements and into the established nest boxes.

The qualified ecologist must hold an Animal Ethics Permit from the Department of Industries and Investment and a wildlife licence under section 132C of the *National Parks and Wildlife Act 1974* issued by the Department of Environment Climate Change and Water. Evidence of engagement of the qualified ecologist and the required licensing must be provided to the Principal Certifying Authority and a copy to Council's Ecological Assessment Officer prior to tree removal being undertaken.

**Reason**: To ensure protection of fauna species.

### 10. Fauna protection – Stage 2

Hollows have been identified as occurring within H1-82 *Syzygium paniculatum* (Magenta Lillypilly) which provide suitable nesting/ roosting habitat for native fauna species. Prior to the removal of hollow-bearing trees an ecologist is to locate and install three nest boxes within close proximity to the area in which the hollow-bearing trees is being removed. A suitable sized nest box comparable to the type of hollow being removed is to be installed prior to tree removal.

A qualified ecologist is to inspect/investigate hollow-bearing tree prior to its removal. The ecologist is to supervise the relocation of any fauna found in this tree in accordance with appropriate licensing requirements and into the established nest boxes.

The qualified ecologist must hold an Animal Ethics Permit from the Department of Industries and Investment and a wildlife licence under section 132C of the *National Parks and Wildlife Act 1974* issued by the Department of Environment Climate Change and Water. Evidence of engagement of the qualified ecologist must be provided to the Principal Certifying Authority and a copy to Council's Ecological Assessment Officer prior to tree removal being undertaken.

**Reason**: To ensure protection of fauna species.

## 11. Fauna protection – Stage 3

Hollows have been identified as occurring within H8-232 *Eucalyptus pilularis* (Blackbutt) which provide suitable nesting/ roosting habitat for native fauna species. Prior to the removal of hollow-bearing tree (H8-232) an ecologist is to locate and install two nest boxes within close proximity to the area in which the hollow-bearing trees is being removed. A suitable sized nest box comparable to the type of hollow

to being removed is to be installed prior to tree removal.

A qualified ecologist is to inspect/investigate hollow-bearing tree prior to its removal. The ecologist is to supervise the relocation of any fauna found in this tree in accordance with appropriate licensing requirements and into the established nest boxes.

The qualified ecologist must hold an Animal Ethics Permit from the Department of Industries and Investment and a wildlife licence under section 132C of the *National Parks and Wildlife Act 1974* issued by the Department of Environment Climate Change and Water. Evidence of engagement of the qualified ecologist must be provided to the Principal Certifying Authority and a copy to Council's Ecological Assessment Officer prior to tree removal being undertaken.

**Reason**: To ensure protection of fauna species.

## 12. Notification of builder's details

Prior to the commencement of any development or excavation works, the Principal Certifying Authority shall be notified in writing of the name and contractor licence number of the owner/builder intending to carry out the approved works.

**Reason:** Statutory requirement.

#### **13.** Dilapidation survey and report (public infrastructure)

Prior to the commencement of any works on site, the Principal Certifying Authority shall be satisfied that a dilapidation report on the visible and structural condition of the following public infrastructure, has been completed and submitted to Council:

Public infrastructure

- Full road pavement width, including kerb and gutter, of Fiddens Wharf Road between Pacific Highway and Lady Game Drive, including the roundabout;
- Full length of Golf Links Road.

The report must be completed by a consulting structural/civil engineer. Particular attention must be paid to accurately recording (both written and photographic) existing damaged areas on the aforementioned infrastructure so that Council is fully informed when assessing any damage to public infrastructure caused as a result of the development.

The developer may be held liable to any recent damage to public infrastructure in the vicinity of the site, where such damage is not accurately recorded by the requirements of this condition prior to the commencement of works.

**Note:** A written acknowledgment from Council must be obtained (attesting to this condition being appropriately satisfied) and submitted to the Principal Certifying Authority prior to the commencement of any excavation works.

**Reason:** To record the structural condition of public infrastructure before works commence.

## 14. Construction and traffic management plan

For each stage of the works, the applicant must submit to Council a Construction Traffic Management Plan (TMP), which is to be approved prior to the commencement of any works associated with that stage.

The plan is to consist of a report with Traffic Control Plans attached, and may be based on the **Traffic Assessment and Construction Management Plan by GHD dated 22 March 2011**.

The report is to contain commitments which must be followed by the excavation contractor, builder, owner and subcontractors. The TMP applies to all persons associated with demolition, excavation and construction of the development.

The report is to contain construction vehicle routes for approach and departure to and from all directions.

The report is to contain a site plan showing entry and exit points. Swept paths are to be shown on the site plan showing access and egress for an 11 metre long heavy rigid vehicle.

The Traffic Control Plans are to be prepared by a qualified person (red card holder).

Traffic controllers must be in place at the site entry and exit points to control heavy vehicle movements in order to maintain the safety of pedestrians and other road users.

When a satisfactory TMP is received, a letter of approval will be issued with conditions attached. Traffic management at the site must comply with the approved TMP as well as any conditions in the letter issued by Council. Council's Rangers will be patrolling the site regularly and fines will be issued for any non-compliance with this condition.

**Reason:** To ensure that appropriate measures have been considered during all phases of the construction process in a manner that maintains the environmental amenity and ensures the ongoing safety and protection of people.

## 15. Erosion and drainage management

Earthworks associated with each stage of the development shall not commence until an erosion and sediment control plan is submitted to and approved by the Principal Certifying Authority. The plan shall comply with the guidelines set out in the NSW Department of Housing manual "Managing Urban Stormwater: Soils and Construction" certificate. Erosion and sediment control works shall be implemented in accordance with the erosion and sediment control plan. **Reason:** To preserve and enhance the natural environment.

# 16. Tree protection fencing – Stage 1

To preserve retained existing trees, no work shall commence until the tree protection zone (as defined by Volumes 2 and 3 of the Arborists Report by Australian Tree Consultants dated 25 February 2011) is fenced off to prevent any activities, storage or the disposal of materials within the fenced area. The fence/s shall be maintained intact until the completion of all Stage 1 development works.

**Reason:** To protect existing trees during the construction phase.

# 17. Tree protection fencing – Stage 2

To preserve existing trees, no work shall commence until the tree protection zone (as defined by Volumes 2 and 4 of the Arborists Report by Australian Tree Consultants dated 25 February 2011) is fenced off to prevent any activities, storage or the disposal of materials within the fenced area. The fence/s shall be maintained intact until the completion of all Stage 2 development works.

**Reason:** To protect existing trees during the construction phase.

# 18. Tree protection fencing – Stage 3

To preserve existing trees, no work shall commence until the tree protection zone (as defined by Volumes 2 and 3 of the Arborists Report by Australian Tree Consultants dated 25 February 2011) is fenced off to prevent any activities, storage or the disposal of materials within the fenced area. The fence/s shall be maintained intact until the completion of all Stage 1 development works.

**Reason:** To protect existing trees during the construction phase.

# 19. Tree protection fencing excluding approved access routes – Stage 1

To preserve existing trees, no work shall commence until the approved access routes through treed areas have been fenced off and separated within the tree protection fenced areas. Protective fencing is to be located at a 1.0m offset on each side of the approved access route. Where trees are located outside of the tree protection area, their trunks are to be protected with boarding as per AS4970-2009 Protection of trees on development sites. The fence/s shall be maintained intact until the completion of all demolition/building work on site.

**Reason:** To protect existing trees during the construction phase.

# 20. Tree protection fencing excluding approved access routes – Stage 2

To preserve existing trees, no work shall commence until the approved access routes through treed areas have been fenced off and separated within the tree protection fenced areas. Protective fencing is to be located at a 1.0m offset on each side of the approved access route. Where trees are located outside of the tree protection area, their trunks are to be protected with boarding as per AS4970-2009 Protection of trees on development sites. The fence/s shall be maintained intact until the completion of all demolition/building work on site.

**Reason:** To protect existing trees during the construction phase.

# 21. Tree protection fencing excluding approved access routes – Stage 3

To preserve existing trees, no work shall commence until the approved access routes through treed areas have been fenced off and separated within the tree protection fenced areas. Protective fencing is to be located at a 1.0m offset on each side of the approved access route. Where trees are located outside of the tree protection area, their trunks are to be protected with boarding as per AS4970-2009 Protection of trees on development sites. The fence/s shall be maintained intact until the completion of all demolition/building work on site.

**Reason:** To protect existing trees during the construction phase.

# 22. Tree protective fencing type galvanised mesh

Where vehicular access and/or development work is being undertaken within a 20.0m radius of existing trees, the tree protection fencing shall be constructed of galvanised pipe at 2.4 metres spacing and connected by securely attached chain mesh fencing to a minimum height of 1.8 metres in height prior to work commencing.

**Reason:** To protect existing trees during construction phase.

# 23. Tree protective fencing type plastic construction webbing/star picket

Where development works are being undertaken at a greater distance than 20.0m from existing trees, the tree protection fencing shall be constructed of star pickets at 2.4 metres spacing and connected by strands of 2mm wire with brightly coloured plastic construction webbing to a minimum height of 1.2m metres in height prior to work commencing.

**Reason:** To protect existing trees during construction phase.

# 24. Tree protection signage

Prior to works commencing, tree protection signage is to be attached to each tree protection zone, displayed in a prominent position and the sign repeated at 10 metres intervals or closer where the fence changes direction. Each sign shall contain in a clearly legible form, the following information:

- Tree protection zone.
- This fence has been installed to prevent damage to the trees and their growing environment both above and below ground and access is restricted.
- Any encroachment not previously approved within the tree protection zone shall be the subject of an arborist's report.
- The arborist's report shall provide proof that no other alternative is available.

- The arborist's report shall be submitted to the Principal Certifying Authority for further consultation with Council.
- The name, address, and telephone number of the developer.

**Reason:** To protect existing trees during the construction phase.

# 25. Tree protection mulching

Prior to works commencing and throughout development works, the area of the tree protection zone is to be mulched to a depth of 100mm with composted organic material being 75% Eucalyptus leaf litter and 25% wood.

**Reason:** To protect existing trees during the construction phase.

# 26. Tree protection – avoiding soil compaction – Stage 1

To preserve existing tree/s and avoid soil compaction, no work shall commence until temporary measures to avoid soil compaction as per AS4970-2009 Protection of trees on development sites (eg rumble boards) within the tree protection zone (TPZ) of the following tree/s is/are installed:

#### **Tree/Location**

All existing trees where vehicular access is proposed within the tree protection zone, as defined by the Arborist reports Volumes 2 and 3 by Australian Tree Consultants dated 25 February 2011.

**Reason:** To protect existing trees during the construction phase.

## 27. Tree protection – avoiding soil compaction – Stage 2

To preserve existing tree/s and avoid soil compaction, no work shall commence until temporary measures to avoid soil compaction as per AS4970-2009 Protection of trees on development sites (eg rumble boards) within the tree protection zone (TPZ) of the following tree/s is/are installed:

|--|

**Tree/Location** 

All existing trees where vehicular access is proposed within the tree protection zone, as defined by the Arborist reports Volumes 2 and 4 by Australian Tree Consultants dated 25 February 2011.

**Reason:** To protect existing trees during the construction phase.

# 28. Tree protection – avoiding soil compaction – Stage 3

To preserve existing tree/s and avoid soil compaction, no work shall commence until temporary measures to avoid soil compaction as per AS4970-2009 Protection of trees on development sites (eg rumble boards) within the tree protection zone (TPZ) of the following tree/s is/are installed:

**Tree/Location** 

All existing trees where vehicular access is proposed within the tree protection zone as defined by the Arborist reports Volumes 2 by Australian Tree Consultants dated 25 February 2011.

**Reason:** To protect existing trees during the construction phase.

# 29. Trunk protection – Stage 1

To preserve the following tree/s, no work shall commence until the trunk/s are protected by the placement of 2.0 metres lengths of 50 x 100mm hardwood timbers spaced at 150mm centres and secured by 2mm wire at 300mm wide spacing over suitable protective padding material. The trunk protection shall be maintained intact until the completion of all work on site.

Any damage to the tree/s shall be treated immediately by an experienced Horticulturist/Arborist, with minimum qualification of Horticulture Certificate or Tree Surgery Certificate and a report detailing the works carried out shall be submitted to the Principal Certifying Authority:

Tree/Location	
H4-197 Angophora costata (Sydney Redgum)	
Adjacent to Golf links Rd entry point	
H4-188 Angophora costata (Sydney Redgum)	
Adjacent to eastern site access route/existing cart path	
H4-179 Angophora costata (Sydney Redgum)	
Adjacent to eastern site access route/existing cart path	
H4-180 Angophora costata (Sydney Redgum)	
Adjacent to eastern site access route/existing cart path	

**Reason:** To protect existing trees during the construction phase.

# **30.** Trunk protection – Stage 3

To preserve the following tree/s, no work shall commence until the trunk/s are protected by the placement of 2.0 metres lengths of 50 x 100mm hardwood timbers spaced at 150mm centres and secured by 2mm wire at 300mm wide spacing over suitable protective padding material. The trunk protection shall be maintained intact until the completion of all work on site.

Any damage to the tree/s shall be treated immediately by an experienced Horticulturist/Arborist, with minimum qualification of Horticulture Certificate or Tree Surgery Certificate and a report detailing the works carried out shall be submitted to the Principal Certifying Authority:

## Tree/Location

H8-251 *Eucalyptus pilularis* (Blackbutt) Adjacent to proposed vehicular access from Fiddens Wharf Rd.

**Reason:** To protect existing trees during the construction phase.

# 31. Tree fencing inspection

Upon installation of the required tree protection measures, an inspection of the site by the Project Arborist is required to verify that tree protection measures comply with all relevant conditions. Written certification of correct installation of tree protection measures is to be provided by the project arborist to the principal certifying authority.

**Reason:** To protect existing trees during the construction phase.

# 32. Seed bank

Prior to works commencing seed and vegetative material from locally occurring native plants at the site and within 10 kilometres of the site are to be collected by a qualified bush regenerator and propagated for use in subsequent bush regeneration and landscape works at the site. Seed and vegetative propagation material is to be collected, stored and propagated by a propagation nursery.

**Reason:** To conserve and enhance local species diversity and preserve existing indigenous plant species.

# 33. Construction waste management plan

Prior to the commencement of any works, the Principal Certifying Authority shall be satisfied that a waste management plan, prepared by a suitably qualified person, has been prepared in accordance with Council's DCP 40 – Construction and Demolition Waste Management.

The plan shall address all issues identified in DCP 40, including but not limited to: the estimated volume of waste and method for disposal for the construction and operation phases of the development.

**Note:** The plan shall be provided to the Certifying Authority.

**Reason:** To ensure appropriate management of construction waste.

# CONDITIONS TO BE SATISFIED PRIOR TO THE ISSUE OF THE CONSTRUCTION CERTIFICATE:

# 34. Vegetation management plan

Prior to the release of the Construction Certificate the vegetation management plan is to include the following:

- a. Identify the riparian areas along inflow and outflow lines of the water storages, and other sections of the watercourses, by mapping the 5m minimum vegetated buffer required by the NOW GTA; and
- b. Map and identify for protection, the extent of any existing riparian buffers, particularly those below the dam along Honeysuckle Creek, and that adjacent to the 5<sup>th</sup> Fairway, along Links Creek.
- **Reason:** To ensure downstream habitat and riparian corridor is maintained and appropriately managed and to ensure:
  - a. Conditions 2.2 and 2.9 from NOW's GTA's are met; and
  - b. To meet the major aims of the Ku-ring-gai Council Riparian Policy (2004), particularly:
  - Conservation, enhancement, and protection of existing riparian corridors, giving priority to those that are most intact, and those that pass through endangered ecological communities or threatened species populations.
  - Rehabilitation and restoration of degraded, fragmented and highly modified riparian corridors that provide some of the functions of an intact system
  - Restoration of the bio-link value of riparian corridors by creating greater lateral and longitudinal connections between isolated or narrow riparian zones.
  - Conservation and enhancement of local biodiversity and habitat quality

## 35. Dam design

For each of the two dams, the Principal Certifying Authority is to be satisfied that the design meets the requirements of the NSW Dams Safety Committee prior to issue of a Construction Certificate.

**Reason:** Statutory requirement.

### 36. Ecological burn prohibited

The proposed ecological burn as detailed within section 5 of the flora and fauna assessment for Darwinia biflora is not approved.

Plan no.	Drawn by	Dated
Flora and Fauna Assessment (21/19814/168116)	GHD	December 2011

# **Reason:** This type of development requires separate approval from the NSW Rural Fire Service.

## 37. Amendments to on site construction access –Stage 1

Prior to the issue of the Stage 1 Construction Certificate, the Principal Certifying Authority shall be satisfied that the 'On site construction access review' by Colston Budd Hunt & Kafes dated 07/05/2012, has been amended in accordance with the requirements of this condition as well as other conditions of this consent:

The on site construction access documentation/plans shall be amended in the following ways:

• The 18.3m Truck and Dog vehicle swept path #9 is to amend the swept path route so that it does not encroach within the tree protection zone of ANY existing trees beyond the initial access route. The turning swept path is to be limited to the existing fairway area.

Prior to the issue of the Stage 1 Construction Certificate, the Principal Certifying Authority shall be satisfied that the on site access review and plan/s has been amended as required by this condition.

**Reason:** To ensure adequate landscaping of the site

## 38. Amendments to on site construction access – Stage 2

Prior to the issue of the Stage 2 Construction Certificate, the Principal Certifying Authority shall be satisfied that the 'On site construction access review' by Colston Budd Hunt & Kafes dated 07/05/2012, has been amended in accordance with the requirements of this condition as well as other conditions of this consent:

The on site construction access documentation/plans shall be amended in the following ways:

• The 18.3m Truck and Dog vehicle swept path plan #7 & 8 is to be amended to show the vehicular access following the 16<sup>th</sup> and 10<sup>th</sup> fairways outside of identified tree protection zones. The proposed access adjacent to the existing residential properties and through the existing tree grove is to be deleted.

Prior to the issue of the Stage 2 Construction Certificate, the Principal Certifying Authority shall be satisfied that the on site access review and plan/s has been amended as required by this condition.

**Reason:** To protect existing trees during the construction phase.

# **39.** Amendments to approved stormwater management plan - Stage 2

Prior to the issue of the Stage 2 Construction Certificate, the Principal Certifying

Authority shall be satisfied that the 'stormwater management plan' by GHD dated March 2011, has been amended in accordance with the requirements of this condition as well as other conditions of this consent:

The stormwater management plan shall be amended in the following ways:

• Figure 2a, Bradfield Paddock proposed Stormwater Plan Rev A, dated 17/03/2011 is to be amended by relocating the relocated sewer pipe and pits, and the stormwater pipe and pits from the northern side of the proposed dam to the southern side.

Prior to the issue of the Stage 2 Construction Certificate, the Principal Certifying Authority shall be satisfied that the Stormwater Management Plan has been amended as required by this condition.

**Reason:** To protect existing trees during the construction phase.

# 40. Amendments to approved overall grading plan – Stage 2

Prior to the issue of the Stage 2 Construction Certificate, the Principal Certifying Authority shall be satisfied that the 'overall grading plan' by Cashmore, dated April 2012, has been amended in accordance with the requirements of this condition as well as other conditions of this consent:

The stormwater management plan shall be amended in the following ways:

• To minimise impacts to trees H13-101-106 Araucaria cunninghamii (Hoop Pine) being part of the avenue planting adjacent to the 13<sup>th</sup> fairway, the grading plan is to be amended to ensure that existing levels and grades are maintained within the tree protection zone (as defined by the arborist report Volume 3 by Australian Tree Consultants, dated 25 February 2011).

Prior to the issue of the Stage 2 Construction Certificate, the Principal Certifying Authority shall be satisfied that the overall grading plan has been amended as required by this condition.

**Reason:** To protect existing trees during the construction phase.

## 41. Amendments to approved Stage 1 tree removal and retention plan/s

Prior to the issue of the Stage 1 Construction Certificate, the Principal Certifying Authority shall be satisfied that the approved Stage 1 tree removal/retention plans, listed below and endorsed with Council's stamp, have been amended in accordance with the requirements of this condition as well as other conditions of this consent:

Plan no.	Drawn by	Dated	
LA03 'B'	Taylor Brammer	30/04/2012	
LA03-3 'C'	Taylor Brammer	30/04/2012	
LA03-5 'C'	Taylor Brammer	30/04/2012	
LA03-6 'C'	Taylor Brammer	30/04/2012	
LA03-8 'C'	Taylor Brammer	30/04/2012	

The above Stage 1 tree removal/retention plan(s) shall be amended in the following ways:

• The following trees are to be shown to be retained;

H5-200 Eucalyptus microcorys	H4-96 Harpephyllum caffrum (Kaffir
(Tallowood)	Plum)
H4-181 Eucalyptus sideroxylon (Red	H4-81 Corymbia maculata (Spotted
Ironbark)	Gum)

• The bunker proposed adjacent to tree H5-184 Eucalyptus pilularis (Blackbutt) is to be deleted.

Prior to the issue of the Stage 1 Construction Certificate, the Principal Certifying Authority shall be satisfied that the Stage 1 tree removal/retention plan/s has been amended as required by this condition.

**Note:** An amended plan, prepared by a landscape architect or qualified landscape designer shall be submitted to the Certifying Authority.

**Reason:** To ensure adequate landscaping of the site

## 42. Amendments to approved Stage 1 landscape/planting plan

Prior to the issue of the Stage 1 Construction Certificate, the Principal Certifying Authority shall be satisfied that the approved Stage 1 landscape/planting plans, listed below and endorsed with Council's stamp, have been amended in accordance with the requirements of this condition as well as other conditions of this consent:

Plan no.	Drawn by	Dated
LA05 'D'	Taylor Brammer	04/06/2012
LA06-3 'C'	Taylor Brammer	30/04/2012
LA06-5 'C'	Taylor Brammer	30/04/2012
LA06-6 'C'	Taylor Brammer	30/04/2012
LA06-8 'C'	Taylor Brammer	30/04/2012

The above landscape plan(s) shall be amended in the following ways:

- The proposed planting size of sub canopy trees is to be increased from tube stock to a minimum 5 litres pot size.
- The bunker proposed adjacent to tree H5-184 *Eucalyptus pilularis* (Blackbutt) is to be deleted.
- The existing retaining wall and cart path is to be shown to be retained within the identified tree protection zone of tree H5-184 *Eucalyptus pilularis* (Blackbutt) located adjacent to the 5<sup>th</sup> green.
- The following trees are to be shown to be retained;

H5-200 Eucalyptus microcorys	H4-96 Harpephyllum caffrum (Kaffir
(Tallowood)	Plum)
H4-181 Eucalyptus sideroxylon (Red	H4-81 Corymbia maculata (Spotted
Ironbark)	Gum)

Prior to the issue of the Stage 1 Construction Certificate, the Principal Certifying Authority shall be satisfied that the landscape plan has been amended as required by this condition.

**Note:** An amended plan, prepared by a landscape architect or qualified landscape designer shall be submitted to the Certifying Authority.

**Reason:** To ensure adequate landscaping of the site

# 43. Amendments to approved Stage 2 tree removal and retention plan/s

Prior to the issue of the Stage 2 Construction Certificate, the Principal Certifying Authority shall be satisfied that the approved tree removal/retention plans, listed below and endorsed with Council's stamp, have been amended in accordance with the requirements of this condition as well as other conditions of this consent:

Plan no.	Drawn by	Dated
LA02'B'	Taylor Brammer	30/04/2012
LA02-15 'C'	Taylor Brammer	30/04/2012
LA02-16 'C'	Taylor Brammer	30/04/2012
LA04 'B'	Taylor Brammer	30/04/2012
LA04-3 'C'	Taylor Brammer	30/04/2012
LA04-4 'C'	Taylor Brammer	30/04/2012
LA04-5 'C'	Taylor Brammer	30/04/2012
LA04-7 'C'	Taylor Brammer	30/04/2012
LA04-8 'C'	Taylor Brammer	30/04/2012
LA04-11 'C'	Taylor Brammer	30/04/2012
LA04-12 'C'	Taylor Brammer	30/04/2012
LA04-14 'C'	Taylor Brammer	30/04/2012
LA04-15 'C'	Taylor Brammer	30/04/2012
LA04-17 'C'	Taylor Brammer	30/04/2012

The above Stage 2 tree removal/retention plan(s) shall be amended in the following ways:

The following trees are to be shown to be retained;

H17-98 Harpulia pendula (Tulip	H17-97 Banksia integrifolia (Coastal
Wood)	Banksia)
H17-91 Syncarpia glomulifera	H17-89 Elaeocarpus reticulatus
(Turpentine)	(Blueberry Ash)
H17-87 Syncarpia glomulifera	H17-86 Podocarpus nerifolius (Brown
(Turpentine)	Pine)
W18 Syzigium leuhmanii (Small-	W19 Elaeocarpus reticulatus
leafed Lillypilly)	(Blueberry Ash)

W21 Eucalyptus paniculata (Grey	W22 Elaeocarpus reticulatus
lronbark)	(Blueberry Ash)
W23 Syncarpia glomulifera	W24 Acmena smithii (Lillypilly)
(Turpentine)	
W25 Syncarpia glomulifera	H17-66 Syncarpia glomulifera
(Turpentine)	(Turpentine)
H17-70 Syncarpia glomulifera	H12-11 Araucaria cunninghamii
(Turpentine)	(Hoop Pine)
H11-1 Cedrus deodar (Himalayan	H11-2 Cupressus torulosa (Bhutan
Cedar)	Cypress)
H11-3 <i>Cupressus torulosa</i> (Bhutan	H11-4 Cupressus torulosa (Bhutan
Cypress)	Cypress)
	H11-6 Cupressus torulosa (Bhutan
H11-5 <i>Cupressus torulosa</i> (Bhutan	
Cypress)	Cypress)
H11-7 <i>Cupressus torulosa</i> (Bhutan	H11-8 Cupressus torulosa (Bhutan
Cypress)	Cypress)
H11-9 Cupressus torulosa (Bhutan	H10-113 Magnolia grandiflora (Bull
Cypress)	Bay Magnolia)
H10-115 Podocarpus elatus (Brown	H10-116 Podocarpus elatus (Brown
Pine)	Pine)
H10-125 Sequoia sempervirens	H10-128 Macadamia tetraphylla
(Californian Redwood)	(Macadamia)
H10-132 Liquidambar styraciflua	H10-139 Araucaria cunninghamii
(Sweet Gum)	(Hoop Pine)
H10-140 Macadamia tetraphylla	H10-141 Agathis robusta (Kauri Pine)
(Macadamia)	
H10-142 Araucaria cunninghamii	H10-143 Agathis robusta (Kauri Pine)
(Hoop Pine)	
H10-144 Araucaria cunninghamii	H10-153 Araucaria cunninghamii
(Hoop Pine)	(Hoop Pine)
H10-156 Agathis robusta (Kauri Pine)	H10-160 Araucaria cunninghamii
	(Hoop Pine)
1116 00 Lanhastaman confertue	
H16-88 Lophostemon confertus	H16-85 Lophostemon confertus
(Brushbox)	(Brushbox)
H9-48 Taxodium distichum (Swamp	H9-47 Metatsequoia glyptostroboides
Cypress)	(Dawn Redwood)
H13-111 Araucaria cunninghamii	H13-110 Araucaria cunninghamii
(Hoop Pine)	(Hoop Pine)
H13-109 Araucaria cunninghamii	H13-108 Araucaria cunninghamii
(Hoop Pine)	(Hoop Pine)
H13-107 Araucaria cunninghamii	H14-211 Nyssa sylvatica (Tupelo)
(Hoop Pine)	
H14-208 Araucaria cunninghamii	H14-205 Nyssa sylvatica (Tupelo)
(Hoop Pine)	
H14-203 Araucaria cunninghamii	H14-213 Araucaria cunninghamii
(Hoop Pine)	(Hoop Pine)
H13-106 Araucaria cunninghamii	H13-105 Araucaria cunninghamii
(Hoop Pine)	(Hoop Pine)

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H13-104 Araucaria cunninghamii	H13-103 Araucaria cunninghamii
(Hoop Pine)	(Hoop Pine)
H13-102 Araucaria cunninghamii	H13-101 Araucaria cunninghamii
(Hoop Pine)	(Hoop Pine)
H14-216 Araucaria cunninghamii	H13-199 Lophostemon confertus
(Hoop Pine)	(Brushbox)
H14-103 Corymbia maculata (Spotted	H14-104 Corymbia maculata (Spotted
Gum)	Gum)
H14-112 Araucaria bidwillii (Bunya	H14-136 Corymbia maculata (Spotted
Pine)	Gum)
H14-52 Jacaranda mimosifolia	H14-53 Unidentified species
(Jacaranda)	
H14-72 Quercus pallustris (Pin Oak)	H14-240 Corymbia maculata (Spotted
	Gum)
H14-241 Corymbia maculata (Spotted	H14-242 Corymbia maculata (Spotted
Gum)	Gum)
H15-107 Agathis robusta (Kauri Pine)	H15-108 Agathis robusta (Kauri Pine)

The following trees are to be shown to be removed;

H9-102 <i>Eucalyptus microcorys</i> (Tallowood)	H10-16 Pinus patula (Mexican Pine)

- The proposed practice green and bunkers is to be amended to be consistent with the Practice Fairway Grading Plan #G.HPF, dated May 2012 to minimise impacts to tree's H2-63 and H2-64.
- The proposed cart path location adjacent to tree W-52 *Eucalyptus saligna* (Sydney Bluegum) is to be amended to be consistent with Figure 1 (Page 6) of the Addendum to the Arboricultural Development Impact Report, dated April 2012 by Urban Forestry Australia.
- The location of the proposed bunker adjacent to tree H10-125 Sequoia sempervirens (Californian Redwood) is to be amended so that it has a minimum setback of 8.0m from H10-125.

Prior to the issue of the Stage 2 Construction Certificate, the Principal Certifying Authority shall be satisfied that the Stage 2 tree removal/retention plan/s has been amended as required by this condition.

**Note:** An amended plan, prepared by a landscape architect or qualified landscape designer shall be submitted to the Certifying Authority.

**Reason:** To ensure adequate landscaping of the site

# 44. Amendments to approved Stage 2 landscape/planting plan

Prior to the issue of the Stage 2 Construction Certificate, the Principal Certifying Authority shall be satisfied that the approved Stage 2 landscape/planting plans, listed below and endorsed with Council's stamp, have been amended in accordance

Plan no.	Drawn by	Dated
LA05 'D'	Taylor Brammer	04/06/2012
LA05-10 'C'	Taylor Brammer	30/04/2012
LA05-11 'C'	Taylor Brammer	30/04/2012
LA05-15 'C'	Taylor Brammer	30/04/2012
LA05-16 'C'	Taylor Brammer	30/04/2012
LA07 'D'	Taylor Brammer	04/06/2012
LA07-3 'C'	Taylor Brammer	30/04/2012
LA07-4 'C'	Taylor Brammer	30/04/2012
LA07-5 'C'	Taylor Brammer	30/04/2012
LA07-7 'C'	Taylor Brammer	30/04/2012
LA07-8 'C'	Taylor Brammer	30/04/2012
LA07-11 'C'	Taylor Brammer	30/04/2012
LA07-12 'C'	Taylor Brammer	30/04/2012
LA07-14 'C'	Taylor Brammer	30/04/2012
LA07-15 'C'	Taylor Brammer	30/04/2012
LA07-17 'C'	Taylor Brammer	30/04/2012

with the requirements of this condition as well as other conditions of this consent:

The above landscape/planting plan(s) shall be amended in the following ways:

- Realign HOLE 13 to accommodate the avenue planting of Araucaria cunninghamii (Hoop Pine).
- The proposed practice green and bunkers is to be amended to be consistent with the Practice Fairway Grading Plan #G.HPF dated May 2012 to minimise impacts to trees H2-63 and H2-64.
- The proposed cart path location adjacent to tree W-52 *Eucalyptus saligna* (Sydney Bluegum) is to be amended to be consistent with Figure 1 (Page 6) of the Addendum to the Arboricultural Development Impact Report, dated April 2012 by Urban Forestry Australia.
- The location of the proposed bunker adjacent to tree H10-125 Sequoia sempervirens (Californian Redwood) is to be amended so that it has a minimum setback of 8.0m from H10-125.
- The proposed planting size of sub canopy trees is to be increased from tube stock to a minimum 5 litres pot size.
- The following trees are to be shown to be retained;

H17-98 Harpulia pendula (Tulip	H17-97 Banksia integrifolia (Coastal
Wood)	Banksia)
H17-91 Syncarpia glomulifera	H17-89 Elaeocarpus reticulatus
(Turpentine)	(Blueberry Ash)
H17-87 Syncarpia glomulifera	H17-86 Podocarpus nerifolius (Brown
(Turpentine)	Pine)
W18 Syzigium leuhmanii (Small-	W19 Elaeocarpus reticulatus
leafed Lillypilly)	(Blueberry Ash)
W21 Eucalyptus paniculata (Grey	W22 Elaeocarpus reticulatus
Ironbark)	(Blueberry Ash)
W23 Syncarpia glomulifera	W24 Acmena smithii (Lillypilly)
(Turpentine)	

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W25 Syncarpia glomulifera	H17-66 Syncarpia glomulifera
(Turpentine)	(Turpentine)
H17-70 Syncarpia glomulifera	H12-11 Araucaria cunninghamii
(Turpentine)	(Hoop Pine)
H11-1 Cedrus deodar (Himalayan	H11-2 Cupressus torulosa (Bhutan
Cedar)	Cypress)
H11-3 Cupressus torulosa (Bhutan	H11-4 Cupressus torulosa (Bhutan
Cypress)	Cypress)
H11-5 Cupressus torulosa (Bhutan	H11-6 Cupressus torulosa (Bhutan
Cypress)	Cypress)
H11-7 Cupressus torulosa (Bhutan	H11-8 Cupressus torulosa (Bhutan
Cypress)	Cypress)
H11-9 Cupressus torulosa (Bhutan	H10-113 Magnolia grandiflora (Bull
Cypress)	Bay Magnolia)
H10-115 Podocarpus elatus (Brown	
Pine)	H10-116 <i>Podocarpus elatus</i> (Brown Pine)
H10-125 Sequoia sempervirens	
(Californian Redwood)	H10-128 Macadamia tetraphylla
H10-132 Liquidambar styraciflua	(Macadamia)
(Sweet Gum)	H10-139 Araucaria cunninghamii
	(Hoop Pine)
H10-140 Macadamia tetraphylla	H10-141 Agathis robusta (Kauri Pine)
(Macadamia)	
H10-142 Araucaria cunninghamii	H10-143 Agathis robusta (Kauri Pine)
(Hoop Pine)	
H10-144 Araucaria cunninghamii	H10-153 Araucaria cunninghamii
(Hoop Pine)	(Hoop Pine)
H10-156 Agathis robusta (Kauri Pine)	H10-160 Araucaria cunninghamii
	(Hoop Pine)
H16-88 Lophostemon confertus	H16-85 Lophostemon confertus
(Brushbox)	(Brushbox)
H9-48 Taxodium distichum (Swamp	H9-47 Metatsequoia glyptostroboides
Cypress)	(Dawn Redwood)
H13-111 Araucaria cunninghamii	H13-110 Araucaria cunninghamii
(Hoop Pine)	(Hoop Pine)
H13-109 Araucaria cunninghamii	H13-108 Araucaria cunninghamii
(Hoop Pine)	(Hoop Pine)
H13-107 Araucaria cunninghamii	H14-211 Nyssa sylvatica (Tupelo)
(Hoop Pine)	(Tupelo)
H14-208 Araucaria cunninghamii	H14-205 Nussa suluction (Turala)
(Hoop Pine)	H14-205 <i>Nyssa sylvatica</i> (Tupelo)
H14-203 Araucaria cunninghamii	H11_213 Arguparia supplies the mil
(Hoop Pine)	H14-213 Araucaria cunninghamii
H13-106 Araucaria cunninghamii	(Hoop Pine)
(Hoop Pine)	H13-105 Araucaria cunninghamii
	(Hoop Pine)
H13-104 <i>Araucaria cunninghamii</i> (Hoop Pine)	H13-103 Araucaria cunninghamii
	(Hoop Pine)
H13-102 Araucaria cunninghamii	H13-101 Araucaria cunninghamii
(Hoop Pine)	(Hoop Pine)
H14-216 Araucaria cunninghamii	H13-199 Lophostemon confertus
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(Hoop Pine)	(Brushbox)
H14-103 Corymbia maculata (Spotted	H14-104 Corymbia maculata (Spotted
Gum)	Gum)
H14-112 Araucaria bidwillii (Bunya	H14-136 Corymbia maculata (Spotted
Pine)	Gum)
H14-52 Jacaranda mimosifolia	H14-53 Unidentified species
(Jacaranda)	
H14-72 Quercus pallustris (Pin Oak)	H14-240 Corymbia maculata (Spotted
	Gum)
H14-241 Corymbia maculata (Spotted	H14-241 Corymbia maculata (Spotted
Gum)	Gum)
H15-107 Agathis robusta (Kauri Pine)	H15-108 Agathis robusta (Kauri Pine)

• The following trees are to be shown to be removed;

H9-102 Eucalyptus microcorys	H10-16 Pinus patula (Mexican Pine)
(Tallowood)	

Prior to the issue of the Stage 2 Construction Certificate, the Principal Certifying Authority shall be satisfied that the landscape/planting plan has been amended as required by this condition.

**Note:** An amended plan, prepared by a landscape architect or qualified landscape designer shall be submitted to the Certifying Authority.

**Reason:** To ensure adequate landscaping of the site

#### 45. Amendments to approved Stage 3 tree removal and retention plan/s

Prior to the issue of the Stage 3 Construction Certificate, the Principal Certifying Authority shall be satisfied that the approved Stage 3 tree removal/retention plans, listed below and endorsed with Council's stamp, have been amended in accordance with the requirements of this condition as well as other conditions of this consent:

Plan no.	Drawn by	Dated
LA02 'B'	Taylor Brammer	30/04/2012
LA02-5 'C'	Taylor Brammer	30/04/2012
LA02-7 'C'	Taylor Brammer	30/04/2012
LA02-8 'C'	Taylor Brammer	30/04/2012
LA02-11 'C'	Taylor Brammer	30/04/2012
LA02-12 'C'	Taylor Brammer	30/04/2012
LA02-13 'C'	Taylor Brammer	30/04/2012
La02-14 'C'	Taylor Brammer	30/04/2012

The above tree retention/removal plan(s) shall be amended in the following ways:

The following trees shall be shown to be retained;

H1 67 Lophostomen confecture	
H1-67 Lophostemon confertus	H1-188 Araucaria cunninghamii
(Brushbox)	(Hoop Pine)
H1-189 Araucaria cunninghamii	H1-190 Araucaria bidwillii (Bunya
(Hoop Pine)	Pine)
H1-191 <i>Araucaria bidwillii</i> (Bunya	H1-192 Araucaria cunninghamii
Pine)	(Hoop Pine)
H1-193 Araucaria cunninghamii	H1-194 Araucaria bidwillii (Bunya
(Hoop Pine)	Pine)
H1-195 <i>Araucaria bidwillii</i> (Bunya	H1-196 Araucaria cunninghamii
Pine)	(Hoop Pine)
H1-197 Araucaria cunninghamii	H1-198 Araucaria bidwillii (Bunya
(Hoop Pine)	Pine)
H1-199 Araucaria cunninghamii	H1-200 Araucaria cunninghamii
(Hoop Pine)	(Hoop Pine)
H1-202 Araucaria bidwillii (Bunya	H1-203 Araucaria cunninghamii
Pine)	(Hoop Pine)
H1-204 Araucaria bidwillii (Bunya	H1-205 <i>Araucaria bidwillii</i> (Bunya
Pine)	Pine)
H1-206 Araucaria cunninghamii	H1-207 Araucaria cunninghamii
(Hoop Pine)	(Hoop Pine)
H1-208 Araucaria cunninghamii	H18-154 Melicope elleryana (Pink
(Hoop Pine)	Euodia)
H18-155 Jacaranda mimosifolia	H18-156 Cedrus deodar (Himalayan
(Jacaranda)	Cedar)
H18-160 Archontophoenix alexandrae	H18-161 Archontophoenix alexandrae
(Alexandra Palm)	(Alexandra Palm)
H18-162 Archontophoenix alexandrae	H18-163 Archontophoenix alexandrae
(Alexandra Palm)	(Alexandra Palm)
H18-164 to170 Archontophoenix	
alexandrae (Alexandra Palm)	
H8-161 Archontophoenix alexandrae	H8-163 Allocasuarina torulosa (Forest
(Alexandra Palm)	Oak)
H8-164 Archontophoenix alexandrae	H8-165 Archontophoenix alexandrae
(Alexandra Palm)	(Alexandra Palm)
H8-169 Podocarpus elatus (Brown	H8-175 Archontophoenix alexandrae
Pine)	(Alexandra Palm)
H8-176 Archontophoenix alexandrae	H8-177 Cyathea cooperi (Straw Tree
(Alexandra Palm)	Fern)
H8-178 Cyathea cooperi (Straw Tree	H8-179 Archontophoenix alexandrae
Fern)	(Alexandra Palm)
H8-180 Archontophoenix alexandrae	H8-181 Archontophoenix alexandrae
(Alexandra Palm)	(Alexandra Palm)
H8-182 Archontophoenix alexandrae	H8-183 Brachychiton acerifolius

• The proposed bunker adjacent to tree H18-155 and H18-156 is to be deleted. Existing ground levels are to be shown to be retained for a minimum 8m and 5.0m around each tree, respectively. • The proposed bunker adjacent to tree H18-159 is to be amended so that it has a minimum 12m setback from H18-159 to maintain its stability. Existing levels and grades are to be maintained within the 12m setback area.

Prior to the issue of the Stage 3 Construction Certificate, the Principal Certifying Authority shall be satisfied that the tree retention/removal plans have been amended as required by this condition.

**Note:** An amended plan, prepared by a landscape architect or qualified landscape designer shall be submitted to the Certifying Authority.

**Reason:** To ensure adequate landscaping of the site

#### 46. Amendments to approved Stage 3 landscape/planting plan

Prior to the issue of the Stage 3 Construction Certificate, the Principal Certifying Authority shall be satisfied that the approved Stage 3 landscape/planting plans, listed below and endorsed with Council's stamp, have been amended in accordance with the requirements of this condition as well as other conditions of this consent:

Plan no.	Drawn by	Dated
LA05'D'	Taylor Brammer	04/06/2012
LA05-8	Taylor Brammer	30/04/2012

The above landscape/planting plan(s) shall be amended in the following ways:

- The proposed planting size of sub canopy trees is to be increased from tube stock to a minimum 5 litres pot size.
- The proposed bunker adjacent to tree H18-155 and H18-156 is to be deleted. Existing ground levels are to be shown to be retained for a minimum 8m and 5.0m around each tree respectively.
- The proposed bunker adjacent to tree H18-159 is to be amended so that it has a minimum 12m setback from H18-159 to maintain its stability. Existing levels and grades are to be maintained within the 12m setback area.

Prior to the issue of the Stage 3 Construction Certificate, the Principal Certifying Authority shall be satisfied that the landscape plan has been amended as required by this condition.

**Note:** An amended plan, prepared by a landscape architect or qualified landscape designer shall be submitted to the Certifying Authority.

**Reason:** To ensure adequate landscaping of the site

#### 47. Amendments to approved tree removal and retention plan/s – Stage 1

Prior to the issue of the stage 1 Construction Certificate, the Principal Certifying Authority shall be satisfied that the approved landscape plans, listed below and endorsed with Council's stamp, have been amended in accordance with the requirements of this condition as well as other conditions of this consent:

Pian no.	Drawn by	Dated	
LA03 Issue B)	Taylor Brammer	30.04.2012	

The above landscape plan(s) shall be amended in the following ways:

The following trees listed below are to be retained:

H5-3 Eucalyptus globoidea (White Mahogany)	Retain
H5-6 Corymbia gummifera (Red Bloodwood)	Retain
H5-8 Eucalyptus globoidea (White Mahogany)	Retain
H5-9 Eucalyptus globoidea (White Mahogany)	Retain
H5-13 Eucalyptus pilularis (Blackbutt)	Retain
H5-18 Corymbia gummifera (Red Bloodwood)	Retain
H5-35 Acacia species Wattle	Retain
H5-68 <i>Lagunaria patersonia</i> (Norfolk Island Hibiscus)	Retain
H5-69 <i>Lagunaria patersonia</i> (Norfolk Island Hibiscus)	Retain

Prior to the issue of the Construction Certificate, the Principal Certifying Authority shall be satisfied that the landscape plan has been amended are required by this condition.

- **Note:** An amended plan, prepared by a landscape architect or qualified landscape designer shall be submitted to the Certifying Authority.
- **Reason:** To ensure adequate landscaping of the site

# 48. Amendments to approved landscape/planting plan – Stage 1

Prior to the issue of the stage 1 Construction Certificate, the Principal Certifying Authority shall be satisfied that the approved landscape plans, listed below and endorsed with Council's stamp, have been amended in accordance with the requirements of this condition as well as other conditions of this consent:

Plan no.	Drawn by	Dated
LA06 (Issue D)	Taylor Brammer	04.06.2012
LA06-04 (Issue C)	Taylor Brammer	30.04.2012

The above landscape plan(s) shall be amended in the following ways:

1. The following trees listed below are to be retained:

H5-3 Eucalyptus globoidea (White Mahogany)	Retain
H5-6 Corymbia gummifera (Red Bloodwood)	Retain
H5-8 Eucalyptus globoidea (White Mahogany)	Retain

H5-9 Eucalyptus globoidea (White Mahogany)	Retain
H5-13 Eucalyptus pilularis (Blackbutt)	Retain
H5-18 Corymbia gummifera (Red Bloodwood)	Retain
H5-35 Acacia species Wattle	Retain

2. The following reference "An ecological burn is recommended to coincide with the tree removal to stimulate native plant growth". is to be removed from plan.

Prior to the issue of the stage 1 Construction Certificate, the Principal Certifying Authority shall be satisfied that the landscape plan has been amended as required by this condition.

**Note:** An amended plan, prepared by a landscape architect or qualified landscape designer shall be submitted to the Certifying Authority.

**Reason:** To ensure adequate landscaping of the site

#### 49. Long service levy

In accordance with Section 109F(i) of the Environmental Planning and Assessment Act a Construction Certificate shall not be issued until any long service levy payable under Section 34 of the Building and Construction Industry Long Service Payments Act 1986 (or where such levy is payable by instalments, the first instalment of the levy) has been paid. Council is authorised to accept payment. Where payment has been made elsewhere, proof of payment is to be provided to Council.

**Reason:** Statutory requirement.

### 50. Builder's indemnity insurance

The applicant, builder, developer or person who does the work on this development, must arrange builder's indemnity insurance and submit the certificate of insurance in accordance with the requirements of Part 6 of the Home Building Act 1989 to the Certifying Authority for endorsement of the plans accompanying the Construction Certificate.

It is the responsibility of the applicant, builder or developer to arrange the builder's indemnity insurance for residential building work over the value of \$20,000. The builder's indemnity insurance does not apply to commercial or industrial building work or to residential work valued at less than \$20,000, nor to work undertaken by persons holding an owner/builder's permit issued by the Department of Fair Trading (unless the owner/builder's property is sold within 7 years of the commencement of the work).

**Reason:** Statutory requirement.

#### CONDITIONS TO BE SATISFIED PRIOR TO THE ISSUE OF THE CONSTRUCTION CERTIFICATE OR PRIOR TO DEMOLITION, EXCAVATION OR CONSTRUCTION (WHICHEVER COMES FIRST):

#### 51. Infrastructure restorations fee

To ensure that damage to Council Property as a result of construction activity is rectified in a timely matter:

- All work or activity taken in furtherance of the development the subject of this approval must be undertaken in a manner to avoid damage to Council Property and must not jeopardise the safety of any person using or occupying the adjacent public areas.
- b) The applicant, builder, developer or any person acting in reliance on this approval shall be responsible for making good any damage to Council Property, and for the removal from Council Property of any waste bin, building materials, sediment, silt, or any other material or article.
- c) The Infrastructure Restoration Fee must be paid to the Council by the applicant prior to both the issue of the Construction Certificate and the commencement of any earthworks or construction.
- d) In consideration of payment of the Infrastructure Restorations Fee, Council will undertake such inspections of Council Property as Council considers necessary and also undertake, on behalf of the applicant, such restoration work to Council Property, if any, that Council considers necessary as a consequence of the development. The provision of such restoration work by the Council does not absolve any person of the responsibilities contained in (a) to (b) above. Restoration work to be undertaken by the Council referred to in this condition is limited to work that can be undertaken by Council at a cost of not more than the Infrastructure Restorations Fee payable pursuant to this condition.
- e) In this condition:

"Council Property" includes any road, footway, footpath paving, kerbing, guttering, crossings, street furniture, seats, letter bins, trees, shrubs, lawns, mounds, bushland, and similar structures or features on any road or public road within the meaning of the Local Government Act 1993 (NSW) or any public place; and

"Infrastructure Restoration Fee" means the Infrastructure Restorations Fee calculated in accordance with the Schedule of Fees & Charges adopted by Council as at the date of payment and the cost of any inspections required by the Council of Council Property associated with this condition.

**Reason**: To maintain public infrastructure.

#### 52. Bush fire risk certification

Bush fire protection measures shall be carried out in accordance with the following bush fire risk assessment, report and certificate, listed below and endorsed with Council's stamp, except where amended by other conditions of this consent:

Document title	Prepared by	Dated
Amended requirements for a Bushfire Protection Assessment for Killara Golf Club	Eco Logical Australia	3 May 2012

Prior to the issue of the construction certificate, the principal certifying authority must be satisfied that the construction certificate is in accordance with the recommendations of the report and certificate as listed above.

#### CONDITIONS TO BE SATISFIED DURING THE DEMOLITION, EXCAVATION AND CONSTRUCTION PHASES:

#### 53. Flowpath of Honeysuckle Creek

During construction works to enlarge the dam capacity flow to Honeysuckle Creek below the dam from golf course run-off should be maintained. Any proposed measure should meet sediment erosion control requirements and must not impact retained trees. The diversion works shall be undertaken in consultation and certified by the project arborist.

**Reason:** To maintain ecological flows downstream of the work site during construction.

#### 54. Prescribed conditions

The applicant shall comply with any relevant prescribed conditions of development consent under clause 98 of the Environmental Planning and Assessment Regulation. For the purposes of section 80A (11) of the Environmental Planning and Assessment Act, the following conditions are prescribed in relation to a development consent for development that involves any building work:

- The work must be carried out in accordance with the requirements of the Building Code of Australia
- In the case of residential building work for which the Home Building Act 1989 requires there to be a contract of insurance in force in accordance with Part 6 of that Act, that such a contract of insurance is in force before any works commence.

**Reason:** Statutory requirement.

**Reason:** To ensure that the development is in accordance with the determination.

#### 55. Hours of work

Demolition, excavation, construction work and deliveries of building material and equipment must not take place outside the hours of 7.00am to 5.00pm Monday to Friday and 8.00am to 12 noon Saturday. No work and no deliveries are to take place on Sundays and public holidays.

Excavation or removal of any materials using machinery of any kind, including compressors and jack hammers, must be limited to between 7.30am and 5.00pm Monday to Friday, with a respite break of 45 minutes between 12 noon 1.00pm.

Where it is necessary for works to occur outside of these hours (ie) placement of concrete for large floor areas on large residential/commercial developments or where building processes require the use of oversized trucks and/or cranes that are restricted by the RTA from travelling during daylight hours to deliver, erect or remove machinery, tower cranes, pre-cast panels, beams, tanks or service equipment to or from the site, approval for such activities will be subject to the issue of an "outside of hours works permit" from Council as well as notification of the surrounding properties likely to be affected by the proposed works.

- **Note:** Failure to obtain a permit to work outside of the approved hours will result in on the spot fines being issued.
- **Reason:** To ensure reasonable standards of amenity for occupants of neighbouring properties.

### 56. Cart path location and construction

To minimise impacts to existing trees being retained, proposed cart paths are to be constructed of a porous material on top of existing grade where they occur within the tree protection zone (TPZ) as defined by AS4970-2009 Protection of trees on development sites. All proposed cart paths are to be located outside of the structural root zone (SRZ) as identified within the Arborist Reports Volumes 2, 3, and 4 by Australian Tree Consultants dated 25 February 2011.

**Reason:** To protect existing trees

#### 57. Irrigation works

To minimise impacts to existing trees, the proposed irrigation lines are to be located outside of the tree protection zone (TPZ) as defined by AS4970-2009 Protection of trees on development sites and as detailed within Volumes 2, 3, and 4 of the Arborist Reports by Australian Tree Consultants dated 25 February 2011. Where irrigation works within the TPZ cannot be avoided the project arborist is to directly supervise all works. Excavation for irrigation works within the TPZ is to be undertaken by hand.

**Reason:** To protect existing trees

#### 58. Ground moisture monitoring

To ensure seasonal ground moisture regimes are maintained within the proximity of Honeysuckle Dam enabling the ongoing health and viability of existing trees during dam development works, it is required that soil moisture testing be undertaken as per the recommendations detailed within the Addendum to the Arboricultural Development Impact Report dated April 2012 by Urban Forestry Australia. Ground moisture monitoring is to be undertaken in conjunction with the project arborist. Documentation (results, recommendations and actions) from the arborist to the Principal Certifying Authority with a copy to Council is required at the following times of testing.

Tree/Location	Time of inspection
All retained trees within a 10.0m setback from the	Initial testing to be
edge of Honeysuckle Dam.	undertaken one
	month prior to the
Soil testing locations is required as per Appendix 4	commencement of
Soil Moisture Testing Plan of Addendum to	dam works (including
arboricultural Impact report dated April 2012, by Urban	draining/transfer of
Forestry Australia.	water).
	At monthly intervals
	during dam
	development works.
	At monthly intervals
	for three months
	after the dam has
	been filled.

**Reason:** To protect existing trees during the construction phase.

#### 59. Removal of fill stock pile beneath tree

The existing stock pile/ soil beneath B8-B22 trees and within the tree protection zones is to be removed to the original soil levels. The removal of the stockpile of soil shall be supervised by an AQF level 5 Arborist.

**Reason:** To protect the environment.

#### 60. Fauna protection

Prior to tree removal being undertaken a qualified ecologist is to inspect/investigate trees. The ecologist is to supervise the relocation of any fauna found within trees in accordance with appropriate licensing requirements.

The qualified ecologist must hold an Animal Ethics Permit from the Department of Industries and Investment and a wildlife licence under section 132C of the National Parks and Wildlife Act 1974. Evidence of engagement of the ecologist and the

required licensing is to be provided to the Principal Certifying Authority & provided to Council's Ecologist.

**Reason**: To ensure protection of fauna species.

### 61. Approved plans to be on site

A copy of all approved and certified plans, specifications and documents incorporating conditions of consent and certification (including the Construction Certificate if required for the work) shall be kept on site at all times during the demolition, excavation and construction phases and must be readily available to any officer of Council or the Principal Certifying Authority.

**Reason:** To ensure that the development is in accordance with the determination.

## 62. Statement of compliance with Australian Standards

The demolition work shall comply with the provisions of Australian Standard AS2601: 2001 The Demolition of Structures. The work plans required by AS2601: 2001 shall be accompanied by a written statement from a suitably qualified person that the proposal contained in the work plan comply with the safety requirements of the Standard. The work plan and the statement of compliance shall be submitted to the satisfaction of the Principal Certifying Authority prior to the commencement of any works.

**Reason:** To ensure compliance with the Australian Standards.

#### 63. Site notice

A site notice shall be erected on the site prior to any work commencing and shall be displayed throughout the works period.

The site notice must:

- be prominently displayed at the boundaries of the site for the purposes of informing the public that unauthorised entry to the site is not permitted
- display project details including, but not limited to the details of the builder, Principal Certifying Authority and structural engineer
- be durable and weatherproof
- display the approved hours of work, the name of the site/project manager, the responsible managing company (if any), its address and 24 hour contact phone number for any inquiries, including construction/noise complaint are to be displayed on the site notice
- be mounted at eye level on the perimeter hoardings/fencing and is to state that unauthorised entry to the site is not permitted

**Reason:** To ensure public safety and public information.

#### 64. Dust control

During excavation, demolition and construction, adequate measures shall be taken to prevent dust from affecting the amenity of the neighbourhood. The following measures must be adopted:

- physical barriers shall be erected at right angles to the prevailing wind direction or shall be placed around or over dust sources to prevent wind or activity from generating dust
- earthworks and scheduling activities shall be managed to coincide with the next stage of development to minimise the amount of time the site is left cut or exposed
- all materials shall be stored or stockpiled at the best locations
- the ground surface should be dampened slightly to prevent dust from becoming airborne but should not be wet to the extent that run-off occurs
- all vehicles carrying spoil or rubble to or from the site shall at all times be covered to prevent the escape of dust
- all equipment wheels shall be washed before exiting the site using manual or automated sprayers and drive-through washing bays
- gates shall be closed between vehicle movements and shall be fitted with shade cloth
- cleaning of footpaths and roadways shall be carried out daily

**Reason:** To protect the environment and amenity of surrounding properties.

### 65 Post-construction dilapidation report

The applicant shall engage a suitably qualified person to prepare a post construction dilapidation report at the completion of each stage of the construction works. This report is to ascertain whether the construction works created any structural damage to adjoining buildings, infrastructure and roads. The report is to be submitted to the Principal Certifying Authority. In ascertaining whether adverse structural damage has occurred to adjoining buildings, infrastructure and roads, the Principal Certifying Authority must:

- compare the post-construction dilapidation report with the pre-construction dilapidation report
- have written confirmation from the relevant authority that there is no adverse structural damage to their infrastructure and roads.

A copy of this report is to be forwarded to Council at the completion of the construction works.

**Reason:** Management of records.

### 66. Further geotechnical input

The geotechnical and hydro-geological works implementation, inspection, testing and monitoring program for the excavation and construction works must be in accordance with the reports by Douglas Partners and GHD. Over the course of the works, a qualified geotechnical/hydrogeological engineer must complete the following:

- further geotechnical investigations and testing recommended in the above report(s) and as determined necessary
- further monitoring and inspection at the hold points recommended in the above report(s) and as determined necessary
- written report(s) including certification(s) of the geotechnical inspection, testing and monitoring programs

**Reason:** To ensure the safety and protection of property.

### 67. Compliance with submitted geotechnical report

A contractor with specialist excavation experience must undertake the excavations for the development and a suitably qualified and consulting geotechnical engineer must oversee excavation.

Geotechnical aspects of the development work, namely:

- appropriate excavation method and vibration control
- the need for any dilapidation survey of any private residences
- support and retention of excavated faces
- hydro-geological considerations

must be undertaken in accordance with the recommendations of the Geotechnical Investigation Report Project No. 71424.00 dated May 2010 prepared by Douglas Partners and the Geotechnical Review: Report for Enlargement of Honeysuckle Creek Dam Storage and New Storage at Bradfield Paddock dated February 2011 prepared by GHD Pty Ltd.

**Reason:** To ensure the safety and protection of property.

#### 68. Use of road or footpath

During excavation, demolition and construction phases, no building materials, plant or the like are to be stored on the road or footpath without written approval being obtained from Council beforehand. The pathway shall be kept in a clean, tidy and safe condition during building operations. Council reserves the right, without notice, to rectify any such breach and to charge the cost against the applicant/owner/builder, as the case may be.

**Reason:** To ensure safety and amenity of the area.

#### 69. Guarding excavations

All excavation, demolition and construction works shall be properly guarded and protected with hoardings or fencing to prevent them from being dangerous to life and property.

Reason: To ensure public safety.

#### 70. Toilet facilities

During excavation, demolition and construction phases, toilet facilities are to be provided, on the work site, at the rate of one toilet for every 20 persons or part of 20 persons employed at the site.

**Reason:** Statutory requirement.

#### 71. Protection of public places

If the work involved in the erection, demolition or construction of the development is likely to cause pedestrian or vehicular traffic in a public place to be obstructed or rendered inconvenient, or building involves the enclosure of a public place, a hoarding or fence must be erected between the work site and the public place.

If necessary, a hoarding is to be erected, sufficient to prevent any substance from, or in connection with, the work falling into the public place.

The work site must be kept lit between sunset and sunrise if it is likely to be hazardous to persons in the public place.

Any hoarding, fence or awning is to be removed when the work has been completed.

**Reason:** To protect public places.

### 72. Recycling of building material (general)

During demolition and construction, the Principal Certifying Authority shall be satisfied that building materials suitable for recycling have been forwarded to an appropriate registered business dealing in recycling of materials. Materials to be recycled must be kept in good order.

Reason: To facilitate recycling of materials.

#### 73. Construction signage

All construction signs must comply with the following requirements:

- are not to cover any mechanical ventilation inlet or outlet vent
- are not illuminated, self-illuminated or flashing at any time
- are located wholly within a property where construction is being undertaken
- refer only to the business(es) undertaking the construction and/or the site at which the construction is being undertaken
- are restricted to one such sign per property
- do not exceed 2.5m<sup>2</sup>
- are removed within 14 days of the completion of all construction works

**Reason:** To ensure compliance with Council's controls regarding signage.

### 74. Road reserve safety

All public footways and roadways fronting and adjacent to the site must be maintained in a safe condition at all times during the course of the development works. Construction materials must not be stored in the road reserve. A safe pedestrian circulation route and a pavement/route free of trip hazards must be maintained at all times on or adjacent to any public access ways fronting the construction site. Where public infrastructure is damaged, repair works must be carried out when and as directed by Council officers. Where pedestrian circulation is diverted on to the roadway or verge areas, clear directional signage and protective barricades must be installed in accordance with AS1742-3 (1996) "Traffic Control Devices for Work on Roads". If pedestrian circulation is not satisfactorily maintained across the site frontage, and action is not taken promptly to rectify the defects, Council may undertake proceedings to stop work.

**Reason:** To ensure safe public footways and roadways during construction.

# 75. Road repairs necessitated by excavation and construction works

It is highly likely that damage will be caused to the roadway at or near the subject site as a result of the construction (or demolition or excavation) works. The applicant, owner and builder (and demolition or excavation contractor as appropriate) will be held responsible for repair of such damage, regardless of the Infrastructure Restorations Fee paid (this fee is to cover wear and tear on Council's wider road network due to heavy vehicle traffic, not actual major damage).

Section 102(1) of the Roads Act states "A person who causes damage to a public road is liable to pay to the appropriate roads authority the cost incurred by that authority in making good the damage."

Council will notify when road repairs are needed, and if they are not carried out within 48 hours, then Council will proceed with the repairs, and will invoice the applicant, owner and relevant contractor for the balance.

Reason: To protect public infrastructure.

#### 76. Services

Where required, the adjustment or inclusion of any new utility service facilities must be carried out by the applicant and in accordance with the requirements of the relevant utility authority. These works shall be at no cost to Council. It is the applicants' full responsibility to make contact with the relevant utility authorities to ascertain the impacts of the proposal upon utility services (including water, phone, gas and the like). Council accepts no responsibility for any matter arising from its approval to this application involving any influence upon utility services provided by another authority.

**Reason:** Provision of utility services.

### 77. Arborist's report

The tree/s to be retained shall be inspected, monitored and treated by a qualified Arborist during and after completion of development works to ensure their long term survival. Regular inspections and documentation from the Arborist to the Principal Certifying Authority are required at the following times or phases of work:

Tree/Location	Time of inspection
All trees to be retained	When development works are being undertaken within the tree protection zone (TPZ) as defined by AS4970-2009- Protection of trees on development sites/ or as specified within Volumes 2, 3 and 4 Arborists Report by Australian Tree Consultants dated 25 February 2011.

**Reason:** To ensure protection of existing trees.

### 78. Canopy/root pruning

Canopy and/or root pruning of the following tree/s which is necessary to accommodate the approved building works shall be undertaken by an experienced AQF3 Arborist/Horticulturist. All pruning works shall be undertaken as specified in Australian Standard 4373-2007 – Pruning of Amenity Trees.

Tree/Location	Tree works
H5-184 Eucalyptus pilularis	Canopy pruning as depicted and specified
(Blackbutt)	within the Addendum to the Arboricultural
Adjacent to Hole 5 green	Development Impact Report dated April 2012
	by Urban Forestry Australia.

**Reason:** To protect the environment.

### 79. Canopy pruning

Canopy pruning of the following tree/s which is necessary to accommodate safety and golf course design shall be undertaken by an experienced AQF5 Arborist/Horticulturist.

All pruning works for trees: H15-79, H15-80 & H5-184 shall be undertaken as specified in accordance with the addendum arborist report prepared by Urban Forestry Australia dated April 2012.

Pruning works for tree H18-159 shall be undertaken in accordance with Appendix 1 of the tree report prepared by John Campbell dated 31<sup>st</sup> May 2012.

Pruning works for H14:245 to be undertaken in accordance with the tree trimming report prepared by Killara Golf Course dated 27<sup>th</sup> April 2012.

Pruning works for H18:158 to be undertaken in accordance with the tree trimming

report prepared by Killara Golf Course dated 28<sup>th</sup> May 2012.

Schedule		
Tree/Location	Tree works	
H2-63 Sydney Blue Gum ( <i>Eucalyptus saligna</i> )	Removal of deadwood greater than 50mm diameters and in accordance with cl.7.2.2 of AS4373.	
H5-184 Blackbutt ( <i>Eucalyptus pilularis</i> )	Crown thinning & minor reduction pruning can be undertaken to the north/northwest side of the crown where it interferes with play. Pruning is to be confined to removal of small branches of no greater than 80mm diameters and consisted with cl.7.2.3 and cl.7.3.2 of AS4373. Removal of live material is not to exceed of the overall crown volume Plate 4.	
H14:245 Blackbutt ( <i>Eucalyptus pilularis</i> )	Selective pruning in accordance with cl.7.2.4 of AS4373 and consisting of trimming as per photo plate within the report.	
H15-72 Smooth-barked Apple ( <i>Angophora costata</i> )	Selective pruning in accordance with cl.7.2.4 of AS4373 and consisting of the removal of the lower north first-order branch identified in Plate 2.	
H15-80 Red Mahogany ( <i>Eucalyptus resinifera</i> )	Selective pruning in accordance with cl.7.2.4 of AS4373 and consisting of the removal of the lower northwest second order branch identified in Plate 3.	
H18-159 Sydney Blue Gum ( <i>Eucalyptus saligna</i> )	Selective pruning in accordance with cl.7.2.4 of AS4373 and consisting of trimming as per plate in Appendix 1.	
H18-158 Sydney Blue Gum ( <i>Eucalyptus saligna</i> )	Selective pruning in accordance with cl.7.2.4 of AS4373 and consisting of trimming as per photo plate within the report.	

**Reason:** To provide safety to Golf Players and Golf Course Design.

### 80. Treatment of tree roots

If tree roots are required to be severed for the purposes of constructing the approved works, they shall be cut cleanly by hand, by an experienced AQF3 Arborist/Horticulturist. All pruning works shall be undertaken as specified in Australian Standard 4373-2007 – Pruning of Amenity Trees.

**Reason:** To protect existing trees.

### 81. Cutting of tree roots

No tree roots of 30mm or greater in diameter located within the specified radius of the trunk/s of the following tree/s shall be severed or injured in the process of any works during the construction period. All pruning works shall be undertaken as specified in Australian Standard 4373-2007 – Pruning of Amenity Trees, by an AQF3 Arborist/Horticulturalist.

Tree/Location	Radius from trunk
All trees to be retained.	Within the tree protection zone
On site or where works are proposed	(TPZ) as defined by AS4970-2009-
within the tree protection zone (TPZ) of Protection of trees on develo	
trees on neighbouring properties.	sites.

**Reason:** To protect existing trees.

#### 82. Approved tree works - STAGE 1 (Holes 2-7)

Approval is given for the following works to be undertaken to trees on the site. The project arborist is to confirm correct identification of the trees to be removed prior to their removal. All trees are to be clearly tagged and identified consistent with the numbering of the submitted arborist/s reports prior to the removal of ANY trees. Trees cannot be removed prior to the issue of the Stage 1 Construction Certificate.

Tree number	Approved tree works
Hole 2	
H1-113 Sapium sebiferum (Chinese Tallowood)	Remove
H1-114 Sapium sebiferum (Chinese Tallowood)	Remove
H1-115 Eucalyptus acaciaformis (Peppermint)	Remove
H1-125 Syncarpia glomulifera (Turpentine)	Remove
H1-126 <i>Metasequoia glyptostroboides</i> (Dawn Redwood)	Remove
H1-127 <i>Metasequoia glyptostroboides</i> (Dawn Redwood)	Remove
H1-128 <i>Archontophoenix cunninghamii</i> (Bangalow Palm)	Remove
H1-119 <i>Metasequoia glyptostroboides</i> (Dawn Redwood)	Remove
H1-120 Eucalyptus paniculata (Grey Ironbark)	Remove
H1-121 Araucaria cunninghamii (Hoop Pine)	Remove
H1-123 Prumnopitys spp (Mt Spurgeon Black Pine)	Remove
H1-124 Araucaria cunninghamii (Hoop Pine)	Remove
H3-25 Eucalyptus microcorys (Tallowood)	Remove
H3-39 Eucalyptus microcorys (Tallowood)	Remove
H3-40 Eucalyptus resinifera (Red Mahogany)	Remove
H3-41 Eucalyptus scoparia (White Gum)	Remove
H3-42 Eucalyptus paniculata (Grey Ironbark)	Remove
H3-44 Callistemon viminalis (Bottlebrush)	Remove
H3-45 Eucalyptus paniculata (Grey Ironbark)	Remove
H19-1 Eucalyptus spp (Eucalypt)	Remove
H19-2 Eucalyptus paniculata (Grey Ironbark)	Remove
H19-3 Lophostemon confertus (Brushbox)	Remove
H19-12 Grevillea robusta (Silky Oak)	Remove
H19-14 Syragus romanzoffianum (Queen Palm)	Remove

Remove
Remove
Remove
F
Remove
Remove

Hole 6	
H4-183 Araucaria bidwillii (Bunya Pine)	Remove
H4-134 Lophostemon confertus (Brushbox)	Remove
H4-123 Lophostemon confertus (Brushbox)	Remove
H4-115 Lophostemon confertus (Brushbox)	Remove
H4-101 Lophostemon confertus (Brushbox)	Remove
H6-182 Corymbia maculata (Spotted Gum)	Remove
H6-180 Eucalyptus sideroxlon (Red Ironbark)	Remove
H6-179 Eucalyptus punctata (Grey Gum)	Remove
H4-41 Eucalyptus crebra (Narrow-leaved Ironbark)	Remove
H4-43 Eucalyptus microcorys (Tallowood)	Remove
H4-47 <i>Eucalyptus punctata</i> (Grey Gum)	Remove
H6-177 Eucalyptus microcorys (Tallowood)	Remove
H6-176 Eucalyptus microcorys (Tallowood)	Remove
H6-175 Eucalyptus microcorys (Tallowood)	Remove
H6-174 Eucalyptus microcorys (Tallowood)	Remove
H6-173 Eucalyptus paniculata (Grey Ironbark)	Remove
H6-172 Eucalyptus microcorys (Tallowood)	Remove
H4-48 Syncarpia glomulifera (Turpentine)	Remove
H4-48A Lophostemon confertus (Brushbox)	Remove
H4-49 Lophostemon confertus (Brushbox)	Remove
H4-49A Lophostemon confertus (Brushbox)	Remove
H4-50 Lophostemon confertus (Brushbox)	Remove
H4-51 Lophostemon confertus (Brushbox)	Remove
H4-52 Lophostemon confertus (Brushbox)	Remove
H6-170 Eucalyptus paniculata (Grey Ironbark)	Remove
Hole 7	
H4-82 Eucalyptus crebra (Narrow-leaved Ironbark)	Remove
H4-83 Corymbia maculata (Spotted Gum)	Remove
H4-84 Eucalyptus microcorys (Tallowood)	Remove
H4-85 Corymbia maculata (Spotted Gum)	Remove
H4-86 Eucalyptus haemastoma (Scribbly Gum)	Remove
H4-87 <i>Eucalyptus scoparia</i> (White Gum)	Remove
H4-88 Eucalyptus paniculata (Grey Ironbark)	Remove
H4-89 Eucalyptus paniculata (Grey Ironbark)	Remove
H4-90 Corymbia maculata (Spotted Gum)	Remove
H4-81 Corymbia maculata (Spotted Gum)	Remove
H7-196 Eucalyptus microcorys (Tallowood)	Remove
H7-194 <i>Corymbia maculata</i> (Spotted Gum)	Remove
H7-191 <i>Corymbia maculata</i> (Spotted Gum)	Remove
H7-189 Eucalyptus microcorys (Tallowood)	Remove
H7-188 Eucalyptus racemosa (Snappy Gum)	Remove
H7-185 Banksia integrifolia (Coastal Banksia)	Remove
H7-183 Banksia integrifolia (Coastal Banksia)	Remove
H7-182 Corymbia maculata (Spotted Gum)	Remove
H7-181 Eucalyptus microcorys (Tallowood)	Remove
H4-95 <i>Eucalyptus sideroxlon</i> (Red Ironbark)	Remove
H7-178 Eucalyptus sideroxylon (Red Ironbark)	Remove
	T tomoto

H7-179 Eucalyptus microcorys (Tallowood)	Remove
H7-117 Melaleuca quinquenervia (Paperbark)	Remove
H7-118 Melaleuca quinquenervia (Paperbark)	Remove
H7-119 Casuarina cunninghamiana (River She Oak)	Remove
H7-120 Casuarina cunninghamiana (River She Oak)	Remove
H7-130 Brachychiton acerifolius (Illawarra Flame Tree)	Remove
H7-135 Jacaranda mimosifolia (Jacaranda)	Remove
H7-136 Jacaranda mimosifolia (Jacaranda)	Remove
H7-140 Jacaranda mimosifolia (Jacaranda)	Remove
H7-142 Stenocarpus sinuatus (Q'Id Firewheel Tree)	Remove
H7-143 Stenocarpus sinuatus (Q'Id Firewheel Tree)	Remove
H7-145 Stenocarpus sinuatus (Q'ld Firewheel Tree)	Remove

Removal or pruning of any other tree on the site is not approved, excluding species exempt under Council's Tree Preservation Order.

**Reason:** To ensure that the development is in accordance with the determination.

### 83. Approved tree works – Stage 1

Approval is given for the following works to be undertaken to trees on the site. All trees are to be clearly tagged and identified consistent with the numbering of the submitted arborist/s reports prior to the removal of any trees. Trees cannot be removed prior to the issue of the stage 1 Construction Certificate.

Tree number	Approved tree works
Proposed Hole 4	
H5-61 <i>Brachychiton rupestris</i> (Bottle Tree)	Remove
H5-62 Melaleuca bracteata (Bracelet Honey Myrtle)	Remove
H5-63 Waterhousea floribunda (Weeping Lilly Pilly)	Remove
H5-64 <i>Melaleuca stypheloides</i> (Prickly-leaved Paperbark)	Remove
H5-65 Callistemon species	Remove
H5-66 Syzygium leuhmannii (Small Leaf Lilly Pilly)	Remove
H5-67 Melaleuca linarifolia (Snow in Summer)	Remove
H5-70 Toona ciliate (Red Cedar)	Remove
H5-71 Brachychiton rupestris (Flame Tree)	Remove
H5-72 Eucalyptus microcorys (Tallowood)	Remove
H5-73 Melaleuca linarifolia (Snow in Summer)	Remove
H5-74 Eucalyptus scoparia (Willowgum)	Remove
H5-77 Acacia decurrens	Remove
H5-78 Eucalyptus species	Remove
H5-79 Eucalyptus scoparia (Willowgum)	Remove
H5-80 Melaleuca leucadendra (White Paperbark)	Remove
H5-81 Melaleuca bracteata (Bracelet Honey Myrtle)	Remove

H5-82 Melaleuca bracteata (Bracelet Honey Myrtle)	Remove
H5-83 Melaleuca leucadendra (White Paperbark)	Remove
H5-84 <i>Melaleuca linarifolia</i> (Snow in Summer)	Remove
H5-85 Camellia sasanqua (Christmas Camellia)	Remove
H5-86 <i>Melaleuca linarifolia</i> (Snow in Summer)	Remove
H5-87 Melaleuca bracteata (Bracelet Honey Myrtle)	Remove
H5-88 Melaleuca leucadendra (White Paperbark)	Remove
H5-89 Eucalyptus globoidea (White Mahogany)	Remove
H5-90 Melaleuca bracteata (Bracelet Honey Myrtle)	Remove
H5-91 Eucalyptus globoidea (White Mahogany)	Remove
H5-96 Eucalyptus globoidea (White Mahogany)	Remove
H5-97 <i>Corymbia gummifera</i> (Red Bloodwood)	Remove
H5-98 Eucalyptus globoidea (White Mahogany)	Remove
H5-99 <i>Eucalyptus globoidea</i> (White Mahogany)	Remove
H5-104 Allocasuarina littoralis (Black She-oak)	Remove
H5-105 Allocasuarina littoralis (Black She-oak)	Remove
H5-106 Allocasuarina littoralis (Black She-oak)	Remove
H5-107 Corymbia gummifera (Red Bloodwood)	Remove
H5-108 Eucalyptus species	Remove
H5-109 Allocasuarina littoralis (Black She-oak)	Remove
H5-110 Allocasuarina littoralis (Black She-oak)	Remove
H5-111 Allocasuarina littoralis (Black She-oak)	Remove
H5-112 Eucalyptus globoidea (White Mahogany)	Remove
H5-113 <i>Corymbia gummifera</i> (Red Bloodwood)	Remove
H5-114 Eucalyptus species	Remove
H5-115 Allocasuarina littoralis (Black She-oak)	Remove
H5-116 <i>Eucalyptus globoidea</i> (White Mahogany)	Remove
H5-117 Corymbia gummifera (Red Bloodwood)	Remove
H5-118 Allocasuarina littoralis (Black She-oak)	Remove
H5-119 <i>Allocasuarina littoralis</i> (Black She-oak)	Remove
H5-120 Allocasuarina littoralis (Black She-oak)	Remove
H5-121 Angophora crassifolia (Narrow-leaved	Remove
Apple)	
H5-122 Eucalyptus globoidea (White Mahogany)	Remove
H5-123 Eucalyptus globoidea (White Mahogany)	Remove
H5-124 Melaleuca quinquenervia	Remove
H5-125 Allocasuarina littoralis (Black She-oak)	Remove
H5-127 Allocasuarina littoralis (Black She-oak)	Remove
H5-128 Corymbia gummifera (Red Bloodwood)	Remove
H5-129 Eucalyptus species	Remove
H5-130 Eucalyptus globoidea (White Mahogany)	Remove
H5-131 Melaleuca quinquenervia (Broad-leaved Paperbark)	Remove
H5-132 Melaleuca quinquenervia (Broad-leaved	Remove

Paperbark)	Î
H5-133 <i>Melaleuca quinquenervia</i> (Broad-leaved Paperbark)	Remove
H5-134 Eucalyptus microcorys (Tallowood)	Remove
H5-135 Eucalyptus scoparia (Willow Gum)	Remove
H5-136 Eucalyptus globoidea (White Mahogany)	Remove
H5-137 <i>Eucalyptus scoparia</i> (Willow Gum)	Remove
H5-138 Corymbia maculate (Spotted Gum)	Remove
H5-139 Eucalyptus microcorys (Tallowood)	Remove
H5-140 Eucalyptus microcorys (Tallowood)	Remove
H5-141 Eucalyptus sideroxylon (Mungga Ironbark)	Remove
H5-143 Eucalyptus paniculata (Grey Ironbark)	Remove
H5-144 Eucalyptus pilularis (Blackbutt)	Remove
H5-145 Casuarina cunninghamiana (River Oak)	Remove
H5-146 Eucalyptus species	Remove
H5-148 Casuarina cunninghamiana (River Oak)	Remove
H6-77 Eucalyptus microcorys (Tallowood)	Remove
H6-78 Eucalyptus microcorys (Tallowood)	Remove
H6-79 Eucalyptus microcorys (Tallowood)	Remove
H6-80 Eucalyptus microcorys (Tallowood)	Remove
H6-81 Casuarina glauca (Swamp Oak)	Remove
H6-82 Eucalyptus paniculata (Grey Ironbark)	Remove
H6-83 Eucalyptus microcorys (Tallowood)	Remove
H6-85 Corymbia maculate (Spotted Gum)	Remove
H6-86 Eucalyptus paniculata (Grey Ironbark)	Remove
H6-87 Eucalyptus microcorys (Tallowood)	Remove
H6-90 Eucalyptus punctata (Grey Gum)	Remove
H6-91 <i>Eucalyptus saligna</i> (Sydney Blue Gum)	Remove
H6-92 Eucalyptus crebra (Narrow-leaved Ironbark)	Remove
H6-93 Casuarina glauca (Swamp Oak)	Remove
H6-95 Eucalyptus punctata (Grey Gum)	Remove
H6-96 Waterhousea floribunda (Weeping Lilly Pilly)	Remove
H6-97 Tristaniopsis laurina (Watergum)	Remove
H6-98 Casuarina cunninghamiana (River Oak)	Remove
H6-100 Pittosporum undulatum (Sweet	Remove
Pittosporum)	
H6-101 Pittosporum undulatum (Sweet	Remove
Pittosporum)	Demons
H6-102 Corymbia gummifera (Red Bloodwood)	Remove
H6-103 Corymbia gummifera (Red Bloodwood)	Remove
H6-104 Eucalyptus resinifera (Red Mahogany)	Remove
H6-105 Corymbia gummifera (Red Bloodwood)	Remove
H6-106 Allocasuarina littoralis (Black She-oak)	Remove
H6-107 Corymbia gummifera (Red Bloodwood)	Remove

H6-108 Corymbia gummifera (Red Bloodwood)	Remove
H6-109 Allocasuarina littoralis (Black She-oak)	Remove
H6-110 Allocasuarina littoralis (Black She-oak)	Remove
H6-111 Allocasuarina littoralis (Black She-oak)	Remove
H6-112 Allocasuarina littoralis (Black She-oak)	Remove
H6-113 Corymbia gummifera (Red Bloodwood)	Remove
H6-114 Corymbia gummifera (Red Bloodwood)	Remove
H6-115 Corymbia gummifera (Red Bloodwood)	Remove
H6-116 Allocasuarina littoralis (Black She-oak)	Remove
H6-117 Allocasuarina littoralis (Black She-oak)	Remove
H6-118 Allocasuarina littoralis (Black She-oak)	Remove
H6-119 Allocasuarina littoralis (Black She-oak)	Remove
H6-120 Corymbia gummifera (Red Bloodwood)	Remove
H6-121 Eucalyptus globoidea (White Mahogany)	Remove
H6-122 Allocasuarina littoralis (Black She-oak)	Remove
H6-123 Corymbia gummifera (Red Bloodwood)	Remove
H6-124 Allocasuarina littoralis (Black She-oak)	Remove
H6-125 Corymbia gummifera (Red Bloodwood)	Remove
H6-147 Melaleuca linarifolia (Snow in Summer)	Remove

Removal or pruning of any other tree on the site is not approved, excluding species exempt under Council's Tree Preservation Order.

**Reason:** To ensure that the development is in accordance with the determination.

### 84. Approved tree works - Stage 2 (Practice area, Proposed dam, Holes 9-14, Spare hole, Holes 16 & 17)

Approval is given for the following works to be undertaken to trees on the site. The project arborist is to confirm correct identification of the trees being removed prior to their removal. All trees are to be clearly tagged and identified consistent with the numbering of the submitted arborist/s reports prior to the removal of any trees. Trees cannot be removed prior to the issue of the Stage 2 Construction Certificate.

Tree	Approved tree works
Practice Area	
H2-62 Spatodea campanulata (African Tulip Tree)	Remove
H2-61 Pittosporum rhombifolium (Queensland Laurel)	Remove
H2-60 Magnolia grandiflora (Bull Bay Magnolia)	Remove
H2-59 Liquidambar styraciflua (Sweet Gum)	Remove
H2-58 Jacaranda mimosifolia (Jacaranda)	Remove
H2-57 Ginkgo biloba (Maidenhair Tree)	Remove
H2-56 Glochidion ferdinandii (Cheese Tree)	Remove
H2-55 Cedrus deodar (Himalayan Cedar)	Remove
H2-54 Ulmus glabra 'Lutescens' (Golden Elm)	Remove

H2-53 Cedrus deodar (Himalayan Cedar)	Remove
H2-52 Citharexylem quadrangulare (Fiddlewood)	Remove
H2-51 Nyssa sylvatica (Tupelo)	Remove
H2-50 Citharexylem quadrangulare (Fiddlewood)	
H2-49 Dortyphora sassafrass (Sassafrass)	Remove
H2-48 Stenocarpus sinuatus (Q'Id Firewheel Tree)	Remove
H2-47 Liquidambar styraciflua (Sweet Gum)	Remove
H2-46 Cedrus deodar (Himalayan Cedar)	Remove
H2-45 Nyssa sylvatica (Tupelo)	Remove
H2-44 <i>Pinus patula</i> (Mexican Pine)	Remove
H2-43 <i>Pinus patula</i> (Mexican Pine)	Remove
H2-42 <i>Pinus patula</i> (Mexican Pine)	Remove
H2-41 <i>Pinus patula</i> (Mexican Pine)	Remove
H2-40 Pinus patula (Mexican Pine)	Remove
H2-40 Pinus patula (Mexican Pine)	Remove
H2-39 Pinus patula (Mexican Pine)	Remove
H2-38 Pinus patula (Mexican Pine)	Remove
H2-37 Pinus patula (Mexican Pine)	Remove
H2-36 Pinus patula (Mexican Pine)	Remove
H2-35 Pinus patula (Mexican Pine)	Remove
H2-34 Pinus patula (Mexican Pine)	Remove
H1-162 Lophostemon confertus (Brushbox)	Remove
H1-161 Lophostemon confertus (Brushbox)	Remove
H1-160 Liquidambar styraciflua (Sweet Gum)	Remove
H18-187 Unidentified tree species	Remove
H18-198 Cedrus deodar (Himalayan Cedar)	Remove
H2-33 Pinus patula (Mexican Pine)	Remove
H2-32 Pinus patula (Mexican Pine)	Remove
H2-31 Pinus patula (Mexican Pine)	Remove
H2-30 Pinus patula (Mexican Pine)	Remove
H2-29 Pinus patula (Mexican Pine)	Remove
H2-28 Pinus patula (Mexican Pine)	Remove
H2-27 Pinus patula (Mexican Pine)	Remove
H2-26 Pinus patula (Mexican Pine)	Remove
H2-25 Pinus patula (Mexican Pine)	Remove
H2-24 Pinus patula (Mexican Pine)	Remove
H2-23 Pinus patula (Mexican Pine)	Remove
H2-22 Pinus patula (Mexican Pine)	Remove
H2-21 Pinus patula (Mexican Pine)	Remove
H2-20 Pinus patula (Mexican Pine)	Remove
H2-19 Pinus patula (Mexican Pine)	Remove
H2-18 Pinus patula (Mexican Pine)	Remove
H2-17 Pinus patula (Mexican Pine)	Remove
H2-16 Pinus patula (Mexican Pine)	Remove
H2-15 Pinus patula (Mexican Pine)	Remove
H2-14 Pinus patula (Mexican Pine)	Remove
H2-13 Pinus patula (Mexican Pine)	Remove
H2-12 Pinus patula (Mexican Pine)	Remove
H2-10 <i>Pinus patula</i> (Mexican Pine)	Remove
	Remove

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LIQ O Disus natula (Mavison Dina)	Remove
H2-9 Pinus patula (Mexican Pine)	Remove
H2-8 Pinus patula (Mexican Pine)	Remove
H2-7 Pinus patula (Mexican Pine)	Remove
H2-6 Pinus patula (Mexican Pine)	
H2-5 Pinus patula (Mexican Pine)	Remove
H2-4 Pinus patula (Mexican Pine)	Remove
H2-3 Pinus patula (Mexican Pine)	Remove
H2-2 Pinus patula (Mexican Pine)	Remove
H2-1 Pinus patula (Mexican Pine)	Remove
H1-153 Liquidambar styraciflua (Sweet Gum)	Remove
H1-154 Liquidambar styraciflua (Sweet Gum)	Remove
H1-155 Syzigium paniculatum (Magenta Lillypilly)	Remove
H1-156 Liquidambar styraciflua (Sweet Gum)	Remove
H1-157 Lophostemon confertus (Brushbox)	Remove
H1-158 Lophostemon confertus (Brushbox)	Remove
H1-159 Liquidambar styraciflua (Sweet Gum)	Remove
H1-151 Syzigium moorii (Rose Apple)	Remove
H1-150 Agathis robusta (Kauri Pine)	Remove
H1-149 Syzigium paniculatum (Magenta Lillypilly)	Remove
H1-147 Eucalyptus botryoides (Bangalay)	Remove
H1-145 Eucalyptus botryoides (Bangalay)	Remove
H1-144 Agathis robusta (Kauri Pine)	Remove
H1-143 Tristaniopsis laurina (Water Gum)	Remove
H1-140 Agathis robusta (Kauri Pine)	Remove
H1-139 Metasequoia glyptostroboides (Dawn Redwood)	Remove
H1-138 Tristaniopsis laurina (Water Gum)	Remove
H1-137 Agathis robusta (Kauri Pine)	Remove
H1-136 Agathis robusta (Kauri Pine)	Remove
H1-135 Agathis robusta (Kauri Pine)	Remove
H1-134 Tristaniopsis laurina (Water Gum)	Remove
H1-133 Lophostemon confertus (Brushbox)	Remove
H1-132 Metasequoia glyptostroboides (Dawn Redwood)	Remove
H1-131 Metasequoia glyptostroboides (Dawn Redwood)	Remove
H3-9 Quercus palustris (Pin Oak)	Remove
H3-10 Quercus palustris (Pin Oak)	Remove
H3-14 Eucalyptus crebra (Narrow-leaved Ironbark)	Remove
H3-121 Afrocarpus falcatus (Yellowwood)	Remove
H3-122 Afrocarpus falcatus (Yellowwood)	Remove
H3-132 Nyssa sylvatica (Tupelo)	Remove
H2-76 Agathis robusta (Kauri Pine)	Remove
H2-77 Brachychiton discolor (Lacebark)	Remove
H2-78 Jacaranda mimosifolia (Jacaranda)	Remove
H2-79 Brachychiton discolor (Lacebark)	Remove
H2-80 Cryptocarya glaucescens (Native Laurel)	Remove
H2-81 <i>Glochidion ferdinandii</i> (Cheese Tree)	Remove
H2-82 Brachychiton acerifolius (Illawarra Flame Tree)	Remove
H2-83 Brachychiton acerifolius (Illawarra Flame Tree)	Remove
H2-84 Darlingia darlingtonia (Brown Silky Oak)	Remove

H2-85 Cryptocarya glaucescens (Native Laurel)	Demous
H2-86 Brachychiton x hybridum (Jerilderie Red)	Remove
	Remove
H2-87 Castonospermum australe (Black Bean)	Remove
H2-88 Magnolia grandiflora (Bull Bay Magnolia)	Remove
H2-89 Magnolia grandiflora (Bull Bay Magnolia)	Remove
H2-90 Castonspermum australe (Black Bean)	Remove
H2-91 Quercus pallustris (Pin Oak)	Remove
H3-1 Agathis robusta (Kauri Pine)	Remove
H3-2 Darlingia darlingiana (Silky Oak)	Remove
H3-3 Agathis robusta (Kauri Pine)	Remove
H3-4 Brachychiton acerifolius (Illawarra Flame tree)	Remove
H3-5 Brachychiton acerifolius (Illawarra Flame tree)	Remove
H3-6 Eucalyptus microcorys (Tallowood)	Remove
H3-7 Agathis robusta (Kauri Pine)	Remove
H3-8 Castanospermum australe (Blackbean)	Remove
H3-133 Casuarina cunninghamiana (River She Oak)	Remove
H3-136 Sapium sebiferum (Chinese Tallowood)	Remove
H3-140 Jacaranda mimosifolia (Jacaranda)	Remove
H3-141 Cupressus torulosa (Bhutan Cypress)	Remove
H3-142 Cupressus torulosa (Bhutan Cypress)	Remove
H3-143 Cupressus torulosa (Bhutan Cypress)	Remove
H3-144 Cupressus torulosa (Bhutan Cypress)	Remove
H2-65 Cedrus deodar (Himalayan Cedar)	Remove
H2-66 Cedrus deodar (Himalayan Cedar)	Remove
H2-67 Jacaranda mimosifolia (Jacaranda)	Remove
H2-68 Cedrus deodar (Himalayan Cedar)	Remove
H2-69 Stenocarpus sinuatus (Q'Id Firewheel Tree)	Remove
H2-70 Sapium sebiferum (Chinese Tallowwood)	Remove
H2-71 Sapium sebiferum (Chinese Tallowwood)	Remove
H2-72 Araucaria cunninghamii (Hoop Pine)	Remove
H2-73 Brachychiton rupestris (Bottle Tree)	Transplant
H2-74 Agathis robusta (Kauri Pine)	Remove
H18-198 Cedrus deodar (Himalayan Cedar)	Remove
H3-15 Eucalyptus crebra (Narrow-leaved Ironbark)	Remove
H3-95 Castanospermum australe (Blackbean)	Remove
H3-96 Agathis robusta (Kauri Pine)	Remove
H3-97 Agathis robusta (Kauri Pine)	Remove
H3-98 Agathis robusta (Kauri Pine)	Remove
H3-99 Agathis robusta (Kauri Pine)	Remove
H3-100 Agathis robusta (Kauri Pine)	Remove
Hole 9	
H9-184 Metasequoia glyptostroboides (Dawn Redwood)	Remove
H9-183 Metasequoia glyptostroboides (Dawn Redwood)	Remove
H9-182 <i>Metasequoia glyptostroboides</i> (Dawn Redwood)	Remove
H9-181 Metasequoia glyptostroboides (Dawn Redwood)	
H9-180 Metasequoia glyptostroboides (Dawn Redwood)	Remove
H9-179 Metasequoia glyptostroboides (Dawn Redwood)	Remove
H9-177 Ficus microcarpa var. hillii (Hills Fig)	Remove
no ni nous microcarpa var. mim (mins riy)	Remove

H9-176 Nyssa sylvatica (Tupelo)	Remove
H9-175 Ficus microcarpa var. hillii (Hills Fig)	Remove
H9-174 <i>Citharexlem quadrangulare</i> (Fiddlewood)	Remove
H16-96 Ficus microcarpa var. hillii (Hills Fig)	Remove
H16-97 <i>Photinia x fraseri</i> (Photinia)	Remove
H16-98 Ficus microcarpa var. hillii (Hills Fig)	Remove
H9-172 Syzigium moorii (Rose Apple)	Remove
H16-99 Carnarvifolia aralifolia (Red Oak)	Remove
H16-100 Brachychiton acerifolius (Illawarra Flame Tree)	Remove
H9-169 Darlingia darlingiana (Brown Silky Oak)	Remove
H9-168 Acmena smithii (Lillypilly)	Remove
H9-166 Syzigium moorii (Rose Apple)	Remove
H9-165 <i>Photinia x fraseri</i> (Photinia)	Remove
H16-101 Unidentified species	Remove
H16-102 <i>Diploglottis australis</i> (Native Tamarind)	Remove
H16-103 <i>Macadamia integrifolia</i> (Macadamia)	Remove
H9-22 <i>Metasequoia glyptostroboides</i> (Dawn Redwood)	Remove
H9-27 Agathis robusta (Kauri Pine)	Remove
H9-32 Agathis robusta (Kauri Pine)	Remove
	Remove
H9-33 Agathis robusta (Kauri Pine) H9-34 Agathis robusta (Kauri Pine)	Remove
H9-45 Taxodium distichum (Swamp Cypress)	Remove
	· · · · · · · · · · · · · · · · · · ·
H9-46 Metasequoia glyptostroboides (Dawn Redwood)	Remove
H9-49 Metasequoia glyptostroboides (Dawn Redwood)	Remove
H9-50 Taxodium distichum (Swamp Cypress)	Remove
H9-162 Metasequoia glyptostroboides (Dawn Redwood)	Remove
H9-161 Metasequoia glyptostroboides (Dawn Redwood)	Remove
H9-160 Metasequoia glyptostroboides (Dawn Redwood)	Remove
H9-159 Flindersia australis (Crows Ash)	Remove
H9-158 Flindersia australis (Crows Ash)	Remove
H9-157 Flindersia australis (Crows Ash)	Remove
H16-104 Metasequoia glyptostroboides (Dawn Redwood)	Remove
H16-105 Metasequoia glyptostroboides (Dawn Redwood)	Remove
H16-106 Metasequoia glyptostroboides (Dawn Redwood)	Remove
H16-107 Ficus microcarpa var. hillii (Hills Fig)	Remove
H16-108 Ficus microcarpa var. hillii (Hills Fig)	Remove
H16-109 Agathis robusta (Kauri Pine)	Remove
H9-49 Metasequoia glyptostroboides (Dawn Redwood)	Remove
H9-51 Metasequoia glyptostroboides (Dawn Redwood)	Remove
H9-52 Metasequoia glyptostroboides (Dawn Redwood)	Remove
H9-53 Metasequoia glyptostroboides (Dawn Redwood)	Remove
H9-58 Metasequoia glyptostroboides (Dawn Redwood)	Remove
H16-110 Flindersia australis (Crows Ash)	Remove
H16-111 Flindersia australis (Crows Ash)	Remove
H16-112 Agathis robusta (Kauri Pine)	Remove
H9-155 Agathis robusta (Kauri Pine)	Remove
H9-153 Flindersia australis (Crows Ash)	Remove
H9-151 Agathis robusta (Kauri Pine)	Remove

H9-150 Flindersia australis (Crows Ash)	Pomovo
H9-149 <i>Flindersia australis</i> (Crows Ash)	Remove
	Remove
H16-113 Agathis robusta (Kauri Pine)	Remove
H16-114 Agathis robusta (Kauri Pine)	Remove
H9-148 Flindersia australis (Crows Ash)	Remove
H9-147 Flindersia australis (Crows Ash)	Remove
H9-146 Flindersia australis (Crows Ash)	Remove
H9-145 Flindersia australis (Crows Ash)	Remove
H9-144 Araucaria cunninghamiana (Hoop Pine)	Remove
H9-143 Araucaria cunninghamiana (Hoop Pine)	Remove
H9-142 Leptospermum petersonii (Lemon scented tea	Remove
tree)	
H9-141 Acmena smithii (Lillypilly)	Remove
H9-140 Araucaria cunninghamiana (Hoop Pine)	Remove
H9-139 Araucaria cunninghamiana (Hoop Pine)	Remove
H9-138 Araucaria cunninghamiana (Hoop Pine)	Remove
H16-115 Ficus microcarpa var. hillii (Hills Fig)	Remove
H16-116 Ficus microcarpa var. hillii (Hills Fig)	Remove
H16-117 Flindersia australis (Crows Ash)	Remove
H16-118 Ficus microcarpa var. hillii (Hills Fig)	Remove
H16-119 Ficus microcarpa var. hillii (Hills Fig)	Remove
H16-120 Ficus microcarpa var. hillii (Hills Fig)	Remove
H16-121 Ficus microcarpa var. hillii (Hills Fig)	Remove
H9-65 Taxodium distichum (Swamp Cypress)	Remove
H9-66 Taxodium distichum (Swamp Cypress)	Remove
H9-80 Araucaria cunninghamiana (Hoop Pine)	Remove
H9-99 Pinus radiata (Monterey Pine)	Remove
H9-102 Eucalyptus microcorys (Tallowood)	Remove
H9-113 Eucalyptus pilularis (Blackbutt)	Remove
H9-124 Brachychiton acerifolius (Illawarra Flame Tree)	Remove
H9-125 Syzigium oleosum (Blue Lillypilly)	Remove
H9-126 Acmena smithii (Lillypilly)	Remove
H9-127 Acmena smithii (Lillypilly)	Remove
H9-128 Acmena smithii (Lillypilly)	Remove
H9-130 Taxodium distichum (Swamp Cypress)	Remove
H9-131 Taxodium distichum (Swamp Cypress)	Remove
H9-132 <i>Taxodium distichum</i> (Swamp Cypress)	Remove
H16-128 Metasequoia glyptostroboides (Dawn Redwood)	Remove
H16-129 <i>Melaleuca stypheloides</i> (Prickly Paperbark)	Remove
H16-131 <i>Grevillea robusta</i> (Silky Oak)	Remove
H16-132 Cedrus deodar (Himalyan Cedar)	Remove
Hole 10	T CHIOYO
H10-200 Eucalyptus microcorys (Tallowood)	Remove
H10-201 Agathis robusta (Kauri Pine)	Remove
H10-202 Agathis robusta (Kauri Pine)	Remove
H16-1 <i>Diploglottis australis</i> (Native Tamarind)	Remove
H16-4 <i>Diploglottis australis</i> (Native Tamarind)	
	Remove
H10-195 Fraxinus augustifolia 'Raywood' (Claret Ash)	Remove

H10-196 Fraxinus augustifolia 'Raywood' (Claret Ash)	Remove
H10-187 Acmena smithii (Lillypilly)	Remove
	Remove
H10-186 Acmena smithii (Lillypilly)	Remove
H10-185 Acmena smithii (Lillypilly)	
H10-184 Quercus pallustris (Pin Oak)	Remove
H10-183 Podocarpus elatus (Brown Pine)	Remove
H10-182 Melaleuca quinquenervia (Broad-leaved	Remove
Paperbark)	
H10-180 Stenocarpus sinuatus (Q'ld Firewheel Tree)	Remove
H10-179 Agathis robusta (Kauri Pine)	Remove
H10-176 Jacaranda mimosifolia (Jacaranda)	Remove
H10-174 Liquidambar styraciflua (Sweet Gum)	Remove
H10-173 Liquidambar styraciflua (Sweet Gum)	Remove
H10-165 Liquidambar styraciflua (Sweet Gum)	Remove
H10-164 Liquidambar styraciflua (Sweet Gum)	Remove
H10-152 Liquidambar styraciflua (Sweet Gum)	Remove
H10-151 Liquidambar styraciflua (Sweet Gum)	Remove
H10-147 Liquidambar styraciflua (Sweet Gum)	Remove
H10-145 Liquidambar styraciflua (Sweet Gum)	Remove
H10-204 Leptospermum petersonii (Lemon scented tea	Remove
tree)	
H10-205 Agathis robusta (Kauri Pine)	Remove
H10-206 Agathis robusta (Kauri Pine)	Remove
H10-207 Agathis robusta (Kauri Pine)	Remove
H10-208 Fraxinus augustifolia 'Raywood' (Claret Ash)	Remove
H10-209 Lagunaria patersonia (Norfolk Island Hibiscus)	Remove
H10-210 Lagunaria patersonia (Norfolk Island Hibiscus)	Remove
H10-211 Lagunaria patersonia (Norfolk Island Hibiscus)	Remove
H10-111 Flindersia bennettiana (Bennets Ash)	Remove
H10-110 Flindersia bennettiana (Bennets Ash)	Remove
H10-109 <i>Pinus patula</i> (Mexican Pine)	Remove
H10-108 Pinus patula (Mexican Pine)	Remove
H10-102 Liquidambar styraciflua (Sweet Gum)	Remove
	Remove
H10-100 Backhousia citriodora (Lemon Scented Myrtle)	Remove
H10-99 Brachychiton acerifolius (Illawarra Flame Tree)	Remove
H10-98 Jacaranda mimosifolia (Jacaranda)	
H10-97 Olea europea ssp Africana (African Olive)	Remove
H10-96 Jacaranda mimosifolia (Jacaranda)	Remove
H10-95 Jacaranda mimosifolia (Jacaranda)	Remove
H10-94 Brachychiton x hybridum (Jerilderee Red)	Remove
H10-93 Chamaecyparis obtusa 'Crippsii' (Hinoki Cypress)	Remove
H10-92 Juniperous chinensis (Chinese Juniper)	Remove
H10-91 Cedrus deodar (Himalayan Cedar)	Remove
Hole 11	
H10-70 Pinus radiata (Monterey Pine)	Remove
H10-71 Pinus radiata (Monterey Pine)	Remove
H10-73 Pinus radiata (Monterey Pine)	Remove
H10-76 Pinus radiata (Monterey Pine)	Remove

H10-77 Pinus radiata (Monterey Pine)	Remove
H10-86 Pinus radiata (Monterey Pine)	Remove
H10-87 Pinus radiata (Monterey Pine)	Remove
H10-90 Pinus radiata (Monterey Pine)	Remove
H11-34 Pinus caribaea (Cuban Pine)	Remove
H13-44 Taxodium distichum (Swamp Cypress)	Remove
H11-26 Acmena smithii (Lillypilly)	Remove
H11-25 Toona ciliata (Australian Red Cedar)	Remove
H11-24 Lophostemon confertus (Brushbox)	Remove
H11-23 Brachychiton acerifolius (Illawarra Flame Tree)	Remove
H11-22 Brachychiton acerifolius (Illawarra Flame Tree)	Remove
H11-21 Brachychiton acerifolius (Illawarra Flame Tree)	Remove
H11-20 Brachychiton acerifolius (Illawarra Flame Tree)	Remove
H11-19 Pinus radiata (Monterey Pine)	Remove
H11-18 Brachychiton acerifolius (Illawarra Flame Tree)	Remove
H11-17 Brachychiton acerifolius (Illawarra Flame Tree)	Remove
H11-11 Ficus obliqua (Small-leafed Fig)	Remove
H11-10 Cupressus torulosa (Bhutan Cypress)	Remove
Hole 12	Remove
H12-14 Agathis robusta (Kauri Pine)	Remove
H12-15 Agathis robusta (Kauri Pine)	Remove
H12-23 Agathis robusta (Kauri Pine)	Remove
H12-31 Agathis robusta (Kauri Pine)	Remove
H12-32 Agathis robusta (Kauri Pine)	Remove
H12-33 Agathis robusta (Kauri Pine)	Remove
H12-38 Agathis robusta (Kauri Pine)	Remove
H12-41 Agathis robusta (Kauri Pine)	Remove
H12-124 Araucaria cunninghamii (Hoop Pine)	Remove
H12-125 Grevillea robusta (Silky Oak)	Remove
H12-126 Cupressus spp (Cypress)	Remove
H12-127 Pinus radiata (Monterey Pine)	Remove
H12-128 Ficus microcarpa var. hillii (Hills Fig)	Remove
H12-129 Araucaria cunninghamii (Hoop Pine)	Remove
H12-130 Ficus microcarpa var. hillii (Hills Fig)	Remove
H12-131 Ficus microcarpa var. hillii (Hills Fig)	Remove
H12-132 Araucaria cunninghamii (Hoop Pine)	
H12-133 Lophostemon confertus (Brushbox)	Remove
H12-134 Brachychiton discolor (Lacebark)	Remove
H12-135 Araucaria cunninghamii (Hoop Pine)	Remove
H12-136 Casuarina glauca (Swamp She Oak)	Remove
H11-13 Casuarina cunninghamiana (Swamp She Oak)	Remove
H11-14 Brachychiton acerifolius (Illawarra Flame Tree)	Remove
H11-15 Brachychiton acerifolius (Illawarra Flame Tree)	Remove
	Remove
H11-16 Ficus microcarpa var. hillii (Hills Fig)	Remove
H11-27 Araucaria cunninghamii (Hoop Pine)	Remove
H11-28 Grevillea robusta (Silky Oak)	Remove
H11-30 Waterhousea floribunda (Weeping Lillypilly)	Remove
H11-31 Araucaria cunninghamii (Hoop Pine)	Remove

U11 22 Figure microsorne ver billij (Uille Fig)	Pomovo.
H11-32 Ficus microcarpa var. hillii (Hills Fig) H12-122 Waterhousea floribunda (Weeping Lillypilly)	Remove Remove
	Remove
H12-121 Unidentified tree species	Remove
H12-119 Waterhousea floribunda (Weeping Lillypilly)	Remove
H12-118 Ficus microcarpa var. hillii (Hills Fig) H13-30 Pinus caribaea (Cuban Pine)	
	Remove Remove
H13-29 Agathis robusta (Kauri Pine) H13-27 Araucaria cunninghamii (Hoop Pine)	Remove
H13-25 Araucaria cunninghamii (Hoop Pine)	Remove
H13-33 Unidentified tree species	Remove
H13-24 Araucaria cunninghamii (Hoop Pine)	Remove
H12-113 Araucaria cunninghamii (Hoop Pine)	Remove
H12-112 Stenocarpus sinuatus (Q'ld Firewheel Tree)	Remove
H12-111 Araucaria cunninghamii (Hoop Pine)	Remove
H12-109 Agathis robusta (Kauri Pine)	Remove
H12-108 Agathis robusta (Kauri Pine)	Remove
H12-49 Agathis robusta (Kauri Pine)	Remove
H12-50 Agathis robusta (Kauri Pine)	Remove
H13-21 Araucaria cunninghamii (Hoop Pine)	Remove
H13-20 <i>Metasequoia glyptostroboides</i> (Dawn Redwood)	Remove
H13-19 Araucaria cunninghamii (Hoop Pine)	Remove
H13-18 Agathis robusta (Kauri Pine)	Remove
H12-46 Agathis robusta (Kauri Pine)	Remove
H12-114 Araucaria cunninghamii (Hoop Pine)	Remove
H12-115 Ceratopetalum apetalum (Coachwood)	Remove
H12-107 Ceratopetalum apetalum (Coachwood)	Remove
H12-105 Araucaria cunninghamii (Hoop Pine)	Remove
H12-104 Ficus microcarpa var. hillii (Hills Fig)	Remove
H12-103 Araucaria cunninghamii (Hoop Pine)	Remove
H13-17 Unidentified tree species	Remove
H13-16 Araucaria cunninghamii (Hoop Pine)	Remove
H13-15 Araucaria cunninghamii (Hoop Pine)	Remove
H13-14 Araucaria cunninghamii (Hoop Pine)	Remove
H13-12 Metasequoia glyptostroboides (Dawn Redwood)	Remove
H13-11 Archontophoenix alexandrae (Alexandra Palm)	Remove
H13-10 Syragus romanzoffianum (Queen Palm)	Remove
H13-9 Syragus romanzoffianum (Queen Palm)	Remove
H13-8 Howea forsteriana (Kentia Palm)	Remove
H13-7 Syragus romanzoffianum (Queen Palm)	Remove
H13-6 Archontophoenix alexandrae (Alexandra Palm)	Remove
H13-5 Syragus romanzoffianum (Queen Palm)	Remove
H12-102 Archontophoenix cunninghamiana (Bangalow	Remove
Palm) H12-101 Metasequoia glyptostroboides (Dawn Redwood)	Remove
H12-100 Archontophoenix cunninghamiana (Bangalow	Remove
Palm) H12-99 Syragus romanzoffianum (Queen Palm)	Remove
	I VGIIIOAG

Hole 13	
H13-148 Melaleuca quinquenervia (Broad-leafed Paperbark)	Remove
H13-147 Callistemon viminalis (Weeping Bottlebrush)	Demonst
H13-146 Eucalyptus pilularis (Blackbutt)	Remove
	Remove
H13-145 Ficus microcarpa var. hillii (Hills Fig)	Remove
H13-144 <i>Melaleuca quinquenervia</i> (Broad-leafed Paperbark)	Remove
H13-143 Agathis robusta (Kauri Pine)	Remove
H13-142 <i>Melaleuca quinquenervia</i> (Broad-leafed Paperbark)	Remove
H13-141 Melaleuca styphelloides (Prickly Paperbark)	Remove
H13-140 <i>Melaleuca quinquenervia</i> (Broad-leafed Paperbark)	Remove
H13-139 Melaleuca styphelloides (Prickly Paperbark)	Remove
H13-138 Melaleuca quinquenervia (Broad-leafed	Remove
Paperbark)	
H13-137 <i>Melaleuca quinquenervia</i> (Broad-leafed Paperbark)	Remove
H13-136 Melaleuca styphelloides (Prickly Paperbark)	Remove
113-135 Melaleuca styphelloides (Prickly Paperbark)	Remove
H13-134 Melaleuca styphelloides (Prickly Paperbark)	Remove
H13-133 Melaleuca styphelloides (Prickly Paperbark)	Remove
H13-132 Melaleuca quinquenervia (Broad-leafed	Remove
Paperbark)	
H13-131 <i>Melaleuca quinquenervia</i> (Broad-leafed Paperbark)	Remove
H13-130 Melaleuca styphelloides (Prickly Paperbark)	Remove
H13-179 Geissois benthamiana (Red Carbeen)	Remove
H13-178 Syzigium ingens (Southern Satinash)	Remove
113-174 Syzigium ingens (Southern Satinash)	Remove
113-173 Dysoxylum mollisimum (Red Bean)	Remove
113-172 Acmena smithii (Lillypilly)	Remove
H13-171 Syzigium ingens (Southern Satinash)	Remove
H13-170 Brachychiton rupestris (Bottle Tree)	Transplant
H13-163 Ficus microcarpa var. 'Hillii' (Hill's Fig)	Remove
H13-158 <i>Melaleuca quinquenervia</i> (Broad-leafed Paperbark)	Remove
113-152 Eucalyptus pilularis (Blackbutt)	Remove
113-151 Melaleuca bracteata ((Black Tea Tree)	Remove
113-150 Melaleuca bracteata ((Black Tea Tree)	Remove
113-129 Araucaria columnaris (Cook's Pine)	Remove
113-128 Araucaria columnaris (Cook's Pine)	Remove
113-127 Araucaria columnaris (Cook's Pine)	Remove
113-126 Melaleuca quinquenervia (Broad-leafed Paperbark)	Remove
113-125 Araucaria columnaris (Cook's Pine)	Remove
113-124 Araucaria columnaris (Cook's Pine)	Remove

H13-123 <i>Melaleuca quinquenervia</i> (Broad-leafed Paperbark)	Remove
H13-122 Melaleuca styphelloides (Prickly Paperbark)	Remove
H13-121 Melaleuca styphelloides (Prickly Paperbark)	Remove
H13-120 <i>Melaleuca guinguenervia</i> (Broad-leafed	Remove
Paperbark)	
H13-119 Melaleuca quinquenervia (Broad-leafed	Remove
Paperbark)	T CITIOVC
H13-118 Melaleuca styphelloides (Prickly Paperbark)	Remove
H13-117 <i>Melaleuca styphelloides</i> (Prickly Paperbark)	Remove
H13-116 <i>Melaleuca quinquenervia</i> (Broad-leafed	Remove
Paperbark)	
H13-115 Melaleuca quinquenervia (Broad-leafed	Remove
Paperbark)	
H13-114 Melaleuca quinquenervia (Broad-leafed	Remove
Paperbark)	
H13-113 Melaleuca quinquenervia (Broad-leafed	Remove
Paperbark)	
H13-112 Melaleuca quinquenervia (Broad-leafed	Remove
Paperbark)	
H14-163 Melaleuca quinquenervia (Broad-leafed	Remove
Paperbark)	
H14-169 <i>Melaleuca quinquenervia</i> (Broad-leafed	Remove
Paperbark)	
H14-173 Melaleuca styphelloides (Prickly Paperbark)	Remove
H14-174 Melaleuca quinquenervia (Broad-leafed	Remove
Paperbark)	
H14-175 Melaleuca styphelloides (Prickly Paperbark)	Remove
H14-176 Melaleuca styphelloides (Prickly Paperbark)	Remove
H14-177 Araucaria columnaris (Cook's Pine)	Remove
H14-178 Melaleuca guinguenervia (Broad-leafed	Remove
Paperbark)	
H14-183 Casuarina cunninghamiana (River She Oak)	Remove
H14-185 Melaleuca styphelloides (Prickly Paperbark)	Remove
H14-186 Melaleuca styphelloides (Prickly Paperbark)	Remove
H14-187 Melaleuca styphelloides (Prickly Paperbark)	Remove
H14-189 Casuarina cunninghamiana (River She Oak)	Remove
H14-192 <i>Melaleuca styphelloides</i> (Prickly Paperbark)	Remove
H14-194 Araucaria columnaris (Cook's Pine)	Remove
H14-197 Araucaria cunninghamiana (Hoop Pine)	Remove
H14-209 Fraxinus augustifolia 'Raywood' (Claret Ash)	Remove
H11-33 Acmena smithii (Lillypilly)	Remove
H13-34 Acmena smithii (Lillypilly)	Remove
H13-35 Acmena smithii (Lillypilly)	Remove
H13-36 Syzigium paniculatum (Magenta Lilly)	Remove
H13-38 <i>Pinus caribaea</i> (Cuban Pine)	Remove
H13-46 Taxodium distichum (Swamp Cypress)	Remove
H13-49 Syzigium ingens (Southern satinash)	Remove
H13-50 Syzigium paniculatum (Magenta Lilly)	Remove

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H13-53 Liquidambar styraciflua (Sweet Gum)	Demous
H13-54 Liquidambar styraciflua (Sweet Gum)	Remove
H13-55 Lagunaria patersonii (Norfolk Island Hibiscus)	Remove
H13-56 Melaleuca quinquenervia (Braod-leafed	Remove
Paperbark)	Remove
H13-61 Melaleuca stypheloides (Prickly Paperbark)	Demous
H14-214 <i>Fraxinus augustifolia</i> 'Raywood' (Claret Ash)	Remove
H14-218 Melaleuca quinquenervia (Broad-leafed	Remove
Paperbark)	Remove
H10-48 Melaleuca quinquenervia (Broad-leafed	Demovie
Paperbark)	Remove
H10-50 Magnolia grandiflora (Bull Bay Magnolia)	Remove
H10-44 Podocarpus elatus (Brown Pine)	
H13-86 Cupressus sempervirens (Mediterranean	Remove
Cypress)	Remove
H13-87 Lophostemon confertus (Brushbox)	Demous
H10-47 Melaleuca quinquenervia (Broad-leafed	Remove
Paperbark)	Remove
H10-46 Melaleuca quinquenervia (Broad-leafed	Remove
Paperbark)	Remove
H10-45 Melaleuca quinquenervia (Broad-leafed	Remove
Paperbark)	Remove
H10-42 Melaleuca quinquenervia (Broad-leafed	Remove
Paperbark)	Remove
H10-43 Podocarpus elatus (Brown Pine)	Remove
H10-41 Podocarpus elatus (Brown Pine)	Remove
H10-40 Podocarpus elatus (Brown Pine)	Remove
H10-39 <i>Podocarpus elatus</i> (Brown Pine)	Remove
H10-34 <i>Dyloxylum fraserianum</i> (Rosewood)	Remove
H13-88 Araucaria cunninghamii (Hoop Pine)	Remove
H13-89 Araucaria cunninghamii (Hoop Pine)	Remove
H13-90 Araucaria cunninghamii (Hoop Pine)	Remove
H13-94 Araucaria cunninghamii (Hoop Pine)	Remove
H13-95 <i>Brachychiton discolor</i> (Lacebark)	Remove
Hole 14	Keniove
H14-233 Brachychiton populneus (Kurrajong)	Remove
H13-96 Brachychiton discolor (Lacebark)	Remove
H13-97 Araucaria cunninghamii (Hoop Pine)	
H14-232 Casuarina cunninghamiana (River She Oak)	Remove
H14-231 Casuarina cunninghamiana (River She Oak)	Remove
H14-230 Casuarina cunninghamiana (River She Oak)	Remove
H14-229 Casuarina cunninghamiana (River She Oak)	Remove
H14-228 <i>Melaleuca quinquenervia</i> (Broad-leafed	Remove
Paperbark)	Remove
H14-227 Casuarina cunninghamiana (River She Oak)	Domouro
H14-226 Casuarina cunninghamiana (River She Oak)	Remove
H14-225 <i>Melaleuca quinquenervia</i> (River Sne Oak)	Remove
Paperbark)	Remove
H14-224 Casuarina cunninghamiana (River She Oak)	Bomouro
(River She Oak)	Remove

.

H14-222 Melaleuca quinquenervia (Broad-leafed	Remove
Paperbark)	
H14-221 Casuarina cunninghamiana (River She Oak)	Remove
H14-220 Melaleuca quinquenervia (Broad-leafed	Remove
Paperbark)	
H14-219 Cupressus torulosa (Bhutan Cypress)	Remove
H14-217 Araucaria cunninghamii (Hoop Pine)	Remove
H13-100 Araucaria cunninghamii (Hoop Pine)	Remove
H13-99 Casuarina cunninghamiana (River She Oak)	Remove
H13-98 Casuarina cunninghamiana (River She Oak)	Remove
H14-210 Fraxinus augustifolia 'Raywood' (Claret Ash)	Remove
H14-206 Sapium sebiferum (Chinese Tallow)	Remove
H14-201 Robinia pseudoacacia 'Frisia' (Golden Robinia)	Remove
H14-200 Lagunaria patersonia (Norfolk Island Hibiscus)	Remove
H14-199 Lagunaria patersonia (Norfolk Island Hibiscus)	Remove
H14-170 Lagunaria patersonia (Norfolk Island Hibiscus)	Remove
H14-91 Quercus palustris (Pin Oak)	Remove
H14-95 Sapium sebiferum (Chinese Tallow)	Remove
H14-88 Podocarpus elatus (Brown Pine)	Remove
H14-87 Argyodendron actinophyllum (Black Booyong)	Remove
Hole 15	
H10-13 Stenocarpus sinuatus (Q'ld Firewheel Tree)	Remove
H10-14 Brachychiton x hybridum (Jerilderie Red)	Remove
H10-15 Stenocarpus sinuatus (Q'ld Firewheel Tree)	Remove
H10-16 Pinus patula (Mexican Pine)	Remove
H10-17 Stenocarpus sinuatus (Q'Id Firewheel Tree)	Remove
H10-19 Pinus radiata (Monterey Pine)	Remove
H10-22 Liquidambar styraciflua (Sweet Gum)	Remove
H15-35 Macadamia integrifolia (Macadamia)	Remove
H15-34 Stenocarpus sinuatus (Q'Id Firewheel Tree)	Remove
H15-33 Eucalyptus microcorys (Tallowwood)	Remove
H15-32 Acacia binervia (Coastal Myall)	Remove
H15-31 Syzigium moorii (Rose Apple)	Remove
H15-27 Buckinghamia celsissima (Ivory Curl tree)	Remove
H15-25 Buckinghamia celsissima (Ivory Curl tree)	Remove
H15-24 Buckinghamia celsissima (Ivory Curl tree)	Remove
H15-23 Stenocarpus sinuatus (Q'Id Firewheel Tree)	Remove
H15-22 Stenocarpus sinuatus (Q'Id Firewheel Tree)	Remove
H15-21 Agathis robusta (Kauri Pine)	Remove
H14-6 Ulmus parvifolia (Chinese Elm)	Remove
H14-8 Ulmus parvifolia (Chinese Elm)	Remove
H14-8 Olinus parvilolla (Chillese Elin) H15-20 Agonis flexuosa (Willow Myrtle)	Remove
	Remove
H15-30 Buckinghamia celsissima (Ivory Curl tree)	Remove
H15-36 Harpulia pendula (Tulip Wood)	
H15-43 Syzigium leuhmanii (Small-leafed Lillypilly)	Remove
H15-50 Lagunaria patersonia (Norfolk Island Hibiscus)	Remove
H15-79 Eucalyptus globoides (White Mahogany)	Remove
H15-84 Araucaria cunninghamii (Hoop Pine)	Remove

H15-88 Magnolia grandiflora (Bull Bay Magnolia)	Demous
H15-95 Agathis robusta (Kauri Pine)	Remove
H15-100 Nyssa sylvatica (Tupelo)	Remove
	Remove
H15-101 Harpulia pendula (Tulip Wood)	Remove
H15-136 Pinus radiata (Monterey Pine)	Remove
H14-16 Araucaria cunninghamii (Hoop Pine)	Remove
H14-17 Araucaria cunninghamii (Hoop Pine)	Remove
H14-18 Araucaria cunninghamii (Hoop Pine)	Remove
H14-19 Araucaria cunninghamii (Hoop Pine)	Remove
H14-20 Araucaria cunninghamii (Hoop Pine)	Remove
H14-21 Araucaria cunninghamii (Hoop Pine)	Remove
H14-22 Araucaria cunninghamii (Hoop Pine)	Remove
H14-23 Casuarina cunninghamiana (River She Oak)	Remove
H14-24 Araucaria cunninghamii (Hoop Pine)	Remove
H14-25 Casuarina cunninghamiana (River She Oak)	Remove
H14-26 Casuarina cunninghamiana (River She Oak)	Remove
H14-27 Araucaria cunninghamii (Hoop Pine)	Remove
H14-28 Casuarina cunninghamiana (River She Oak)	Remove
H14-29 Casuarina cunninghamiana (River She Oak)	Remove
H14-30 Casuarina cunninghamiana (River She Oak)	Remove
H14-31 Araucaria cunninghamii (Hoop Pine)	Remove
H14-32 Casuarina cunninghamiana (River She Oak)	Remove
H14-33 Casuarina cunninghamiana (River She Oak)	Remove
H14-34 Araucaria cunninghamii (Hoop Pine)	Remove
H14-35 Casuarina cunninghamiana (River She Oak)	Remove
H14-36 Araucaria cunninghamii (Hoop Pine)	Remove
H14-37 Casuarina cunninghamiana (River She Oak)	Remove
H14-38 Casuarina cunninghamiana (River She Oak)	Remove
H14-39 Araucaria cunninghamii (Hoop Pine)	Remove
H14-40 Casuarina cunninghamiana (River She Oak)	Remove
H14-41 Agathis robusta (Kauri Pine)	Remove
H14-42 Casuarina cunninghamiana (River She Oak)	Remove
H14-43 Casuarina cunninghamiana (River She Oak)	Remove
H14-44 Casuarina cunninghamiana (River She Oak)	Remove
H15-162 Jacaranda mimosifolia (Jacaranda)	Remove
H15-18 Araucaria cunninghamii (Hoop Pine)	Remove
H15-13 Lophostemon confertus (Brushbox)	Remove
H15-12 Araucaria cunninghamii (Hoop Pine)	Remove
H15-11 Araucaria cunninghamii (Hoop Pine)	Remove
H15-10 Macadamia integrifolia (Macadamia)	Remove
H15-9 Casuarina cunninghamiana (River She Oak)	Remove
H15-8 Casuarina cunninghamiana (River She Oak)	Remove
H15-7 Casuarina cunninghamiana (River She Oak)	Remove
H15-6 Casuarina cunninghamiana (River She Oak)	Remove
H15-5 Casuarina cunninghamiana (River She Oak)	Remove
H15-4 Casuarina cunninghamiana (River She Oak)	
H15-3 Casuarina cunninghamiana (River She Oak)	Remove
H14-45 Casuarina cunninghamiana (River She Oak)	Remove
(River She Oak)	Remove
1111 A Converting summinghomions (Diver She Oak)	Remove
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H14-46 Casuarina cunninghamiana (River She Oak)	Remove
H14-51 Acer negundo (Box Elder)	Remove
H14-65 Pinus radiata (Monterey Pine)	
H14-66 Pinus radiata (Monterey Pine)	Remove
H14-67 Pinus radiata (Monterey Pine)	Remove
H14-69 Nyssa sylvatica (Tupelo)	Remove
H14-70 Sapium sebiferum (Chinese Tallow)	Remove
H14-71 Nyssa sylvatica (Tupelo)	Remove
H14-73 Pinus radiata (Monterey Pine)	Remove
H14-74 Pinus radiata (Monterey Pine)	Remove
H14-89 Argyodendron actinophyllum (Black Booyong)	Remove
Hole 16	
H16-10 Toona ciliata (Australian Red Cedar)	Remove
H16-10A Toona ciliata (Australian Red Cedar)	Remove
H16-11 Pinus radiata (Monterey Pine)	Remove
H16-14 Pinus radiata (Monterey Pine)	Remove
H16-17 Pinus radiata (Monterey Pine)	Remove
H16-18 Pinus radiata (Monterey Pine)	Remove
H16-23 Liquidambar formosana (Chinese Liquidambar)	Remove
H16-25 Melaleuca quinquenervia (Broad-leafed	Remove
Paperbark)	
H16-27 Metasequoia glyptostroboides (Dawn Redwood)	Remove
H16-39 Melaleuca quinquenervia (Broad-leafed	Remove
Paperbark)	
H16-40 Casuarina cunninghamiana (River She Oak)	Remove
H16-41 Metasequoia glyptostroboides (Dawn Redwood)	Remove
H16-58 Araucaria columnaris (Cook's Pine)	Remove
H16-60 Araucaria cunninghamii (Hoop Pine)	Remove
H16-61 Araucaria cunninghamii (Hoop Pine)	Remove
H16-63 Araucaria hetrophylla (Norfolk Island Pine)	Remove
H16-64 Araucaria hetrophylla (Norfolk Island Pine)	Remove
H16-89 Melaleuca stypheloides (Prickly Paperbark)	Remove
H16-92 Melaleuca stypheloides (Prickly Paperbark)	Remove
Spare Hole	
H14-190 Quercus palustris (Pin Oak)	Remove
H14-182 Lagunaria patersonii (Norfolk Island Hibiscus)	Remove
H14-181 Robinia pseudoacacia 'Frisia' (Golden Robinia)	Remove
H14-180 Lagunaria patersonii (Norfolk Island Hibiscus)	Remove
H14-179 Lagunaria patersonii (Norfolk Island Hibiscus)	Remove
H14-171 Robinia pseudoacacia 'Frisia' (Golden Robinia)	Remove
H14-177 Lagunaria patersonii (Norfolk Island Hibiscus)	Remove
H14-166 Robinia pseudoacacia 'Frisia' (Golden Robinia)	Remove
H14-165 Lagunaria patersonii (Norfolk Island Hibiscus)	Remove
H14-165 Lagunana patersonn (Nonok Island Hibiscus) H14-161 Casuarina cunninghamiana (River She Oak)	Remove
	Remove
H14-160 Casuarina cunninghamiana (River She Oak)	Remove
H14-159 Lophostemon confertus (Q'ld Brushbox)	
H14-158 Lophostemon confertus (Q'ld Brushbox)	Remove
H14-153 Melaleuca stypheloides (Prickly Paperbark)	Remove

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Domoura
Remove

Paperbark)	
H10-56 Podocarpus elatus (Brown Pine)	Remove
H10-57 Agathis robusta (Kauri Pine)	Remove
H10-58 Magnolia grandiflora (Bull Bay Magnolia)	Remove
H10-59 Agathis robusta (Kauri Pine)	Remove
	Remove
H10-60 Metasequoia glyptostroboides (Dawn Redwood)	Remove
H10-61 Mettsequoia glyptostroboides (Dawn Redwood)	Remove
H10-62 Metasequoia glyptostroboides (Dawn Redwood)	
H10-63 Metasequoia glyptostroboides (Dawn Redwood)	Remove Remove
H10-64 Metasequoia glyptostroboides (Dawn Redwood)	
H10-65 Metasequoia glyptostroboides (Dawn Redwood)	Remove
H10-65 Metasequoia glyptostroboides (Dawn Redwood)	Remove
H10-66 Metasequoia glyptostroboides (Dawn Redwood)	Remove
H10-67 Metasequoia glyptostroboides (Dawn Redwood)	Remove
H13-65 Metasequoia glyptostroboides (Dawn Redwood)	Remove
H13-66 Metasequoia glyptostroboides (Dawn Redwood)	Remove
H13-67 Metasequoia glyptostroboides (Dawn Redwood)	Remove
H13-68 Agathis robusta (Kauri Pine)	Remove
H13-69 Agathis robusta (Kauri Pine)	Remove
H13-71 Agathis robusta (Kauri Pine)	Remove
H13-72 Agathis robusta (Kauri Pine)	Remove
H13-73 Syragus romanzoffianum (Queen Palm)	Remove
H13-74 Syragus romanzoffianum (Queen Palm)	Remove
H13-75 Syragus romanzoffianum (Queen Palm)	Remove
H13-76 Agathis robusta (Kauri Pine)	Remove
H13-77 Agathis robusta (Kauri Pine)	Remove
H13-78 Agathis robusta (Kauri Pine)	Remove
H13-79 Melaleuca quinquenervia (Broad-leafed	Remove
Paperbark)	
H13-80 Melaleuca quinquenervia (Broad-leafed	Remove
Paperbark)	
H13-81 Unidentified species	Remove
H13-82 Afrocarpus falcatus (Outeniqua Yellowwood)	Remove
H13-83 Afrocarpus falcatus (Outeniqua Yellowwood)	Remove
H13-84 Magnolia grandiflora (Bull Bay Magnolia)	Remove
H13-85 Brachychiton acerifolius (Illawarra Flame Tree)	Remove
Hole 17	
H17-101 Podocarpus nerifolius (Brown Pine)	Remove
H17-82 Prumnopitys ladei (Mt Spurgeon Pine)	Remove
H17-81 Unidentified species	Remove
H17-80 Litsea leefeana (Brown Bolly Gum)	Remove
H17-77 Cupressus torulosa (Bhutan Cypress)	Remove
H17-95 Carnarvifolia araliifolia (Red Oak)	Remove
H17-73 Lophostemon confertus (Brushbox)	Remove
H17-68 Lophostemon confertus (Brushbox)	Remove
H17-71 Syncarpia glomulifera (Turpentine)	Remove
H17-69 Lophostemon confertus (Brushbox)	Remove
H17-65 Syncarpia glomulifera (Turpentine)	Remove

H17-64 Grevillea robusta (Silky Oak)	Remove
H17-57 Syncarpia glomulifera(Turpentine)	Remove

Removal or pruning of any other tree on the site is not approved, excluding species exempt under Council's Tree Preservation Order.

**Reason:** To ensure that the development is in accordance with the determination.

## 85. Approved tree works - Stage 3

Approval is given for the following works to be undertaken to trees on the site:

Tree	Approved tree works
Hole 1	
H1-129 – Eucalyptus scoparia (Wallangarra White Gum)	Remove
TC-52 Melaleuca quinquenervia (Broad-leafed Paperbark)	Remove
H1-9 Allocasuarina littoralis (Black She Oak)	Remove
H1-10 Allocasuarina littoralis (Black She Oak)	Remove
H1-11 <i>Melaleuca quinquenervia</i> (Broad-leafed Paperbark)	Remove
H1-185 Acmena smithii (Lillypilly)	Remove
H1-184 Syzigium paniculatum (Magenta Lillypilly)	Remove
H1-183 Acmena smithii (Lillypilly)	Remove
H1-182 Syzigium moorii (Rose Apple)	Remove
H1-181 Syzigium paniculatum (Magenta Lillypilly)	Remove
H1-180 Stenocarpus sinuatus (Q'Id Firewheel Tree)	Remove
H1-179 Syzigium moorii (Rose Apple)	Remove
H1-178 Syzigium paniculatum (Magenta Lillypilly)	Remove
H1-177 Stenocarpus sinuatus (Q'ld Firewheel Tree)	Remove
H1-176 Stenocarpus sinuatus (Q'ld Firewheel Tree)	Remove
H1-175 Syzigium paniculatum (Magenta Lillypilly)	Remove
H1-174 Harpulia pendula (Tulip Wood)	Remove
H1-173 Agathis robusta (Kauri Pine)	Remove
H1-172 Agathis robusta (Kauri Pine)	Remove
H1-171 Stenocarpus sinuatus (Q'ld Firewheel Tree)	Remove
H1-169 Sapium sebiferum (Chinese Tallow)	Remove
H1-168 Syzigium paniculatum (Magenta Lillypilly)	Remove
H1-167 Agathis robusta (Kauri Pine)	Remove
H1-166 Jacaranda mimosifolia (Jacaranda)	Remove
H1-165 Stenocarpus sinuatus (Q'ld Firewheel Tree)	Remove
H1-164 Syzigium paniculatum (Magenta Lillypilly)	Remove
H1-163 Syzigium paniculatum (Magenta Lillypilly)	Remove
H1-68 Tristaniopsis laurina (Water Gum)	Remove
H1-69 Tristaniopsis laurina (Water Gum)	Remove
H1-71 Tristaniopsis laurina (Water Gum)	Remove
H1-72 Tristaniopsis laurina (Water Gum)	Remove

H1-73 Eucalyptus paniculata (Grey Ironbark)	Remove
H1-80 Acmena smithii (Lillypilly)	
	Remove
H1-81 Syzigium paniculatum (Magenta Lillypilly)	Remove
H1-82 Syzigium paniculatum (Magenta Lillypilly)	Remove
H1-83 Syzigium paniculatum (Magenta Lillypilly)	Remove
H1-84 Syzigium paniculatum (Magenta Lillypilly)	Remove
H1-85 Syzigium paniculatum (Magenta Lillypilly)	Remove
H1-86 Callistemon viminalis (Weeping Bottlebrush)	Remove
H1-94 Sapium sebiferum (Chinese Tallow)	Remove
H1-98 Syzigium paniculatum (Magenta Lillypilly)	Remove
H1-99 Syzigium paniculatum (Magenta Lillypilly)	Remove
H1-102 Sapium sebiferum (Chinese Tallow)	Remove
H1-104 Callistemon viminalis (Weeping Bottlebrush)	Remove
H1-105 Banksia integrifolia (Coastal Banksia)	Remove
Hole 8	
H3-78 Alloxylon flammeum (Tree Waratah)	Remove
H8-1 Lagunaria patersonii (Norfolk Island Hibiscus)	Remove
H8-2 Eucalyptus paniculata (Red Ironbark)	Remove
H8-3 Castanospermum australe (Black Bean)	Remove
H3-81 Castanospermum australe (Black Bean)	Remove
H3-88 Cedrus deodar (Himalyan Cedar)	Remove
H8-292 Tristaniopsis laurina (Water Gum)	Remove
H8-293 Casuarina cunninghamiana (River She Oak)	Remove
H8-272 Harpulia pendula (Tulip Wood)	Remove
H8-269 Acmena smithii (Lillypilly)	Remove
H8-268 Acmena smithii (Lillypilly)	Remove
H8-267 Acmena smithii (lillypilly)	Remove
H8-229 Flindersia bennettiana (Bennett's Ash)	Remove
H8-232 Eucalyptus pilularis (Blackbutt)	Remove
H8-233 Cryptocarya glaucescens (Native Laurel)	Remove
H8-250 Callistemon viminalis (Weeping Bottlebrush)	Remove
Hole 18	
H18-177 Harpulia pendula (Tulip Wood)	Remove
H18-170 Harpulia pendula (Tulip Wood)	Remove
H18-137 Sapium sebiferum (Chinese Tallow)	Remove
H18-139 Sapium sebiferum (Chinese Tallow)	Remove
H18-143 Sapium sebiferum (Chinese Tallow)	Remove
H18-144 Lepiderema pulchella (Fine-leaved Tuckeroo)	Remove
H18-149 Agonis flexuosa (Weeping Myrtle)	Remove
H18-150 Fraxinus excelsior 'Aurea' (Golden Ash)	Remove
H18-151 Fraxinus excelsior 'Aurea' (Golden Ash)	Remove
H18-152 Fraxinus excelsior 'Aurea' (Golden Ash)	Remove
84 <i>Jacaranda mimosifolia</i> (Jacaranda)	Remove
86 Jacaranda mimosifolia (Jacaranda)	Remove
oo oadaranda mimosiidila (Jacaranda)	IVEIIIOVE

Removal or pruning of any other tree on the site is not approved, excluding species exempt under Council's Tree Preservation Order.

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**Reason:** To ensure that the development is in accordance with the determination.

#### 86. Hand excavation

All excavation within the specified radius of the trunk/s of the following tree/s shall be hand dug or as recommended by and under the direct supervision of an AQF5 Arborist.

Tree/Location	Radius from trunk
All trees to be retained.	Within the tree protection zone
On site or where works are proposed	(TPZ) as defined by AS4970-2009-
within the tree protection zone (TPZ) of	Protection of trees on development
trees on neighbouring properties.	sites/ or as specified within Volumes
	2, 3 and 4 Arborists Report by
	Australian Tree Consultants dated
	25 February 2011.

**Reason:** To protect existing trees.

### 87. Thrust boring/directional drilling

Excavation for the installation of any services within the specified radius of the trunk/s of the following tree/s shall utilise the thrust boring/directional drilling method. Thrust boring/directional drilling shall be carried out at least 600mm beneath natural ground level to minimise damage to tree/s root system:

Tree/Location	Radius from trunk
All trees to be retained.	Where works encroach greater than
On site or where works are proposed	10% of the tree protection zone
within the tree protection zone (TPZ) of	(TPZ) as defined by AS4970-2009-
trees on neighbouring properties.	Protection of trees on development
	sites/ or as specified within Volumes
	2, 3 and 4 Arborists Report by
	Australian Tree Consultants dated
	25 February 2011.

**Reason:** To protect existing trees.

### 88. No storage of materials beneath trees

No activities, storage or disposal of materials shall take place beneath the canopy of any tree protected under Council's Tree Preservation Order at any time.

**Reason:** To protect existing trees.

## 89. Supervision of transplanting – Stage 1

Transplanting of the following trees/shrubs shall be directly supervised by an experienced arborist/horticulturist with a minimum qualification of Horticulture Certificate or Tree Surgery Certificate.

Species/From	То
H6-94 Brachychiton rupestris (Bottle	Home Paddock adjacent to practice
Tree)	fairway tee area in prominent
Proposed Hole 3	position

**Reason:** To protect the trees during transplanting.

## 90. Supervision of transplanting - Stage 2

Transplanting of the following trees/shrubs shall be directly supervised by an experienced arborist/horticulturist with a minimum qualification of Horticulture Certificate or Tree Surgery Certificate.

Species/From	То
H2-73 Brachychiton rupestris (Bottle Tree)	Home Paddock adjacent to practice
Proposed practice area	fairway tee area in prominent position
H13-170 Brachychiton rupestris (Bottle	outside the field of play.
Tree) Hole 13	
H13-184 Brachychiton rupestris (Bottle	
Tree) Hole 13	

**Reason:** To protect the trees during transplanting.

## 91. Removal of refuse

All builders' refuse, spoil and/or material unsuitable for use in landscape areas shall be removed from the site on completion of the building works.

**Reason:** To protect the environment.

## 92. Canopy replenishment trees to be planted

The canopy replenishment trees to be planted shall be maintained in a healthy and vigorous condition until they attain a height of 5.0 metres whereby they will be protected by Council's Tree Preservation Order. Any of the trees found faulty, damaged, dying or dead shall be replaced in the same location with the same species.

**Reason:** To maintain the treed character of the area.

## 93. Removal of noxious plants & weeds

All noxious and/or environmental weed species occurring within proposed planting areas with the exception of exotic trees shall be removed by recognised bush regenerator. The minimum qualifications minimum qualifications and experience (for site supervisor) are a TAFE Certificate 2 in Bushland Regeneration and one year demonstrated experience (for other personnel).

**Reason:** To protect the environment.

## 94. On site retention of waste dockets

All demolition, excavation and construction waste dockets are to be retained on site, or at suitable location, in order to confirm which facility received materials generated from the site for recycling or disposal.

- Each docket is to be an official receipt from a facility authorised to accept the material type, for disposal or processing.
- This information is to be made available at the request of an Authorised Officer of Council.

**Reason:** To protect the environment.

# CONDITIONS TO BE SATISFIED PRIOR TO THE ISSUE OF AN OCCUPATION CERTIFICATE:

## 95. Dam Construction Certification

Prior to issue of the Final Compliance Certificate for either of the two dams, the Principal Certifying Authority is to be satisfied that the construction of the dam was carried out in accordance with the requirements of the NSW Dams Safety Committee.

**Reason:** Statutory requirement.

## 96. Completion of landscape works

Prior to the release of the Occupation Certificate for each stage, the Principal Certifying Authority is to be satisfied that all landscape works, including the removal of all noxious and/or environmental weed species, have been undertaken in accordance with the approved plan(s) and conditions of consent.

**Reason:** To ensure that the landscape works are consistent with the development consent.

#### 97. Infrastructure repair

Prior to issue of the Final Certificate of Compliance for each stage, the Principal Certifying Authority must be satisfied that any damaged public infrastructure caused as a result of construction works (including damage caused by, but not limited to, delivery vehicles, waste collection, contractors, sub contractors, concrete vehicles) is fully repaired to the satisfaction of Council Development Engineer and at no cost to Council.

**Reason:** To protect public infrastructure.

## 98. Compliance with bush fire assessment, report and certificate

Prior to the issue of an Occupation Certificate, the Principal Certifying Authority shall be satisfied that all recommendations listed in the bush fire risk assessment and report below have been complied with:

Document title	Prepared by	Dated
Amended requirements for a	Eco Logical Australia	3 May 2012
Bushfire Protection Assessment		
for Killara Golf Club		

**Reason:** Statutory requirement.

## CONDITIONS TO BE SATISFIED AT ALL TIMES:

## 99. Surveillance of dams by NSW Dams Safety Committee

The ongoing surveillance of each dam is to be in accordance with the requirements of the NSW Dams Safety Committee.

**Reason:** Statutory requirement

## INTEGRATED REFERRAL CONDITIONS:

# 100. Trade & Investment, Regional Infrastructure & Services – General Terms of Approval - Conditions

In accordance with Section 91A of the Environmental Planning and assessment Act 1979, the DTIRIS-Fisheries issues an approval with the following terms:

- Prior to any works, the proponent must obtain a Part 7 permit from DTIRIS-Fisheries under s.201 of the Fisheries Management Act, or a Controlled Activity Approval from the NSW Office of Water. Contrary to the Statement of Environmental Effects (SEE) for the proposal, only one of those authorisations is required, not both;
- Prior to any works, and regardless of which approval referred to in GTA 1 is sought, the proponent is to submit and receive written approval from DTIRIS-Fisheries for a Safe Works Method Statement for dewatering Honeysuckle Dam. The SEE suggests the pest fish Gambusia australis is present in the dam, but did not describe the dewatering process and/or endpoint for that water. DTIRIS-Fisheries seeks appropriate measures to ensure Gambusia are not deposited into adjacent waterways;
- Environmental safeguards (e.g. erosion control fences, sediment bunds etc.) must be used to ensure sediment does not alter adjacent waterways. Such sediment has the potential to have a significantly negative impact on the biotic (e.g. fish) and abiotic (e.g. flow paths) components of adjacent waterways;
- All other relevant authorities have no objections to this proposal.

## 101. NSW Office of Water – General Terms of Approval - Conditions

In accordance with Section 91A of the Environmental Planning and assessment Act 1979, the Office of Water issues an approval with the following terms:

## 1. General and Administrative Issues

- 1.1 The location of the dams as shown on a plan retained in the office of the Office of Water shall not be altered. Please be advised that any installation of an additional dam and /or enlargement of an existing dam may require further local council approval and /or an amended approval from the Office of Water.
- 1.2 Subject to any access or flow condition contained in the approval, the holder may divert part or all of the stored water from the licensed work.
- 1.3 The applicant shall not allow any tailwater drainage to discharge into or onto:
  - any adjoining public or crown road;
  - any other persons land;
  - any Crown Land;

- any river, creek or watercourse;
- any groundwater aquifer;
- any area of native vegetation as described in the Native Vegetation Conservation Act 1997;
- any wetlands of environmental significance
- 1.4 Your attention is particularly drawn to the provisions of condition (1.3) regarding disposal of drainage waters. The discharge of polluted waters into a river or lake otherwise than in accordance with the conditions of a license under the Protection of the Environment Operations Act may render the offender subject to prosecution and penalty under the Act. Therefore where an approved drainage disposal system involves the possible discharge of drainage water into a river or lake, a license may be required under the Protection of the Environment Operations Act to authorise such discharge.
- 1.5 The existing profile of the channel and bank of any watercourse or drainage depression must not be disturbed any more than is necessary in order to site and maintain the authorised work. Any area that is disturbed when carrying out such work shall be stabilised and maintained by vegetation cover, stone pitching or any other approved material as directed and to this Office's satisfaction so as to prevent the occurrence of erosion.
- 1.6 Works used for the purpose of conveying, distributing or storing water taken by means of the authorised work shall not be constructed or installed so as to obstruct the reasonable passage of floodwaters flowing into or from a river.
- 1.7 Works used for the purpose of conveying, distributing or storing water taken by means of the authorised work shall not be constructed or installed so as to obstruct the reasonable passage of floodwaters other than water to be impounded or obstructed.
- 1.8 The pumping and ancillary equipment and pump site shall be, at all times, properly secured and/or sealed so as to prevent any leakage of petroleum based products and/or noxious material from entering any river or lake. Typically, a bunding wall of hay bales or other approved material shall be installed around the pumping plant to avoid contamination of any river or lake through spills or leaks of oils, fuels or greases.
- 1.9 Any drainage channels or cross banks associated with the authorised works or access roads to or from that work shall have installed and maintained a bunding wall of hay bales ()r other approved material, to prevent siltation reaching any river or lake.
- 1.10 The work shall be constructed and maintained in such manner as will ensure its safety and as will preclude the possibility of damage being occasioned by it, or resulting from it, to any public or private interest.
- 1.11 The holder .of the approval shall within 3 months of being called upon by the Office of Water to do so, install to the satisfaction of the department in respect of location, form, type and construction, an appliance or appliances for the

measurement of the quantity of water diverted or taken by means of the licensed works, such appliance or appliances to consist of either measuring weir or weirs with automatic recorder or meter or meters of the dethridge type, or such other class of meter or means of measurement as may be approved by the department, and shall continuously maintain such appliance or appliances in good working order and condition, and shall, after the installation of such appliance or appliances, record the measurements of all water diverted or taken by means of the licensed work and supply particulars of such measurement to the department at such intervals as shall be directed by the department. Whenever called upon to do so a test certificate furnished either by the manufacturer concerned or by some person or authority duly qualified shall be supplied by the holder of the license as to the accuracy of the appliance or appliances installed.

## 2. Conditions Specific to DA0147/11

- 2.1 The water supply structures proposed for the golf course redevelopment are to be constructed so as to isolate the surface water stored within the impoundments from the underlying shallow groundwater system at all times by means of an impermeable barrier designed and constructed in accordance with the appropriate Australian Standard and any applicable state design guideline.
- 2.2 All inflow and outflow drainage lines shall be maintained with sufficient vegetation to ensure optimum quality of water entering the dams.
- 2.3 The level of the crest of the enlarged overshot dam (Honeysuckle Creek dam) must be fixed at not higher than 10.79 metres below the level of a bench mark established on the road kerb at the corner of Golf Links Rd and Fiddens Wharf Rd, particulars of which are retained in the Office of Water.
- 2.4 A pipe with a diameter of not less than 100 mm fitted with a stop valve or other control device must be constructed through the dam to the satisfaction of the Office of Water. The level of the invert of the said pipe shall be fixed at not higher than 12.5 metres below the level of the invert of the bench mark referred to in condition (2.2).
- 2.5 When a flow is entering the storage of the dam, the pipe referred to in condition (2.3), must be so operated as to maintain a flow in the watercourse downstream of the said dam equivalent to the flow entering the storage of the dam for the time being or the capacity of the said pipe, whichever is the lesser.
- 2.6 The level of the crest of the bywash crest of the proposed dam on Lot 1 DP233290 must be fixed as to achieve the design storage capacity and safely pass excess flows. These particulars must be provided to and retained by the Office of Water.
- 2.7 A Trickle pipe with a diameter of not less than 100mm must be constructed through the dam to the satisfaction of the Office of Water. The level of the

invert of the pipe must be fixed at not higher than 1.0 metre below the level of the bywash crest.

2.8 (A) Subject to any access or flow condition contained in the license, the holder may in anyone year commencing 1 July divert up to the licensed volume of 150.0 megalitres of water comprising of, 10.0 megalitres for recreation use and 140.0 megalitres for irrigation use.

(B)Notwithstanding paragraph (A), the holder may divert up to twice the licensed volume in one year provided diversions do not exceed three times the licensed volume in any three year period.

(C) The holder shall maintain records of water usage as specified by the department when requested to do so, shall furnish the records to the department.

2.9 A vegetated buffer zone of not less than 5.0 metres must be maintained between the irrigated area and the high bank of the Unnamed Watercourses, located within Lot 2 DP 535219 and Lot 22 DP 217659, Parish of Gordon, County of Cumberland.

#### **3** Formal Application Issues

- 3.1 Upon receipt of an approved development application from Ku-ring-gai Council, the Office of Water will process an amended work approval under the Water Management Act 2000.
- 3.2 The access licence will be subject to the administrative charges as determined from time to time by the Independent Pricing and Regulatory Tribunal (IPART).

Ross Edwards Development Assessment Officer – South Graham Bolton Acting Team Leader Development Assessment – South

Corrie Swanepoel Manager Development Assessment Services Michael Miocic Director Development & Regulation

## **Attachments:**

Plan no.	Drawn by	Dated
LA01 Issue D	Taylor Brammer	30/04/2012
LA02 Issue B	Taylor Brammer	30/02/2012
LA02-01 to 07 Issue C	Taylor Brammer	30/04/2012
LA02-08 to 18 Issue C	Taylor Brammer	30/04/2012
LA03 Issue B	Taylor Brammer	30/04/2012
LA03-01 to09 Issue C	Taylor Brammer	30/04/2012
LA04 Issue B	Taylor Brammer	30/04/2012
LA04-01 to 09 Issue C	Taylor Brammer	30/04/2012
LA04-10 to 18 Issue C	Taylor Brammer	30/04/2012
LA05 Issue D	Taylor Brammer	04/06/2012
LA05-01 to 10 Issue C	Taylor Brammer	30/04/2012
LA05-11 to 18 Issue C	Taylor Brammer	30/04/2012
LA06 Issue D	Taylor Brammer	04/06/2012
LA06-01 to 09 Issue C	Taylor Brammer	30/04/2012
LA07 Issue D	Taylor Brammer	04/06/2012
LA07-01 Issue C	Taylor Brammer	30/04/2012
LA07-02 to 11 Issue C	Taylor Brammer	30/04/2012
LA07-12 to 18 Issue C	Taylor Brammer	30/04/2012
LA08 Issue C	Taylor Brammer	30/04/2012
LA09-1 Issue D	Taylor Brammer	04/06/2012
LA09-2 Issue A	Taylor Brammer	04/06/2012
LA09-3 Issue A	Taylor Brammer	04/06/2012
LA10-1 Issue D	Taylor Brammer	04/06/2012
LA10-2 Issue A	Taylor Brammer	04/06/2012
LA10-3 Issue A	Taylor Brammer	04/06/2012
LA11-1 Issue D	Taylor Brammer	04/06/2012
LA11-2 Issue A	Taylor Brammer	04/06/2012
LA11-3 Issue A	Taylor Brammer	04/06/2012
G.HPF – Practice Fairway Grading Plan	Cashmore	May 2012
Hole 2 Revised grading plan	Cashmore	April 2012
21-19814-S003 Revision A	GHD	03/03/2011

Plan no.	Drawn by	Dated
21-19814-C000 to C006 Revision A	GHD	03/03/2011
Proposed lake – Grading using fill on site	Cashmore	February 2011
Proposed lake (Volume 10.9ML)	Cashmore	February 2011
Proposed lake (Volume 10.9ML) Cross Section 1	Cashmore	1 April 2011
Proposed lake (Volume 10.9ML) Cross Section 2	Cashmore	1 April 2011
Proposed lake (Volume 10.9ML) Cross Section 3	Cashmore	1 April 2011
Proposed lake (Volume 10.9ML) Cross Section 4	Cashmore	1 April 2012
Staging plan	Cashmore	March 2011
Independent Assessment of Golf Course Safety Measures associated with the proposed 2 <sup>nd</sup> hole at Killara Golf Club, Pacific Highway, Killara Issue A	Golf by Design	April 2012
Amended Requirements for a Bushfire Protection Assessment for Killara Golf Club – Eco Logical Australia		3 May 2012
Zoning Extract		3 August 2012
Location Sketch		3 August 2012