

3. **NOTIFICATION OF COUNCIL PLAN CHANGE 44 TO CITY PLAN – LISTING OF THE LOWLAND KAHIKATEA FOREST REMNANT, WHICH FORMS PART OF THE GREATER RICCARTON BUSH AND HOUSE RESERVE AT 12-16 KAHU ROAD, UNDER VOLUME 3, APPENDIX 4 – HERITAGE/NOTABLE TREES, CATEGORY 2 NOTABLE TREES**

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#### PURPOSE OF REPORT

1. This report describes the Council initiated proposed Plan Change 44 – Listing of the Lowland Kahikatea Forest Remnant (forest remnant), which Forms Part of the Greater Riccarton Bush and House Reserve at 12-16 Kahu Road, under Volume 3, Appendix 4 – Heritage/Notable Trees, Category 2 Notable Trees and seeks a Council resolution to publicly notify this Plan Change.

#### EXECUTIVE SUMMARY

2. The proposed Plan Change 44 (refer **Attachment 2**) seeks to provide the forest remnant, commonly known as Riccarton Bush, with better protection from the effects of external activities. The plan change proposes to achieve this by applying the Category 2 – Notable Tree/Group of Trees status to the lowland kahikatea forest remnant at 16 Kahu Road and amending Volume 3, Part 10 of the City Plan by adding this new listing to Appendix 4 – Heritage/Notable Trees. The protected trees provisions in Part 10 are also amended with references specific to the forest remnant. The rules applicable to Category 2 – Notable trees seek to protect the listed trees/groups of trees and their roots from development and other activities, which have the potential to cause damage to the trees. Properties situated in Ngahere Street, Totara Street, Kauri Street and Riccarton Road, which are adjacent to the forest remnant boundary may be affected by the setback rules applicable to protected trees.
3. The group/area of trees proposed to be listed is the entire lowland kahikatea forest remnant area enclosed within the predator proof fence, which forms part of the greater Riccarton Bush and House Reserve zoned Conservation 1. The protected trees area also includes the kahikatea tree growing close to the north-west legal boundary of the reserve, adjacent to 11B Ngahere Street. Planning Map 38B is proposed to be amended by introducing a new 'Protected trees area' symbol, which is a polygon shape covering the forest remnant area (refer to Attachment 1, Diagram 2 in the appended Plan Change document). The City Plan rules applicable to notable trees place restrictions on certain activities (defined as 'works' in Clause 2.2.4 – refer **Attachment 1**) e.g. building or earthworks, that may occur within 10 metres of the base of a protected tree. The outer line of the 'Protected trees area' applicable to the forest remnant is deemed to be the base of the tree for the purpose of the relevant rules.
4. The forest remnant is well protected from within through Conservation 1 zoning, the ecological heritage site status, the heritage and amenities provisions applicable to it as part of "the setting" associated with Riccarton House listed as a heritage item and importantly through the Riccarton Bush Act 1914. Currently, however, there are no mechanisms protecting it from the external threats posed by peripheral urban development occurring along its legal boundaries. These threats include damage to trees and/or their root systems, negative effects of impervious surfaces on the soil moisture content and aeration, shading of trees and the surrounding vegetation by buildings, fire risk, chemical spray drift and reverse sensitivity associated with leaf and branch litter, windthrow and shading by trees.
5. The forest ecosystem needs to be protected as a whole to allow for natural forest regeneration, further growth of the mature and juvenile replacement kahikatea trees and their extensive root systems in particular.
6. The Section 32 Assessment (refer **Attachment 3**) concludes that out of the three options considered i.e. 'Status quo', 'Six metre setback on all adjoining land' and 'Protected tree status applied to the entire forest remnant', the third option is the most efficient and effective means of providing the desired protection to the forest remnant and achieving the City Plan's objectives and policies.

7. It should be noted that this plan change does not cover or relate in any way to trees outside of the forest remnant area. That is to say that the scheduled protected trees on the remainder of the Riccarton Bush and House Reserve are not covered by this plan change.

#### **FINANCIAL IMPLICATIONS**

8. Should the Council resolve to proceed with notifying the plan change there are legal processes which must be followed in accordance with the First Schedule of the Resource Management Act (RMA) 1991. This is a standard process that all plan changes must follow and there are no particular issues or risks that would be incurred if the processes are correctly followed. There would be costs arising at various stages of the plan change process relating to the preparation of officer reports and a hearing in response to submissions. The scale of costs would depend on the level and complexity of the submissions received. There is a potential for costs associated with responding to any Environment Court appeals received. Funding is provided from the existing budget as part of the District Planning work programme adopted by the Council and provided for in the LTCCP.

#### **Do the Recommendations of this Report Align with 2009-19 LTCCP Budgets?**

9. Yes.

#### **LEGAL CONSIDERATIONS**

#### **Have you considered the legal implications of the issue under consideration?**

10. There is a legal process set out in the RMA which must be followed. It includes Section 32 assessment, public notification of the plan change followed by submissions, reporting, hearings, decisions and possible appeals. Provided the process is followed correctly there are no particular risks associated with this plan change.

#### **ALIGNMENT WITH LTCCP AND ACTIVITY MANAGEMENT PLANS**

#### **Do the recommendations of this report support a level of service or project in the 2009-19 LTCCP?**

11. The proposal is part of the district planning levels of service in the LTCCP.

#### **ALIGNMENT WITH STRATEGIES**

#### **Do the recommendations align with the Council's strategies?**

12. The attached Section 32 report demonstrates that the proposed plan change meets the objectives and policies of the City Plan more effectively and efficiently than the current provisions.
13. The proposal gives better effect to the provisions of Chapter 8 of the Canterbury Regional Policy Statement which addresses issues associated with protection of regionally significant landscape, ecology and heritage.

#### **CONSULTATION FULFILMENT**

14. In 2008 the Council sought feedback from the local residents, the Riccarton Bush Trust, the Riccarton/Wigram Community Board and tangata whenua on possible ways of achieving greater protection for the lowland kahikatea forest remnant from the threats of peripheral development. A discussion paper outlining four options for protecting the forest remnant (Status quo, Ten metre setback on adjoining land, Protected tree status to individual kahikatea trees and Advocacy programme) was circulated to some 123 local residents. A public meeting providing an opportunity to ask further questions followed. Six written responses were received in total. The consultation feedback is discussed in the attached Section 32 report (p. 35).

15. The matter has also been presented to the Riccarton/Wigram and Fendalton/Waimairi Community Boards at a joint seminar on 10 March 2010. While the members were supportive of providing the proposed protective measures for the forest remnant, the level of protection through discretionary, non-complying or prohibited activity status was discussed.

**STAFF RECOMMENDATION**

That the Regulatory and Planning Committee recommend to the Council that it:

- (a) Adopt the attached Proposed Plan Change 44 - Listing of the Lowland Kahikatea Forest Remnant, which Forms Part of the Greater Riccarton Bush and House Reserve at 12-16 Kahu Road, under Volume 3, Appendix 4 – Heritage/Notable Trees.
- (b) Adopt the attached Section 32 assessment.
- (c) Agree to publicly notify Proposed Plan Change 44 - Listing of the Lowland Kahikatea Forest Remnant, which Forms Part of the Greater Riccarton Bush and House Reserve at 12-16 Kahu Road, under Volume 3, Appendix 4 – Heritage/Notable Trees pursuant to Clause 16a in Schedule 1 of the Resource Management Act 1991.

## BACKGROUND AND DISCUSSION

### The Plan Change

16. In the recent years a significant number of properties in the Living 1 zone adjoining Riccarton Bush have been subdivided and/or redeveloped, which has resulted in buildings establishing very close to the lowland kahikatea forest remnant (forest remnant) boundary and creating a range of adverse effects on it. The City Plan promotes more intensive use of the existing urban areas through redevelopment and infill in order to achieve a more compact city. These urban consolidation policies and associated rules may create further infill opportunities for properties adjoining Riccarton Bush, potentially exacerbating the adverse effects of such development on the health of the forest remnant. It is therefore important that new provisions aimed at better protection of the forest remnant periphery from future urban development are introduced.
17. The existing City Plan objectives and supporting policies give sufficient recognition to Riccarton Bush as a significant ecological and heritage site containing the last lowland kahikatea forest remnant in the Christchurch area. The objective and policy framework has been translated to date into the Conservation 1 zoning of the site, ecological heritage site status for the lowland kahikatea forest remnant commonly known as Riccarton Bush, protected building status given to Riccarton House and its setting, which includes the forest remnant, and finally recognition of a number of exotic trees in the Riccarton House grounds as notable trees. The Riccarton Bush Act 1914 and the Riccarton Bush Trust Board's Riccarton Bush Reserve Management Plan 1991 provide assurance of sustainable management of the forest remnant and its important ecological heritage. Individually and collectively these provisions ensure that the entire Conservation 1 zone is protected and well managed within its boundaries but they do not provide sufficient protection needed to address those issues associated with external activities that threaten the survival of the forest remnant.
18. The anticipated environmental results and the proposed implementation methods in the City Plan provide an existing framework for introducing better protection for the forest remnant and mitigating any adverse effects that peripheral urban development may have on the forest ecosystem. The purpose of the proposed Plan Change 44 is to provide the desired increased level of protection to the forest remnant by applying a Category 2 – Notable Tree/Group of Trees status to all forest vegetation contained within the predator proof fence and including the kahikatea tree growing close to the north-west legal boundary of the forest remnant, adjacent to 11B Ngahere Street. The forest remnant will be marked as a Protected Trees Area on Planning Map 38B.
19. The forest's ecosystem needs to be protected as a whole, rather than as a group of individual trees, to allow for natural forest regeneration, further growth of the mature and juvenile replacement kahikatea trees and their extensive root systems in particular. The Volume 3, Part 10, Rules 2.3.1, 2.3.2 and 2.3.3 of the City Plan, applicable to notable trees, place restrictions on 'works' (as defined in Clause 2.2.4) that may occur within 10 metres of a protected tree including the removal and pruning of trees, construction of buildings and impervious surfaces, laying of underground services and depositing of harmful substances. As the predator proof fence, which forms the boundary of the proposed forest remnant protected trees area, is set back approximately 4 metres from the legal boundary of Riccarton Bush Reserve, this rule will affect the land on the adjacent private properties to the depth of up to 6 metres. The boundary line of the protected trees area is also deemed to be the 'base of the tree' for the purposes of setback rules.
20. The notable tree 10 metre 'setback' provision, which is set at a discretionary level, will enable any encroaching developments or works to be evaluated against the amended assessment criteria related to the effects of the proposed works on the health and appearance of the forest. The kahikatea surface root systems, which are particularly important to the overall health of the trees, are most at risk from the effects of typical development occurring around the forest remnant periphery. These roots often reach 6 – 10 metres in length and spread into the properties beyond the forest remnant boundary. There have been instances, for example, of such tree roots being damaged and cut to allow for the construction of buildings on the adjacent properties in very close proximity to the boundary shared with Riccarton Bush. The assessment of similar future proposals may lead to conditions being imposed on the development relating to,

for example, setbacks, the use of pile foundations, hand excavation around the root system or soil aeration systems.

### Description of the Site

21. The lowland kahikatea forest remnant, being part of the greater Riccarton Bush and House Reserve, is located in the suburb of Riccarton, approximately three kilometres west of the centre of Christchurch and covers approximately 7.8 hectares. It is the last remnant of lowland podocarp forest once present on the Canterbury Plains. A dominant feature of the forest remnant is the presence of tall kahikatea trees that can reach heights of 45 metres or more and live for hundreds of years. One of mature kahikatea's distinctive features is an extensive system of large surface roots which may extend over 10 metres from the base of the tree. Most of the kahikateas are estimated to be between 300 to 500 years old, with the oldest being up to 600 years old. A range of other native species (e.g. three species of mistletoe) are present in the forest remnant together with native bird (e.g. kereru and the recently established kiwi 'crèche') and insect life (e.g. unusual species of moths).
22. The Living 1 zone (L1) adjoins approximately three quarters of the periphery of the forest remnant site. The applicable L1 setback provisions allow buildings to be erected very close (1.8 metres for houses) or right up to the site boundary (no setback for accessory buildings under 9 metres in length). There is potential for further infill development to occur on the adjoining L1 sites.
23. The St Teresa's School site zoned Cultural 3 zone (Cu3) adjoins the forest remnant along a portion of the south-western boundary. Although Cu3 rules require school buildings to be set back 6 metres from the boundary, some caretaker's or accessory buildings can be built very close or right up to the reserve boundary. Should St Teresa's School decide to dispose of any of the Cu3 zoned land surplus to their requirements, the land would then revert to the underlying L1 zoning opening up the potential for further urban intensification.
24. The two environmental asset waterways running along parts of the north-western and south/south-eastern boundaries of the forest remnant (refer to Attachment 6 in the Section 32 Assessment appended as **Attachment 3**) provide it with potential indirect protection through a provision stating that any building development, filling and excavation within 7 metres of these waterways is a discretionary activity. In reality though, any resource consent application for such works within the 7 metre setback would only be able to be considered in the context of the effects on the adjacent waterway and not the forest remnant trees/ tree roots.
25. The general city rules also place some restrictions on the volume of filling and excavation within various zones (including L1 and Cu3) where no waterway is present. There are exceptions, for example, for the installation of utilities and permitted building foundations, which may lead to serious damage of tree roots extending beyond the forest remnant boundary and affect the health of the trees.

### Description of Issues

26. None of the provisions currently applicable to Riccarton Bush protect the kahikatea forest remnant sufficiently from the external threats posed by activities associated with development intensification along its periphery. The attached Section 32 assessment accompanying the plan change provides the full background and reasons for the proposed changes. The following is the summary of issues associated with peripheral development and its potential adverse effects on the health and amenity of the forest remnant.
27. Damage to trees and their root systems - The extensive root systems of large trees growing close to the forest remnant boundary, kahikateas in particular, are likely to extend into adjacent properties and be particularly susceptible to adverse effects of residential activities. Tree roots will potentially be cut and damaged during ground works associated with laying building foundations and services. There have already been instances of such root damage occurring along the boundary. Root damage can make trees vulnerable to disease and dieback resulting in loss of branches, overall form and, in extreme cases, the loss of tree's stability and potentially windthrow. Similar effects can result from inappropriate tree branch trimming. While property owners have the right to cut any overhanging branches, there have been occasions when

neighbours have also cut vegetation within the forest remnant to reduce shading effects on their properties. Conversely, shading of the forest vegetation by taller buildings in close proximity to the forest remnant, may inhibit vegetation growth in the vicinity, cause disease or even dieback of nearby trees.

28. Windthrow - The current The forest remnant management principles allow natural ecological processes to occur in the forest with minimum human intervention. As a result of natural conditions, e.g. old age or poor health, the trees are susceptible to shedding large branches or even to windthrow. Edge trees are more exposed to strong winds and therefore more prone to windthrow. With the close proximity of buildings to the forest remnant comes the risk of branches or trees falling onto residential properties, particularly in extreme weather. This may be exacerbated where, due to residential activities taking place, the roots have been trimmed or disturbed to the extent that trees become sick and/or unstable. The risk to life and property created by the possibility of branch shedding or windthrow increases as the peripheral development intensifies on the forest remnant boundary.
29. Hydrological and soil aeration effects - Buildings, footpaths, terraces and driveways in the vicinity of the forest remnant create large areas of impervious surfaces that disrupt the natural hydrological patterns of the soil. The stormwater runoff is diverted into the reticulated stormwater systems and the infiltration of rain water into the soil immediately adjacent to the forest remnant is reduced. This affects the amount of rain water available to the roots of plants growing in the vicinity. Soil compaction associated with building construction, filling and extensive areas of impervious surfaces may also affect the level of soil aeration around the tree roots extending, or potentially extending, beyond the forest remnant boundary. Poor soil aeration inhibits the growth of new roots and can result in the death and decay of a large proportion of the existing root system.
30. Risk of fire - Whenever a residential development is located in close proximity to a forest there is an increased risk of fire spreading between the developed areas and the trees. The effect of fire on the slow growing forest remnant vegetation could be potentially devastating and that threat may increase as the development around the boundary intensifies. Accessory buildings such as garages and sheds, often used to store flammable substances, are of a particular risk and there has been at least one incident of fire in a garage within metres from the forest remnant boundary. Equally, a fire starting in the forest could pose a serious danger to the surrounding properties located close to the forest remnant boundary.
31. Contamination and cross-pollination - Properties adjoining the forest remnant are a source of invasive weeds challenging the flora of the indigenous forest. The practise of dumping the garden waste over the shared boundary into the forest has contributed to this problem. Close proximity of private gardens also creates a threat to the forest remnant gene pool resulting from cross-pollination with hybridised and non-endemic natives planted in private gardens nearby. The maintenance of private gardens along the forest remnant boundary may involve the use of herbicides and insecticides. The associated chemical spray drift poses another threat to the forest remnant as it can cause dieback of vegetation.
32. Impacts on visual amenity - Development close to the forest remnant boundary has the potential to adversely impact on the visual amenity of the forest remnant as enjoyed by the local residents and visitors to Riccarton Bush - both from within the forest remnant and from privately and publicly owned sites, walkways and roads external to the forest remnant. While single storey buildings will generally not obscure the views of the forest upper strata from roads nor be highly visible from within the forest remnant or other properties, the higher density, two storey developments can dominate the environment, obscure the views of the forest remnant and significantly detract from its amenity.
33. Reverse sensitivity issues - 'Reverse sensitivity' effects are complaints made by newcomers against the established activities or the effects they produce. One of the most commonly received complaints of this nature is about the shading of the adjoining properties caused by the forest trees, particularly along the southern and south-eastern boundaries. Complaints from neighbours about the branch and leaf fall as well as the risk of windthrow have also been received by the Trust. As the replacement trees planted along the forest remnant boundary in the 1980s mature and the boundary canopy grows higher, the neighbouring properties close to the boundary will potentially experience an increase in shading. New development

intensification would exacerbate the problem of reverse sensitivity further, although the existing 4 metres, or more in places, separation zone may help alleviate some of the problems.

## OPTIONS

34. Section 32 report evaluates the following three options for resolving the potential conflict between the urban development activities on the forest remnant boundary and the long term health and survival of the kahikatea forest remnant.
35. **Option 1 - Status Quo**  
This option considers leaving the current provisions unchanged (the status quo). The objectives and policies give recognition to the outstanding natural and amenity values of the kahikatea forest remnant and promote its protection. The associated rules provide it with effective protection within its boundaries but do not mitigate the adverse effects of peripheral urban development on the forest remnant. The coincidental protection through separation requirements for the two environmental asset waterways adjoining the western and southern boundaries of the forest remnant site is limited. The assessment concludes that despite an adequate objectives and policies framework the existing provisions are ineffective in achieving sufficient protection of the forest remnant from the effects of peripheral development.
36. **Option 2 - Six metre setback provision on all adjoining land**  
This option would seek to restrict urban development in proximity of the forest remnant by introducing a new policy specific to the protection of the forest remnant from external influences and new 6 metre separation or setback rules for all development and earth works on the L1 and Cu3 zoned land adjoining the forest remnant. The setback would be measured from the boundary with the Conservation 1 zone and extend 6 metres into the adjoining properties. When added to the 4 metre distance between the Riccarton Bush reserve legal boundary and the predator proof fence containing the forest remnant, the 6 metre setback would result in the total separation of at least 10 metre. Any development or earth works proposal within that 6 metre separation area would be a discretionary activity and require a resource consent.
37. Although development opportunities on private properties adjoining the forest remnant may potentially be restricted under this option, the assessment concludes that the proposed provisions would be effective in achieving sufficient long term protection of the forest remnant and meet the Plan objectives. In some areas the cleared space between the outer forest remnant boundary and the predator proof fence is greater than 4 metres creating a separation greater than 10 metres between private properties and the forest remnant. Therefore, the uniform 6 metre setback from the legal boundary may not be seen as equitable by some property owners. The Plan would require a substantial number of amendments to the Natural Environment policies, Living 1 and Cultural 3 zone provisions, filling and excavation provisions, clarifications to the definitions of 'building' and 'works', as well as exceptions to the rules for properties on the northern and north-eastern boundaries which are far more than 10 metres away from the forest remnant. This option is not therefore seen as entirely efficient.
38. **Option 3 - Protected (notable) tree status applied to the entire lowland kahikatea forest remnant**  
An alternative option is to apply a protected trees area status (Category 2 Notable trees) to the entire forest remnant which is an area of significant indigenous vegetation of national importance. This classification covers both the ancient kahikatea trees, to which alone the heritage tree status would apply, and all other vegetation including the younger regenerating or replacement trees, which may not classify as notable at this stage but are important in the natural functioning and regeneration of the forest ecosystem. On balance, it is considered appropriate to apply a notable tree status to the entire forest remnant. The extent of the 10 metre setback from the base of the forest remnant Protected Trees Area is shown in the Section 32 report (**Attachment 3**) on the map marked there as **Attachment 5**. The details of the proposed applicable provisions are discussed in paragraphs 19 – 21 above.
39. This option gives better effect to the relevant objectives and policies associated with heritage (trees), natural environment and amenity protection. It relies on the existing rule framework and requires minimal amendments to the Plan. The 10 metre setback would achieve the level of protection recommended by Professor David Norton in his kahikatea roots research. As under

Option 2 above, the development opportunities on private properties adjoining the forest remnant may potentially be restricted, however, the assessment concludes that the proposed provisions would be effective in achieving sufficient long term protection of the forest remnant and better meet the Plan objectives. The proposed protection mechanisms are considered the most efficient, therefore this is the preferred option.

## CONCLUSIONS

40. While recognised by its own Act of Parliament and identified in the City Plan as an ecological heritage site containing the last remnant of lowland kahikatea forest in the Christchurch area, the kahikatea forest remnant is still susceptible to the negative environmental effects of the activities peripheral and external to its legal boundaries. The current mechanisms contained in the City Plan provide a high level of protection to the forest remnant within its site. The existing provisions, however, have proved insufficient to protect the forest remnant from the effects of peripheral urban development. A number of recent developments along the forest remnant periphery have resulted in undesirable outcomes with respect to the health of the forest and reverse sensitivity issues, including locating buildings over the tree root systems and very close to the boundary.
41. Classifying the lowland kahikatea forest remnant as a Group 2 Notable group of trees (Protected Trees Area) will result in a 10 metre separation rule applying to activities defined as 'works' in the adjoining Living 1 and Cultural 3 Zones and provide the forest remnant with the desired level of protection from external activities. The discretionary activity status for such works would provide a certain amount of flexibility to the adjoining property owners who may wish to proceed with some form of development in proximity to the forest remnant boundary. The necessary resource consent process will provide the Council with an opportunity to assess the potential impacts of the proposal on the forest remnant and use its discretion with regard to imposing conditions or refusing the application.
42. Section 32 of the Resource Management Act requires the Council to be satisfied that any proposed plan change is a more efficient and effective means of achieving the Plan's objectives and policies than the current or alternative provisions. The attached Section 32 report concludes that this is the case for the proposed amendments to the City Plan. Should the Council resolve to publicly notify the proposed plan change then those changes will be available for the community to make submissions on. The submitters will then be able to present their submission at a public hearing following which the hearing panel will be obliged to make a recommendation to the Council on whether or not the plan change should be accepted, amended or rejected.