Application for a

Department of **Environment & Climate Change** NSW

Section 91 Licence

under the *Threatened Species Conservation Act 1995* to harm or pick a threatened species, population or ecological community* or damage habitat.

1. Applicant's Name ^: *(if additional persons require authorisation by this licence, please attach details of names and addresses)*	Amliv Developments Pty Limited	
2. Australian Business Number (ABN):	30 060 787 608	
3. Organisation name and position of applicant ^: *(if applicable)*	Kevin Weston Director	
4. Postal address ^:	PO Box 1124 NEWPORT NSW 2106	Telephone ^: B.H: 0414 99 60 99
5. Location of the action *(including grid reference and local government area and delineated on a map).*	59 Herbert Avenue Newport	

* A threatened species, population or ecological community means a species, population or ecological community identified in Schedule 1, 1A or Schedule 2 of the *Threatened Species Conservation Act 1995.*

^The personal details of all Section 91 licences will be displayed in the register of Section 91 licences required under Section 104 of the *Threatened Species Conservation Act 1995.* See notes.

6. Full description of the action and its purpose *(e.g. environmental assessment, development, etc.)*	Remove tree so rectification of stone wall that has collapsed can be completed safely as per attached reports. 1. Pittwater Council Consent No: JT-10968. 2. Arboricultural Impact Report. 3. Geotechnical Report.
7. Details of the area to be affected by the action *(in hectares)*.	One tree directly above collapsed wall.
8. Duration and timing of the action *(including staging, if any).*	One day to remove tree.
9. Is the action to occur on land declared as critical habitat*? *(tick appropriate box)*	✓ No

* Critical habitat means habitat declared as critical habitat under Part 3 of the *Threatened Species Conservation Act 1995*.

10. Threatened species, populations or ecological communities to be harmed or picked.	Scientific name Pittwater Spotted Gum Forest endangered ecological community	Common name Pittwater Spotted Gum Forest endangered ecological community	Conservation status *Endangered*	Details of no. of individual animals, or proportion and type of plant material *(e.g. fertile branchlets for herbarium specimens or whole plants or plant parts)*

11. Species impact: *(please tick appropriate box)* a) For action proposed on land declared as critical habtat; or b) For action proposed on land not declared as critical habitat.	an SIS is attached ☒ No Items 12 to 25 have been addressed ☒ Yes ☐ No

N.B: Provision of a species impact statement is a statutory requirement of a licence application if the action is proposed on critical habitat.

The provision of information addressing items 12 to 17 is a statutory requirement of a licence application if the action proposed is not on land that is critical habitat. Information addressing any of the questions below must be attached to the application.

12. Describe the type and condition of habitats in and adjacent to the land to be affected by the action.	The tree to be removed is part of an area mapped by Pittwater Council as Pittwater Spotted Gum Forest. The overstorey retains integrity although it's continuity in the locality is broken by dwelling and other structures on residential allotments. The understorey contains a mix of indigenous and introduced plant species.
13. Provide details of any known records of a threatened species in the same or similar known habitats in the locality *(include reference sources).*	There are recent records of the Powerful Owl, but only old (24+ years old) records of the Koala, Little Eagle and Masked Owl in the locality. These latter three species are not further considered.
14. Provide details of any known or potential habitat for a threatened species on the land to be affected by the action *(include reference sources).*	The discontinuous Pittwater Spotted Gum Forest on the property and in the surrounding locality provides potential foraging and roosting habitat for the Powerful Owl. The tree to be removed is unlikely to provide such habitat as the canopy of the tree is exposed and on an upper slope.
15. Provide details of the amount of such habitat to be affected by the action proposed in relation to the known distribution of the species and its habitat in the locality .	A single overstorey tree is to be removed, plus possible disturbance to the understorey within a 5 metres radius of the tree. Where possible, the canopy, branches and pieces of the trunk will be lowered to the ground with ropes, to minimise possible disturbance to the understorey around the base of the tree. Due to the location of the tree, this may not be possible in every instance without causing rope damage to the limbs of adjacent trees.

16. Provide an assessment of the likely nature and intensity of the effect of the action on the lifecycle and habitat of the species.	The action is unlikely to have any significant affect, if any, on the life cycle of the Powerful Owl or its habitat. The action will have some impact on the Pittwater Spotted Gum Forest ecological community by removing a remnant mature canopy tree *Corymbia maculata* and possibly disturbing up to 80 square metres (radius of 5 metres around the tree) of understorey.
17. Provide details of possible measures to avoid or ameliorate the effect of the action.	The tree will be removed leaving the stump approx 750mm above ground level. The weeds and non-local native plants will be removed where possible and the area replanted with 3 spotted gums in accordance with council consent. Ground cover native to the area will be planted once the weeds and non-local native plants have been removed. Where possible, the canopy, branches and pieces of the trunk will be lowered to the ground with ropes, to minimise possible disturbance to the understorey around the base of the tree. Due to the location of the tree, this may not be possible in every instance without causing rope damage to the limbs of adjacent trees. Once the tree has been removed, a bush regeneration program will be undertaken, under the supervision of a qualified bush regenerator, experienced in the area. All trees and understorey groundcover plants used will be tube stock, sourced from Pittwater Council, or other approved Nurseries, and native to the street.

N.B: The Director-General must determine whether the action proposed is likely to significantly affect threatened species, populations or ecological communities, or their habitats. To enable this assessment the Applicant is required to address items 18 to 24. Any additional information referred to in addressing these items must be attached to the application.

18. In the case of a threatened species, whether the action proposed is likely to have an adverse effect on the life cycle of the species such that a viable local population of the species is likely to be placed at risk of	In the case of the Powerful Owl, the action proposed is unlikely to have an adverse effect on the life cycle of the species such that a viable local population of the species is likely to be placed at risk of extinction.

extinction.	
19. In the case of an endangered population, whether the action proposed is likely to have an adverse effect on the life cycle of the species that constitutes the endangered population such that a viable local population of the species is likely to be placed at risk of extinction.	N/A
20. In the case of an endangered ecological community or critically endangered ecological community, whether the action proposed: (i) is likely to have an adverse effect on the extent of the ecological community such that its local occurrence is likely to be placed at risk of extinction, or (ii) is likely to substantially and adversely modify the composition of the ecological community such that its local occurrence is likely to be placed at risk of extinction.	In the case of the Pittwater Spotted Gum endangered ecological community, as the extent of works is unlikely to affect more than 80 square metres of the community the action proposed (i) is unlikely to have an adverse effect on the extent of the ecological community such that its local occurrence is likely to be placed at risk of extinction. (ii) is unlikely to substantially and adversely modify the composition of the ecological community such that its local occurrence is likely to be placed at risk of extinction.

21. In relation to the habitat of a threatened species, population or ecological community: (i) the extent to which habitat is likely to be removed or modified as a result of the action proposed, and (ii) whether an area of habitat is likely to become fragmented or isolated from other areas of habitat as a result of the proposed action, and (iii) the importance of the habitat to be removed, modified, fragmented or isolated to the long-term survival of the species, population or ecological community in the locality.	In the case of the Powerful Owl: (i) the extent of works will affect only a single overstorey tree which unlikely to provide roosting habitat as the canopy of the tree is exposed and on an upper slope. Neither does the tree contain any visible hollows that might be used for nesting by this species. However, the tree could contain small hollows which could harbour prey species such as Sugar Gliders. (ii) the action proposed will contribute to the fragmentation of habitat in the locality by removing an overstorey tree from a canopy already fragmented because of developments on residential allotments. (iii) the long term survival of the species locally relies on the persistence of considerable areas of forest that can sustain food resources for the species. While the individual tree to be removed is unlikely, at it's current life stage, to contribute potential habitat for the species or its prey species, it could do so in the future as it develops hollows. The proposed action contributes to the ongoing incremental loss of habitat in the urban areas of Pittwater local government area which may lead to the local extinction of the species. In the case of Pittwater Spotted Gum Forest: (i) the action proposed will remove a single mature overstorey *Corymbia maculata* and may affect up to 80 square metres of understorey of the ecological community. (ii) the action proposed will contribute to the fragmentation of the ecological community in the locality by removing an overstorey tree and possibly understorey vegetation from a canopy already fragmented because of developments on residential allotments. (iii) the long term survival of the ecological community locally relies on protection of remnants on private land since it is not adequately conserved in reserves and it occurs primarily on private property. Unless compensated for the area of the ecological community to be affected will contribute to the ongoing incremental loss which eventually will lead to the local extinction of the community.
22. Whether the action proposed is likely to have an adverse effect on critical habitat (either directly or indirectly).	There is no declared critical habitat that is relevant to this proposed action.

23. Whether the action proposed is consistent with the objectives or actions of a recovery plan or threat abatement plan.	In the approved recovery plan for this species (DEC 2006), forest clearing and fragmentation, including for urban developments, is recognised as the most threatening process for the Powerful Owl. The proposed action is therefore inconsistent with the objective of the recovery plan to prevent or reduce such a threat. There is no recovery plan for Pittwater Spotted Gum Forest.
24. Whether the action proposed constitutes or is part of a key threatening process or is likely to result in the operation of, or increase the impact of, a key threatening process.	Yes, the proposed action constitutes 'clearing of native vegetation' which is listed as a key threatening process on Schedule 3 of the *Threatened Species Conservation Act.*

Important information for the applicant

Processing times and fees

The *Threatened Species Conservation Act 1995* provides that the Director-General must make a decision on the licence application within 120 days where a species impact statement (SIS) has been received. No timeframes have been set for those applications which do not require a SIS. The Director-General will assess your application as soon as possible. You can assist this process by providing clear and concise information in your application.

Applicants may be charged a processing fee. The Director-General is required to advise prospective applicants of the maximum fee payable before the licence application is lodged. Therefore, prospective applicants should contact the Department of Environment, Climate Change and Water NSW (DECCW) prior to submitting a licence application .

A $30 licence application fee must accompany a licence application.

Protected fauna and protected native plants*

* Protected fauna means fauna of a species not named in Schedule 11 of the *National Parks and Wildlife Act 1974.*
Protected native plant means a native plant of a species named in Schedule 13 of the *National Parks and Wildlife Service 1974.*

Licensing provisions for protected fauna and protected native plants are contained within the *National Parks and Wildlife Act 1974.* However, a Section 91 Licence may be extended to include protected fauna and protected native plants when these will be affected by the action.

If you are applying for a licence to cover both threatened and protected species please provide the information requested in Item 10 *as well as* a list of protected species and details of the number of individuals animals or proportion and type of plant material which are likely to be harmed or picked.

Request for additional information

The Director-General may, after receiving the application, request additional information necessary for the determination of the licence application.

Species impact statement

Where the application is not accompanied by a SIS, the Director-General may decide, following an initial assessment of your application, that the action proposed is likely to have a significant effect on threatened species, populations or ecological communities, or their habitats. In such cases, the *Threatened Species Conservation Act 1995* requires that the applicant submit a SIS. Following initial review of the application, the Director-General will advise the applicant of the need to prepare a SIS.

Director-General's requirements for a SIS

Prior to the preparation of a SIS, a request for Director-General's requirements must be forwarded to the relevant DECCW Office. The SIS must be prepared in accordance with section 109 and 110 of the TSC Act and must comply with any requirements notified by the Director-General of DECCW

Disclosure of Personal Information in the Public Register of s91 Licences

The Public Register provides a list of licence applications and licences granted. A person about whom personal information is contained in a public register may request that the information is removed or not placed on the register as publicly available.

Copies of all applications and licences issued under section 91 and certificates issued under section 95 of the Actare available on the DECCW website at
www.environment.nsw.gov.au/threatenedspecies/S91TscaRegisterByDate.htm
or in hardcopy form from The Librarian, DECC, 59 Goulburn St, Sydney.

Certificates

If the Director-General decides, following an assessment of your application, that the proposed action is not likely to significantly affect threatened species, populations or ecological communities, or their habitats, a Section 91 Licence is not required and the Director-General must, as soon as practicable after making the determination, issue the applicant with a certificate to that effect.

N.B: An action that is not required to be licensed under the Threatened Species Conservation Act 1995, may require licensing under the National Parks and Wildlife Act 1974, if it is likely to affect protected fauna or protected native plants.

I confirm that the information contained in this application is correct. I hereby apply for a licence under the provisions of Section 91 of the *Threatened Species Conservation Act 1995.*

Applicant's name
Kevin Weston

Applicant's Position & Organisation Director Amliv Developments	
Applicant's signature	
Date	

For more information or to lodge this form, contact the nearest branch of DECCW's Environment Protection and Regulation Group:

Metropolitan Branch
P: 02 9995 6851
F: 02 9995 6900
PO Box 668
Parramatta
NSW 2124

Metropolitan Branch
P: 02 4225 1455
F: 02 4225 3545
PO Box 5436
Wollongong
NSW 2515

North East Branch
P: 02 6640 2500
F: 02 6642 7743
PO Box 498
Grafton
NSW 2460

North East Branch
P: 02 4908 6800
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PO Box 488G,
Newcastle
NSW 2300

North West Branch
P: 02 6883 5330
F: 02 6884 9382
PO Box 2111
Dubbo
NSW 2830

South Branch
South East Region
P: 02 6122 3100
F: 02 6299 3525
PO Box 622
Queanbeyan
NSW 2620

South Branch
South West Region
P: 02 6022 0600
PO Box 544
Albury
NSW 2640

Department of Environment, Climate Change and Water (NSW)
PO Box A290, Sydney South NSW 1232
Phone: 131 555 (Environment Line) Fax: 9995 5999
Email: info@environment.nsw.gov.au

Jeffery and Katauskas Pty Ltd

CONSULTING GEOTECHNICAL AND ENVIRONMENTAL ENGINEERS
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AS/NZS ISO 9001 Certified
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Email: engineers@jkgroup.net.au

12 May, 2010
Ref: 18306SP5let2

Mr Kevin Weston
P.O. Box 707
MONA VALE NSW 1660

Dear Sirs

GEOTECHNICAL OPINION
REMOVAL OF TREE NEAR DRIVEWAY
59 HERBERT AVENUE, NEWPORT

At the time of our site visits during the construction of the driveway widening, we noted distress to the retaining wall on the high side of the lower portion of the driveway which needs to be repaired. At that time, the damaged wall was propped from the driveway slab, and the retaining wall needs to be repaired for long term stability. As part of the retaining wall repairs, it will be necessary to remove this temporary propping and the careful removal of the damaged portion of retaining wall. There will also be some scaling back of loose soil behind the retaining wall.

Once the retaining wall and some of the soil is removed, the support to a tree immediately behind the works area will compromised. Further, the presence/weight of the tree could have a destabilising effect on the temporary soil face during the works. This obviously forms a risk to worker safety during the works.

Without the presence/weight of the tree, the soil would be considered relatively stable in the short term with appropriate batters, and this would allow the rectification of the deficiencies in the retaining wall.

In addition, it is likely that some of the roots of the tree will be cut during the works, further destabilising the tree. Should the tree be left in place, due to its proximity to the

retaining wall, it is likely that the replaced portion of retaining wall will be further damaged by root growth.

Our recommendation is that the tree be removed prior to the commencement of any further work to repair the retaining wall. While the tree should be removed, we recommend against the grubbing out of the roots as the roots assist the near surface stability of the soil, and the disturbance from grubbing out increases the risk of erosion and surficial soil slumping.

Upon completion of these stabilisation works, the risks from the site would be consistent with those presented in our original geotechnical stability assessment report for the driveway.

This report has been prepared for the particular project described and no responsibility is accepted for the use of any part of this report in any other context or for any other purpose. Copyright in this report is the property of Jeffery and Katauskas Pty Ltd. We have used a degree of care, skill and diligence normally exercised by consulting engineers in similar circumstances and locality. No other warranty expressed or implied is made or intended. Subject to payment of all fees due for the investigation, the client alone shall have a licence to use this report. The report shall not be reproduced except in full.

Should you require any further information regarding the above please do not hesitate to contact the undersigned.

Yours faithfully
For and on behalf of
JEFFERY AND KATAUSKAS PTY LTD

P Wright
Senior Associate

Reviewed by:

P Wright
per

P Stubbs
Principal

Enc. Selected photographs of tree to be removed.

ARBORICULTURAL IMPACT REPORT

PREPARED FOR KEVIN WESTON, AMLIV PTY LTD

59 HERBERT AVENUE
NEWPORT

5 MARCH 2010

Prepared by:
Guy Paroissien
Landscape Matrix Pty Ltd.
ABN 53 110 564 102
T/F. 9943 6510, M. 0425 342 051
40 Timbarra Road St Ives NSW 2075
E-mail: landscapematrix@optusnet.com.au

1. BACKGROUND

Landscape Matrix Pty Ltd has been engaged by Kevin Weston, Amliv Pty Ltd to prepare an Arboricultural report in respect to a tree at 59 Herbert Avenue Newport (the site). Mr. Weston is seeking an opinion as to the current health and structural stability of the tree following recent disturbance to its root zone during heavy rains.

The tree has previously been assessed as part of a report accompanying a Development Application to Pittwater Council for various works including driveway repair and widening works.

The tree is located in a steeply sloping area above the existing driveway access to the site. The location and context of the tree is illustrated in the photograph on the cover page of this report.

This report has been prepared by Guy Paroissien a Director of Landscape Matrix Pty Ltd.

The site was inspected on 23 February 2010. The assessment of the tree is based upon a visual inspection of the tree from ground level using the Visual Tree Assessment (VTA) method described by Mattheck & Breloer (1994). The Safe Useful life Expectancy (SULE) category identified in the report follows Barrell (1996).

The inspection was limited to visual inspection of the tree without dissection, probing or coring. No aerial inspection of the tree was carried out and the assessment did not include any woody tissue testing or root investigation.

The tree height and canopy spread was estimated and is expressed in metres and the tree diameter at breast height (DBH) was measured with a standard metal tape at approximately 1.4 metres above ground level and is expressed in millimetres.

Measurements from the tree referred to in this report are to be taken as if measured from the centre of the tree's trunk.

2. TREE ASSESSED FOR THIS REPORT

One tree has been assessed in preparing this report. The tree is located in a steeply sloping embankment above the existing driveway access to the site.

The tree is a mature, singe trunked specimen of *Corymbia maculata* (Spotted Gum) approximately 28 metres high with a canopy spread of 12 metres and a trunk diameter at breast height (DBH) of 680mm (750mm above ground level). The tree is a remnant forest specimen.

The tree has an upright trunk and the majority of its past canopy development has been to the north of the trunk. Lower limbs have been pruned in the past to 18 metres with the canopy now restricted to the upper third of the trunk.

The tree was in good health and vigour at the time of inspection with reasonable foliage density and less than 5% deadwood.

While there was no visual evidence of significant pest or disease there was reaction wood present in the basal trunk. The presence of this reaction wood is indicative of possible internal damage from termite activity or decay - without further, invasive testing, it is not possible to confirm the structural integrity of the basal trunk of the tree.

Given the above the tree factors the tree is considered to have a Safe Use and Life Expectancy (SULE) of 2 Medium (15 to 40 years). The tree is considered to be of high landscape significance.

Observations regarding the tree are illustrated in photographs 1, 2 and 3 in Appendix A.

3. IDENTIFICATION OF SETBACKS FOR THE TREE

A number of methods to determine the likely extent of root zones and appropriate setbacks for tree root protection zones for trees on development sites have been developed in the past. The key criteria used in determining setbacks is the tree's trunk diameter at breast height (DBH) in conjunction with other factors including the sensitivity of the species in question to environmental disturbance/change, the age of the tree and the tree's health and vigour at the time.

Harris et al (2004) provide formulae for calculating tree protection zones based on the above criteria and modified from the 1991 British Standard for protection of trees on construction sites (BS 5837:1991). The 2005 version of the British Standard (BS 5837:2005) recommends a radius of 12 times the tree's DBH. For multi trunked trees BS 5837:2005 recommends a setback of 10 times the basal trunk diameter.

The Australian Standard AS 4970-2009 Protection of Trees on Construction Sites also identifies a 'Tree Protection Zone' (TPZ) of 12 times the tree's DBH. The Australian Standard also provides a formula for calculating the "Structural Root Zone' of trees on development sites. In regard to palms, other monocots, cycads and tree ferns the Standard identifies the Tree Protection Zone should not be less than 1 metre outside the crown projection. (Australian Standards Association 2009)

The tree protection zones identified below have been calculated using the Australian Standard AS 4970 Protection of Trees on Construction Sites and are the optimum setback from the trees where disturbance (e.g. soil level changes, compaction, excavation etc) should be minimised to reduce potential impacts on the long term health of the trees.

Preferably, no more than 10% of the tree protection zone should be disturbed with compensation made by extension of other areas of the TPZ to compensate for the area(s)

disturbed. Where greater than 10% of the tree protection zone is potentially disturbed the tree's viability needs to be investigated and demonstrated by the project arborist. The structural root zone is the area required for stability and where disturbance of any sort should be avoided.

On the basis of the above the tree protection zone for the tree is calculated as 8.2 metres and its structural root zone is calculated as 2.9 metres in the event the tree is to be retained.

4. RECENT IMPACTS TO THE TREE'S IMMEDIATE GROWING ENVIRONMENT

As noted earlier in this report, the tree is located in a steeply sloping area above the existing driveway access to the site There has been disturbance within the tree's root in the recent past during a heavy rainfall event. This disturbance comprised the partial failure of the retaining wall located below the tree and immediately adjacent to and above the driveway access to the site.
Specifically it is noted:

- The section of retaining wall that has collapsed/failed is located 2.1 metres from the tree on the northern side of the tree;
- There is evidence of landslip behind the failed section of wall;
- The embankment below the tree has been identified as unstable by the site geotechnical engineer (K Weston Pers. Comm.);
- The area where the failure has occurred and identified as unstable by the site geotechnical engineer is within the tree's structural root zone (i.e. the area required for stability (as identified in AS4970);
- The majority of the tree's canopy is to the north of the trunk; and
- Further disturbance is required to effect repair works to the retaining wall including drilling back into the soil within the tree's structural root zone.

Significant concerns are raised in regard to the tree's stability given the recent failure within the tree's structural root zone on the north side, the tree's canopy imbalance to the north and the advice of the geotechnical engineer that the embankment area in the structural root zone below the tree is unstable.

These concerns will be increased when the drilling into the embankment takes place to effect repair works as this disturbance is also within the tree's structural root zone. I am advised there will be a lag time between the drilling works occurring and replacement of the wall. (K Weston - Pers.Comm.) It is concluded the tree will be at high risk of failure during this time and this risk will be significantly increased if there is a major rainfall event of strong winds.

It is noted that mechanical support of the tree is not considered a viable option due to the lack of structures in the vicinity that could be utilised for this purpose. While there are other Spotted Gums in the vicinity the use of these trees to stabilise this tree cannot be

recommended as it may also cause the failure of these other trees if the tree failed. It is recommended advice from an arborist experienced in restraint systems in trees be sought if this option is to be pursued further. In this regard it is recommended that advice be sought from Bill Goddard of Total Height Safety Pty Ltd. (Tel. 9966 9070)

In the event a suitable restraint system is not available the removal of the tree must be considered an option given the location of high occupancy targets (dwellings) within the failure zone of the tree.

5. CONCLUSION

The tree assessed for this report is a mature, singe trunked specimen of *Corymbia maculata* (Spotted Gum) approximately 28 metres high with a canopy spread of 12 metres and a trunk diameter at breast height (DBH) of 680mm (750mm above ground level). The tree is a mature, remnant forest specimen.

The tree has an upright trunk and the majority of its past canopy development has been to the north of the trunk. Lower limbs have been pruned in the past to 18 metres with the canopy now restricted to the upper third of the trunk.

The tree was in good health and vigour at the time of inspection with no evidence of significant pest or disease. However, the presence of reaction wood in the tree's basal trunk area is indicative of possible internal damage from termite activity or.

Given the above the tree factors the tree is considered to have a Safe Use and Life Expectancy (SULE) of 2 Medium (15 to 40 years). The tree is considered to be of high landscape significance.

However, significant concerns are raised in regard to the tree's stability given the recent failure of the retaining wall and embankment within the tree's structural root zone on the north side together with the advice of the geotechnical engineer that the embankment area in the structural root zone below the tree is unstable.

These concerns will be increased when the drilling into the embankment takes place to effect repair works as there will be a lag time between the drilling works occurring and replacement of the wall. It is concluded the tree will be at high risk of failure during this time and this risk will be significantly increased if there is a major rainfall event of strong winds.

Mechanical support of the tree may not be a viable option due to the lack of structures in the vicinity that could be utilised for this purpose. While there are other Spotted Gums in the vicinity the use of these trees to stabilise this tree cannot be recommended as it may also cause the failure of these other trees if the tree failed. It is recommended advice from an arborist experienced in restraint systems in trees be sought if this option is to be pursued further. In this regard it is recommended that advice be sought from Bill Goddard of Total Height Safety Pty Ltd. (Tel. 9966 9070)

In the event a suitable restraint system is not available the removal of the tree must be considered an option given the location of high occupancy targets (dwellings) within the failure zone of the tree.

Guy Paroissien, MAIH, MIACA
M Env. Mgt & Restor., Hort Cert., Tree Care Cert.
Director
Landscape Matrix Pty Ltd
5 March 2010

BIBLIOGRAPHY/REFERENCES

Australian Standards Association (2007) AS 4373- 2007 - Australian Standard 4373-2007 'Pruning of Amenity Trees'.

Australian Standards Association (2009) AS 4790- 2009 - Australian Standard 4790-2009 'Protection of trees on development sites'.

Harris et al (2004). Harris RW, Clark JR, Matheny NP: Arboriculture – Integrated Management of Landscape Trees Shrubs and Vines 4TH Edition. Prentice Hall, New Jersey 07458.

Mattheck & Breloer (1994) – The Body Language of Trees – a handbook for failure analysis - Research for Amenity Trees No. 4. Published by TSO (The Stationary Office) Norwich UK.

UBD Sydney Street Directory. 35th Edition. Published by UBD Australia.

Weston K (Pers. Comm.) - information provided by Kevin Weston, Amliv Pty Ltd during the site inspection undertaken on 23 February 2010.

APPENDIX A

Photograph 1: Illustrating the location of the tree immediately above the failed section of retaining wall and adjacent embankment.

Photograph 2: Illustrating the failed section of retaining wall and adjacent embankment.

Photograph 3: Illustrating the reaction wood in the basal trunk possibly indicative of internal decay or termite damage.

PITTWATER COUNCIL

Tree Application - Conditions of Consent

PLEASE READ CAREFULLY

Application No: JT-10968

Property No:

Applicant:

Amliv Developments
Po Box 1124
Newport 2106

Address of Property: 59 Herbert Ave
Newport 2106

Trees

Tree Description	Location	Consent Details
Corymbia maculata(spotted gum)	Near driveway .	Council consent remove tree as per Arborist report. Tree is protected by Endangered Species Act. section 91 lincence maybe required through NSW Environment Climate Change and Water. Phone 131555

Replanting as required being completed within 6 months with the following species:
3x Spotted gums on property in suitable positions.

GENERAL:

1. The consent or a true copy is to be displayed on the land on which the works are to be carried out, in a position that will enable it to be read prior to the commencement of and during the carrying out of the works. Failure to display the consent will render the consent invalid.

2. All work to be carried out by a qualified and insured tree contractor. Any pruning work is to be carried out in accordance with **AS 4373 - 2007**.

3. The consent of the owner/s of the land on which the tree stands must be obtained before any work is carried out.

4. Where the tree is on a boundary between two or more properties, the consent of all owners must be obtained before any work is carried out.

5. This consent does not give any person the right to enter upon any land without the consent of the owner/s of that land.

6. Except as provided in 7, the consent shall lapse if the works which are the subject of this consent have not been completed within 6 months of the date of consent.

7. Any consent issued in conjunction with a subdivision, building approval or development consent shall lapse if such approval or consent lapses.

MARK FERGUSON
General Manager

Per:

Date: 29/03/10

Customer Service Centre
1 Park Street
MONA VALE

P O Box 882
MONA VALE NSW 1660
DX 9018 MONA VALE

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