

Report 99.29

4 February 1999

File ENV/14/2/2

P:CR:ENV:98.29

Report to the Environment Committee
from Nicki Kinghorn, Policy Advisor

Topsoil Mining in the Wellington Region

1. Purpose

To advise the Council on existing resource management issues and controls associated with topsoil mining in the Wellington Region.

2. Background

At the briefing for newly elected Councillors held on 1 December 1998, a request was made for information on the management of topsoil mining by regional and territorial authorities in the Wellington Region. Of particular interest were:

- the consistency of management approaches between Porirua, Upper Hutt and Wellington City; and
- the number and details of resource consents for topsoil mining in Porirua City.

3. Definitions

The following definitions of 'topsoil mining' and 'turf farming' are sourced from the Parliamentary Commissioner for the Environment's report, *Management of the Environmental Effects of Commercial Topsoil Removal and Turf Farming by the Porirua City Council* (1993).

Topsoil mining is the commercial practice of removing farmland topsoils for respreading in urban areas. This is a one-off, non-repeatable practice on any one site.

Turf farming is the commercial practice of growing a dense sward of pasture, which is stripped and removed along with a thin layer (2-5cm) of topsoil. This practice can be repeated and sustained over a long period if effectively managed.

4. **Resource Management Act 1991 requirements**

Both regional councils and territorial authorities must promote the sustainable management of topsoil when exercising their functions and powers under the Act. Relevant regional council functions include the control of the use of land for the purpose of soil conservation, and the maintenance and enhancement of the quality of water in water bodies and coastal water (s.30(1)(c)). Territorial authorities have much wider land use functions under the Act, including the control of any actual or potential effects of the use or development of land (s.31(b)).

Land use controls can be adopted in regional and district plans, which must not be inconsistent with the Regional Policy Statement (RPS). When deciding on the most appropriate means of exercising its functions, the Wellington Regional Council must have regard to the efficiency and effectiveness of other means (s.32). The Regional Council has decided that it is most appropriate to provide policy guidance only, and leave rule making regarding topsoil mining up to the discretion of territorial authorities, as they have wider land use functions.

5. **Regional Council Controls**

5.1 **Regional Policy Statement**

Issues identified:

- Erosion due to exposure of subsoil (Issue 10)
- Mobilisation of persistent chemicals stored in soil (Issue 11)
- Loss of soil fertility through loss of organic matter, soil compaction and wind erosion (Issue 12)
- Protection of highly versatile soils (Issue 13)

Objectives include maintenance of the life supporting capacity of soil (Objective 1), and limiting land degradation (Objective 2) and off-site impacts of such degradation (Objective 5).

Policy guidance relates to avoiding, remedying, or mitigating adverse effects of topsoil removal and turf farming, and ensuring that those effects do not exceed standards set for soil, water, air, ecosystems or landscape in any regional or district plan (Policy 2).

The RPS commits the Council to the preparation of the Regional Soil Plan containing objectives, policies and, where appropriate, rules and methods for the

implementation of policies for managing topsoil removal and turf farming. Methods in the RPS include development and advocacy of guidelines and codes of practice for topsoil removal, turf farming, and other activities, in liaison with territorial authorities and industrial groups.

5.2 Proposed Regional Soil Plan

Policy guidance relates to:

- locating activities with potentially irreversible effects on soils of low versatility, where practicable;
- regulating soil disturbance to ensure that activities are unlikely to have significant adverse effects on (among other things) erosion rates, soil fertility, soil structure, water quality, and downstream locations; and
- ensuring that recognised erosion control and land rehabilitation techniques are adopted to avoid, remedy or mitigate any adverse effects resulting from soil disturbance activities. For topsoil mining activities, compliance with land rehabilitation guidelines, as provided in an Appendix to the Plan, are advocated as an appropriate technique (see Attachment 1).

The Plan does not include any rules specifically for the purpose of controlling topsoil mining and turf farming. However, any disturbance of greater than 1000 m³ of soil on erosion prone land is a Restricted Discretionary Activity. It is unlikely that topsoil mining or turf farming would be undertaken on such land. Topsoil mining and turf farming are more appropriately managed by territorial local authorities.

5.3 Discharges to water

Control of discharges to water is a Regional Council responsibility. Where sediment runoff from topsoil mining does enter and cause a conspicuous change in the colour and visual clarity of water bodies, the Regional Council will take abatement and enforcement action.

6. Territorial authority controls

Territorial authorities can place conditions on land use consent to control adverse effects of activities, e.g., sediment runoff into water bodies. Territorial authorities control specific activities through district rules. Topsoil mining is not specifically referred to in the district plans mentioned below. However, any activity not specifically provided for in regulations for the rural zone are controlled by a default rule.

6.1 Wellington City District Plan

Topsoil mining and turf farming are managed as Discretionary Activities (Unrestricted) under a default rule for rural areas.

6.2 Proposed Porirua City District Plan

Earthworks are no longer defined as a specific activity. Topsoil mining and turf farming are categorised as Discretionary Activities under the default rule for the Rural Zone.

6.3 Upper Hutt City District Plan

Topsoil mining and turf farming are managed as Non-complying Activities under the default rule for the Rural Zone.

7. Topsoil mining and turf farming in Porirua District

There is currently one ongoing topsoil mining operation and one turf farming operation with consent to operate in Porirua District, as detailed below.

7.1 Cottle Topsoil Ltd.

An application for topsoil mining on Harris Road was originally lodged with the former Hutt City Council and declined. This decision was overturned by the Planning Tribunal in 1986, which granted consent subject to the conditions listed in Attachment 2.

7.2 Williams and Gaunt

An application for sod production (i.e., turf farming) in Pauatahanui (S.H. 58) was lodged with, and granted by, Porirua City Council (PCC) in 1990. Conditions placed on the consent required the applicant to prepare a management and operation plan in consultation with the Wellington Regional Council, to be approved by the City Council prior to the commencement of operations (see Attachment 3). This plan was to address the establishment of the farm, maintenance and harvesting of turf, rehabilitation of the site and review of the operation.

7.3 Other consents

Other consents that have been issued by PCC for activities that have now ceased operation include:

- Ken Gray - Topsoil mining from 3 separate sites; Grays Road, Rawhiti Road & Paekakariki Hill Road.
- Ingles, Cripps & Finlayson - Turf Farming, Moonshine Road.

8. Monitoring and Research

8.1 Regional Council Research

The Wellington Regional Council commissioned the Department of Scientific and Industrial Research to carry out two research and monitoring studies relating to the effects of topsoil mining and turf farming on subsequent pasture productivity. The first was a three year study, running from 1986 to 1989, at a site on Belmont silt loam, with a landscape typical of that which may be mined for topsoil in the region. Results indicated that while remaining subsoil provided a good physical rooting environment for pasture growth, the nitrogen is severely depleted and becomes a limiting factor for pasture growth after topsoil mining. Findings also showed that satisfactory pasture production could be achieved after topsoil mining, but required the application of greater quantities of nitrogen and phosphorous fertilisers. Lenient grazing and replacement of turf also encouraged growth. This study made recommendations for topsoil mining and rehabilitation policies and guidelines. The guidelines currently included in the Proposed Regional Soil Plan are based on these recommendations.¹

The second study was a benchmark data gathering (1990) and monitoring programme (1991 and 1993), at a turf farm in Pauatahanui, to be operated by Ingles, Cripp and Finlayson. After one year of operation, this study concluded that there was a slight improvement in organic matter content of the uppermost soil layer, which was attributed to improved turf management practices. However, after approximately 2.5 years of operation, monitoring results indicated that while soil organic profiles were not significantly affected, the total depth of topsoil would be removed in 3 to 12 years if the same rate of turf extraction continued.² This turf farm has ceased operation.

8.2 Monitoring of current consents

To a large extent, topsoil mining and turf farming operators undertake self-monitoring. However, PCC enforcement officers are responsible for making site visits to monitor that conditions of consent are being met by topsoil mining and turf farming operators. This is not done frequently, which is in part due to the large number of consents to be monitored by these officers.

¹ (Haart, P.B.S., August, J.A., and Watts, H.M. (1990) *Topsoil Mining in the Wellington Region: Background Issues, Agronomic and Cost/Benefit Studies on an Upland Soil, and Rehabilitation Guidelines for the Region*. Contract Report No. 90/2. DSIR, Lower Hutt)

² (Ross, C.W. and Barker, P. R. (1991). *First Monitoring Report on Effects of Turf Farming at Judgeford*. DSIR Land Resources. June 1991).

9. Conclusion

Regional Councils have limited functions relating to the control of land use. With respect to the sustainable management of topsoil, the Wellington Regional Council is exercising its functions by providing policy guidance in the RPS and Regional Soil Plan. Territorial authorities have very wide functions relating to land use. While they have not regulated topsoil mining *per se* through any district rules, this activity is regulated by the Wellington City Council, Porirua City Council, and Upper Hutt City Council using default rules for the rural zone. It is appropriate that land use controls on topsoil mining are adopted in district plans, rather than regional plans, to avoid unnecessary overlap and over regulation between jurisdictions.

Topsoil mining and turf farming currently require resource consents under the Porirua City, Wellington City and Upper Hutt City District Plans. Consent conditions for topsoil mining and turf farming activities currently operating in the Porirua District were set prior to the preparation of the guidelines for topsoil mining included in the Proposed Regional Soil Plan. However, the conditions are generally consistent with these guidelines.

10. Recommendation

That the report be received and the contents noted.

Report prepared by:

Approved by:

NICKI KINGHORN
Policy Advisor

WAYNE HASTIE
Manager, Resource Policy

JANE BRADBURY
Divisional Manager, Environment

Attachments: 3

Attachment 1:

Appendix 4: Guidelines for Topsoil Mining. *Proposed Regional Soil Plan for the Wellington Region, as amended by decisions on submissions.* September 1998.

Attachment 2:

Planning Tribunal decision No. w43/86. *Cottle Topsoil (1982) Ltd. v. Hutt City Council*. pp.5-7.

Attachment 3:

Porirua City Council. *Notice of Decision to Start a Sod Production Unit*, State Highway 58, Pauatahanui.