
PLANNING REVIEW AND ASSESSMENT OF EFFECTS: WOONG TREE: LAND CONTAMINATION ISSUES

1. Summary

This Assessment of Effects should be read in conjunction with the Land Contamination Assessment and Remediation Action Plan by WSP (Attachment I to the WTPDLP response), and the overall proposal and Assessment of Effects as originally lodged with the EPA.

In 2016, WSP undertook a PSI and targeted soils sampling at Wooing Tree.

That 2016 report identified that the site did not trigger any land contamination consent requirements under the National Environmental Standard for Assessing and Managing Contaminants in Soil to protect Human Health (NESCS).

Subsequently, WSP undertook a land contamination assessment on behalf of Waka Kotahi – New Zealand Transport Agency (WK-NZTA) as part of the work associated with the forthcoming construction works for the roundabout at the intersection of State Highway 8B and 6, and the Barry Avenue roundabout.

That work for WK-NZTA identified a HALO effect immediately around the base of the treated timber poles associated with the vineyard.

When WTPDLP became aware of this, it commissioned WSP to undertake a similar analysis of the Wooing Tree site. This identified similar land contamination issues immediately around the base of many of the poles (estimated about 50%).

WSP have prepared a remediation action plan for the site. They have identified that the best means to manage these isolated hotspots is by way of retention of soil on the site, but with a mixing of soils. They find that with this methodology the effects of the development can be successfully managed and that the mixed soil will be below contamination levels.

This application is advanced on that basis.

2. Proposal

The Wooing Tree proposal is set out at length within the application. The aspects relevant to this assessment is to remove the vines and associated infrastructure (posts and wires) and redevelop the land for predominantly housing.

On removal of the vines and posts, the soil will be managed as proposed in the WSP remediation action plan, i.e. it will be graded so as to achieve a mixing of soils to a depth of 300mm. The Applicant will then proceed with the standard development associated with roading, infrastructure, street planting and street furniture; with new sections grassed and subdivided ready for housing development.

On completion of the land grading process, validation sampling will be undertaken by WSP to confirm that the necessary soil standards have been achieved.

3. **Background**

The Wooing Tree Winery has employed organic viticultural practices for some considerable time.

In 2016, Wooing Tree commissioned WSP to undertake a preliminary site investigation including targeted soil sampling on the property.

This work was completed and that report was provided as part of the original application. That concluded there were no land contamination issues which triggered the NESCS or posed a risk to human health.

WSP were recently commissioned by WK-NZTA to undertake land contamination investigations associated with the roundabouts at Barry Avenue and the intersection of State Highway 8B and State Highway 6. During this process they identified that there are isolated confined elevated levels of arsenic around the base of the posts used to hold up the vineyard wires. This was tightly confined around the posts and appeared to be chemicals leaching out of the base of the post.

When WTPDLP was informed of this, they commissioned WSP to undertake an investigation of the Wooing Tree vineyard.

The results of this are set out in the WSP report at Attachment I to this WTPDLP response to comments on the Application.

Essentially WSP found that there were isolated hotspots of arsenic levels in soil above NESCS standards.

WSP have prepared recommendations as to how best to manage this soil situation. They have prepared a remedial action plan for the site which WTPDLP will implement under the overall supervision of WSP.

4. **Findings**

WSP sampled 30 sites throughout the vineyard focused on the land immediately around the posts.

They assessed the soil for a broad range of heavy metals.

The WSP report found that *“50% of the samples analysed from adjacent to the timber posts contained arsenic concentrations in excess of soil guideline values”*. These elevated arsenic levels occurred immediately around the base of 50% of the posts. This did not exceed a depth of 300mm or a distance from the post of more than 200mm.

They found no other heavy metals or contaminants above acceptable guidelines.

These findings are set out at length within the WSP report.

5. **Remediation action plan**

WSP in their report sets out a detailed Remediation Action Plan for the site.

They looked at two options. The first was to remove soil from the site. The second was to retain it on site with soil mixing during earthworks. The WSP report describes this option as *“mixing of soil hotspots with the surrounding soils to a depth of approximately 300mm to ensure that areas containing elevated arsenic concentrations are effectively diluted by surrounding soils. This option is considered to offer significant environmental and sustainability benefits and is therefore the most cost-effective and strategic solution for hotspot remediation across the site. This remedial option is therefore strongly recommended.”*

The WSP report goes on to analyse the application of this mixing for areas involving cut to fill areas and areas without cut.

In both cut to fill areas and areas without cut, WSP's view is that the mixing of soils and redistribution as the land is made good post removal of the vines and posts, is "*considered likely to be sufficient to ensure that micro hotspots on the site are mitigated (local mixing)*".

WSP recommends a validation sampling following this land contouring work and/or sampling of any stockpiling.

A condition of consent to this effect is already included within the application.

The WSP report sets out a detailed contaminated materials management plan including:

- plan management and control,
- contaminated land specialist supervision,
- procedures around stockpiling and any off site disposal,
- health and safety procedures, and
- record keeping and monitoring requirements.

WTPDLP fully accepts these recommendations.

I have drafted conditions of consent which require land contamination issues to be managed in accordance with this remediation action plan. Those conditions also require ongoing monitoring by a qualified specialist, particular health and safety procedures and site monitoring and recording.

The results of that monitoring is to be reported to both the Otago Regional Council and CODC.

The WSP report also sets out a series of protocols for accidental discovery of contaminants.

Conditions of consent to this effect are already included within the application. This will form part of the overall remediation action plan for Wooing Tree.

6. **Reasons for consent**

Under Rule 5.6.1 of the Regional Plan: Waste; hazardous waste at contaminated sites involving disturbance of land or deposit of hazardous waste in, on or under land is a **discretionary activity**.

7. **Assessment of Effects**

The WSP report identifies the land contamination effects of this proposal. They relate to the elevated levels of arsenic immediately around what is expected to be 50% of the posts supporting the vines within the vineyard. The extent of elevated levels are at a depth shallower than 300mm and a distance from the post up to 200mm.

The level of contamination is above human health standards as set out within the NESCS.

A key aspect of this application is that the source of contamination will be removed from the site.

The WSP report sets out an extensive mitigation process to manage these effects. These have been summarised in section 5 above.

With this mitigation, the level of contaminants will be brought into compliance with the NESCS standards.

With appropriate conditions of consent, this matter can be successfully managed.

Appropriate conditions of consent are recommended to give effect to the WSP Remediation Action Plan and the recommendations of WSP. With these conditions of consent in place, the effects of these land contaminants can be successfully managed so that the effects are less than minor.

8. Statutory assessment

The analysis below assesses the relevant statutory provisions that apply to the application.

(a) Clause 31, Sixth Schedule, COVID-19 Recovery (Fast-track Consenting) Act (CRFCA) :

The RMA sets out the statutory framework within which resources are managed. The CRFCA incorporates elements of this framework into decisions under the CRFCA, pursuant to clause 32(1) of Schedule 6. Clause 31 sets out the matters for consideration when assessing the resource consent.

Under clause 31(1), when considering an application for resource consent and any comments received, the Panel must, subject to Part 2 of the RMA and the purpose of the CRFCA, have regard to:

- (i) Any actual and potential effects on the environment of allowing the activity;
- (ii) Any measure proposed or agreed to by the consent applicant to ensure positive effects on the environment to offset or compensate for any adverse effects that will or may result from allowing the activity;
- (iii) any relevant provisions of any of the documents listed in clause 29(2), which includes a national environmental standard, national policy statement, New Zealand Coastal Policy Statement, regional policy statement, plan or proposed plan, and any planning document recognised by a relevant iwi authority and lodged with a local authority; and
- (iv) Any other matter that the Panel considers relevant and reasonably necessary to determine the consent application.

A discretionary activity consent is required for this activity. Section 104B of the RMA (which is relevant pursuant to clause 32 of the CRFCA) states:

104B Determination of applications for discretionary or non-complying activities

After considering an application for a resource consent for a discretionary activity or non-complying activity, a consent authority—

- (a) *may grant or refuse the application; and*
- (b) *if it grants the application, may impose conditions under [section 108](#).*

(b) Clause 31(1)(a) – Actual or potential effects on the environment

Clause 31(1)(a) requires the Panel to have regard to any actual or potential effects on the environment of allowing the activity.

Section 7 above sets out an assessment of the effects of this proposal. The conclusion is that the effects are less than minor.

As there are no adverse effects, there is no need for the applicant to propose an offset to or compensatory measure to offset or compensate for adverse effects and to bring about positive effects.

(c) Clause 31(1)(c) and clause 29(2)(a) – National Environmental Standard

The NESCS applies to this application.

The NESCS is targeted at protecting people and the environment from land contamination.

It sets out the procedures to investigate potentially contaminated land with various escalations depending on risk.

In this case a full DSI has been undertaken by WSP.

The intent of the NESCS is obviously to manage land to a point where health issues are below the NESCS human health guidelines.

In this case, the remediation action plan recommended by WSP demonstrates that the effects of this can be successfully managed and the soil mixed to an extent where it does comply with the guidelines. Therefore with the implementation of the remediation action plan, this proposal would meet the NESCS.

(d) Clause 31(1)(c) and clause 29(2)(b) – Other regulations

There are no other regulations relevant to this activity.

(e) Clause 31(1)(c) and clauses 29(2)(c) and (d) – National Policy Statement and New Zealand Coastal Policy Statement

There are no National Policy Statements relevant to this activity.

(f) Clause 31(1)(c) and clause 29(2)(e) –Regional Policy Statement or Proposed Regional Policy Statement

The Otago Regional Council has an Operative Regional Policy Statement 2019 (Operative in Part) (**RPS**). This addresses a number of issues.

Relevant matters of the RPS are addressed in the application and in the additional information requested by the Panel (see Attachment P to the Applicant’s response to request 1 for further information).

In terms of land contamination, the RPS contains the following policy:

Policy 4.6.5 Managing contaminated land

Ensure contaminated or potentially contaminated land does not pose an unacceptable risk to people and the environment, by:

- a) Assessing and, if required, monitoring contaminant levels and environmental risks;**
- b) Protecting human health in accordance with regulatory requirements;**
- c) Minimising adverse effects of the contaminants on the environment.**

Comment

- The WSP report undertakes an assessment of the land
- The Remediation Action plan sets up a monitoring approach for the site and works
- The source of contamination is removed from the site
- The WSP work identifies the best method to address contamination issues on the site.

(g) Clause 31(1)(c) and clause 29(2)(f) – Otago Regional Plan: Waste

The ‘Regional Plan: Waste’ applies. Under Part 5 Contaminated sites, Rule 5.6 relating to land disturbance states earthworks associated with a site containing hazardous materials is a **discretionary activity**.

The following objectives of the plan apply:

5.3.1 To avoid, remedy or mitigate any adverse effects of contaminated sites.

5.3.2 To avoid further site contamination.

Comment:

- The WSP report identifies how this land can be mitigated.
- The posts which are causing this isolated leaching of arsenic are removed from the site.
- The adverse effects are mitigated by the mixing of soils bringing contaminant levels to within acceptable human health standards.
- Given the removal of the material, there will be no further contamination issues on the site.

The following policies apply:

5.4.1 To recognise and provide for the relationship Kai Tahu have with Otago's natural and physical resources through:

- (a) Carrying out investigations of, and works to remedy and mitigate, contaminated sites in a manner which takes into account Kai Tahu cultural values;*
- (b) Protecting waahi tapu and waahi taoka, and access to them by Kai Tahu, from the effects of contamination;*
- (c) Acknowledging that future generations will inherit the results of work carried out to remedy or mitigate contaminated sites; and*
- (d) Maintaining consultation with Kai Tahu on issues relating to site contamination.*

5.4.2 To locate and investigate contaminated sites in Otago.

5.4.3 To contain contaminated sites and rehabilitate them to the extent that is practicable having regard to the use to which the land is to be put.

5.4.4 To apply the Australia and New Zealand Conservation Council (ANZECC) "Guidelines for the Assessment and Management of Contaminated Sites" (January 1992) as a guide to determine the most appropriate course of action for a particular contaminated site.

5.4.5 To prepare and maintain a register outlining details of sites which are contaminated.

Comment:

- This process (triggered by the work on the roundabout) has identified this potential land contamination issue. The source of the issue, being the posts, are being removed from the site. This will ensure no further continuation of contamination.
- The earthworks controls on the site address cultural issues. Accidental discovery protocols as requested by Ahukaha remain in place.
- The site has been subject to a DSI by WSP.
- The site is being rehabilitated through the mixing of soils and bringing material into acceptable levels.
- WSP have put forward a remediation action plan which meets best practice standards.
- A full monitoring report of these issues will be provided to Otago Regional Council (and CODC).

(h) Conclusion

This proposal triggers consents under both the NESCS and Otago Regional Plan: Waste.

The level of contamination is low and, as illustrated in the WSP report, can be successfully managed such that the effects are less than minor.

Through this management, soil mixing can be undertaken in a manner which brings the site into full compliance with the relevant standards of the NESCS and Otago Regional Plan: Waste.

As such, this proposal meets the statutory assessment.

9. Comments from parties

This project is proceeding under the CRFCA. Issues of involvement of identified parties are provided through that legislation.

The area of contamination is fully contained within the site. These are a confined inland area and depth series of contaminated hotspots at the base of what is estimated to be 50% of the posts within the vineyard. These issues are confined within the site.

The matter can be successfully mitigated within the property. No hazardous material needs to be taken off site and therefore there is no potential for issues to arise as a result of trucking that material through streets or similar effects.

This would have no impact on the procedures completed by the Panel through which comments were sought from the other parties.

10. Suggested conditions of consent

I have set out below the suggested conditions of consent relating to land contamination:

Land contamination

46. *That if during earthworks on the site unexpected discovery of potential sources of contamination are revealed, then:*

(a) Work on this part of the site shall cease.

(b) The CODC Compliance Officer and the Otago Regional Council Compliance Officer shall be informed.

(c) The applicant shall retain a suitably qualified professional to undertake a detailed Site Investigation Report and that report shall be provided to the District Council and Regional Council.

(d) Should that report identify levels of contamination above NES guidelines, then work shall not recommence on the site until the necessary approvals are obtained from CODC and/or Otago Regional Council as appropriate.

46A As part of the removal of timber posts associated with the existing vineyard for each stage of the development, the consent holder shall fully implement the Remediation Action Plan by WSP forming part of this application. That remediation work shall involve the mixing of soils to a depth of 300mm across the affected area.

46B The consent holder shall appoint a contaminated land specialist suitably qualified and experienced in contaminated land management, who shall overview all aspects of the Remediation Action Plan, including implementing a monitoring programme of site works to ensure compliance with the Remediation Action Plan.

- 46C The consent holder shall put in place health and safety procedures as recommended in the remediation action plan by WSP and forming part of this application.
- 46D The consent holder shall provide to the Otago Regional Council and the CODC copies of the monitoring report under condition 46B, and of the final validation report under condition 46E.
- 46E At the conclusion of the removal of the vineyard infrastructure and the making good of the land ready for development, in any stage or stages; the Consent Holder shall retain a suitably qualified professional to undertake a validation DSI to confirm that the land complies with the National Environmental Standard for assessing and Managing Contaminants in Soil to Protect Human Health (2011).*