Environmental Appeal Board

APPEAL NO. 96/12 - HEALTH

In the matter of an appeal under section 5 of the *Health Act*, R.S. 1979, c.161

Between:	Ben Van Druten	**APPELLANT**
And:	Environmental Health Officer	**RESPONDENT**
Before:	A Panel of the Environmental Appeal Board David Perry, Panel Chair Elizabeth Keay, Member Katherine Hough, Member	
Date of Hearing:	October 4, 1996	
Place of Hearing:	Richmond, B.C.	
Appearing:	**For Appellant**	
	Spokesperson: Rob Arden Witnesses: Ben Van Druten David Kneale	
	For Respondent	
	Spokesperson: Nick Potter Witnesses: Heather Goble Blair Choquette	

BACKGROUND

This is an appeal from the decision of the Respondent, Heather Goble, Environmental Health Officer (the "EHO") to deny a permit for a sewage disposal system on a property at 22196 - 61st Street, Richmond, B.C. (the "Property").

The Appellant, Ben Van Druten, applied for a permit to install an on-site sewage disposal system which was engineered by B.H. Levelton & Associates Ltd., Consulting Engineers. It utilizes an approved package treatment plant, the Whitewater DF-50-FF Package Treatment Plant (the "Treatment Plant") coupled with Ozonation treatment (the "Ozonation Unit") and a raised disposal field (the "Disposal Field"). Collectively the whole disposal system will be referred to as the "Proposed System". The Proposed System is intended to service a single family dwelling with usage by greenhouse workers employed by the Appellant.

In a letter dated May 15, 1996, the application was rejected by the Respondent for the following reasons:

1. A high seasonal water table was observed at the surface in the proposed field area.

2. The proposed area is covered with 18-24 inches of fill material. Percolation rates and soil profile of the natural soils are unknown.

3. Drainage ditches placed on opposing sides and in close proximity to the proposed sewage disposal area appeared to have little or no effect on lowering the ground water table in the monitored area.

4. This engineered sewage disposal system was proposed for an area with a minimum soil depth of 24 inches.

RELEVANT LEGISLATION AND POLICY

This appeal is taken pursuant to section 5 of the *Health Act*. The Environmental Appeal Board may confirm, vary, or rescind the ruling under appeal.

The provisions governing the construction, installation, design and approval of residential sewage disposal systems are found in the Sewage Disposal Regulation, B.C. Reg. 411/85 (the "Regulation"). Section 6 of the Regulation states:

> Subject to section 7, no sewage disposal system constructed after the date of this regulation which involves the use of a septic tank or package treatment plant is permitted unless the system conforms with the standards of construction, capacity, design, installation, location, absorption, operation and use set out
>
> ...
>
> (b) for conventional package treatment plant systems, in Schedule 3.

The Property and Proposed System do not comply with sections 11 and 18 of Schedule 3. Section 11 states that an absorption field cannot be located where there is less than four feet of undisturbed soil to the ground water table. In this case, the evidence is that the water table has been observed at the surface of the undisturbed (native) soil. Dry, permeable soil is required to further treat effluent released from the Treatment Plant.

Section 18 of Schedule 3 sets out the construction specifications of a conventional absorption field. The Disposal Field proposed in this case does not meet all those specifications.

A relaxation of these requirements is authorized in certain circumstances. Section 7 provides:

7 (1) Where a medical health officer or public health inspector is satisfied that it is *impossible for a person to comply with*

…

(b) in the case of a conventional package treatment system, sections *11*, 12 or *18* of Schedule 3,

but that the person can comply with all other provisions of the appropriate schedule, he may issue a permit to construct under section 3, containing conditions that he considers appropriate to meet the omitted standards *having regard to safeguarding public health.* [emphasis added]

In this case, the Appellant can meet all other provisions of the schedule. Therefore, the Proposed System may be considered under section 7(1) of the Regulation. The main consideration for the Respondent, and the Board on appeal, is whether the Proposed System can meet or compensate for the omitted standards (high water table and method of construction) in a fashion that will safeguard the public's health.

An Environmental Health Officer (a "public health inspector") considering a system under section 7(1) is required to exercise discretion. It is clear law that discretion must be exercised objectively and with an active intelligence.

REVIEW OF EVIDENCE

The Property covers an area of 4.62 acres in a still largely rural area of Richmond. The Appellant operates a commercial greenhouse operation on the Property and wants to build a house on the Property so that his family can oversee the day-to-day operation of the business more readily. Currently the Appellant does not employ workers outside of his immediate family.

The Property has only 10-12 inches of native soil above an impervious layer of clay but has had additional soils from the same property placed on top making the site now 24-30 inches deep.

The specifications within the original proposed system were modified by the Appellant's witness, Mr. Kneale, from B.H. Levelton & Associates Ltd., prior to the hearing and are contained in the Appellant's Statement of Points. The current proposal makes substantial changes to the original proposal which had been rejected by the Respondent and was filed with insufficient time for the Respondent to adequately analyze and respond to the changes. These modifications would add 4-6 inches of soil to be blended into the soil at the site to create hydraulic lift to ensure that the mound will operate properly. The depth of the mound would also be increased to 1.2 meters of sand which Mr. Kneale testified would be sufficient backup if the Ozonation Unit failed.

Mr. Kneale was concerned, however, that in the intervening time since the Proposed System originally was submitted for approval, the Appellant had constructed a new shed on the west side of the Disposal Field. It was Mr. Kneale's recommendation that this shed be dismantled and a fence be erected to ensure no further encroachment on the Disposal Field.

The majority of the evidence called by the Respondent focused on the perceived inadequacies of the Disposal Field, and in particular, the proposed mound. Ms. Goble's able explanation of the Respondent's position was overshadowed by the lack of preparation time required to respond to the Appellant's modified proposal. However, Ms. Goble testified that, even with the modifications, she was not satisfied that the Proposed System was adequate to safeguard public health.

By policy, the Health Unit requires a disposal field to have a minimum of 18 inches of unsaturated native soil before a permit will be issued. Additional fill material may be added as a supplement to increase the soil depth to ensure proper treatment of the effluent.

The application in this case is for an engineered system which is backed up by technical data and addresses the lack of 18 inches of native soil and the problem of surface water. As stated previously, when assessing an application under section 7(1), it is incumbent upon an Environmental Health Officer to objectively assess the application with an open mind to determine whether or not this particular application safeguards the public health.

At the hearing, the Respondent's witnesses identified three primary health issues:

1. the "ground water" was at the ground surface in the location of the Disposal Field;

2. the sewage in the mound would not be attenuated but would "perch" and flow out of the toe of the mound onto the surface of the land; and

3. the ditches were inadequate to deal with the inevitable breakout from the mound.

The evidence presented by the Appellant was most compelling. The Appellant conceded there was a ground water problem on the site but the evidence was that the proposed depth and circumference of the mound would adequately address the issue. The Respondent's submission that there would be substantial perching below the sand mound was flatly contradicted by Mr. Kneale whose evidence this Panel accepts. The Respondent failed to provide any evidence for their conclusion. The Appellant's evidence is that with 1.2 meters of sand on top of a 4-6 inch level of mixed soil and sand between the site and the mound would cause any liquid in the system to properly attenuate and there would be no "breakouts" of sewage or liquid from the mound. The addition of the sand to be mixed with the soil at the base of the mound would increase the unsaturated depth of soil below the disposal bed to 36 inches, thereby, increasing the efficacy of the mound.

The Panel finds that the Respondent also erred in concluding that the size of the mound would be so enormous that it would encroach on neighbouring property or in the alternative would not be sufficiently distant from the property line to ensure an adequate safety margin. The correct calculations for the mound bring it within acceptable size, slope and distance parameters of the Ministry's own policies.

The Appellant must show that the public health will not be at risk when requesting that the Environmental Health Officer exercise her discretion under section 7 of the Regulations.

In the Panel's opinion sufficient evidence was presented that the Proposed System would effectively treat the domestic sewage such that its disposal through the Disposal Field would not constitute a public health hazard. The retention times within the raised field is sufficient to adequately treat effluent before it enters any of the surrounding drainage ditches.

Regarding the Ozonation Unit, the Panel accepts the Appellant's evidence that there were enough safeguards built into the Proposed System that even if the Ozonation Unit is ineffective, it will not affect the efficacy of the total system. There is no reason to believe that if the Proposed System is properly installed that it will not meet the treatment specifications claimed and no proof was supplied to contradict this assessment.

The Panel finds that, in the instant case, an on-site sewage disposal system incorporating the Treatment Plant and Disposal Field, if installed in accordance with Schedule 3 (except for sections 11 and 18) will not constitute a risk to public health. The Ozonation Unit should nevertheless be required as an additional safeguard.

THE DECISION

The Panel finds that this is a situation where, having regard to safeguarding public health, a permit should be issued by the Environmental Health Officer to construct a sewage disposal system, containing those conditions set out in sections 1-10, 12-17 and 19-21 of the Schedule 3. Accordingly the appeal is allowed.

The appeal is allowed with the following conditions:

a. The approved on-site sewage disposal system for the Property ("Approved System") will be the Proposed System presented at this hearing except that the shed erected along the west side of the Disposal Field be removed and a fence be erected 3 meters from the edge of the infiltration bed around the Disposal Field to prevent future encroachment on the said field. Swale along property line to be reconfigured to a drainage ditch which connects to existing ditches on either side of field.

b. The Respondent may specify reasonable inspection requirements during the course of installing the Approved System, as amended.

c. The Respondent may require that an engineer verify, in writing, that the Approved System has been installed in accordance with the plans and specifications.

d. The Respondent may require the registration of a restrictive covenant pursuant to section 215 of the *Land Title Act* regarding the installation and the maintenance of the system. This restrictive covenant would be made in favour of the Ministry of Health and may have the following provisions, amongst any others the Respondent considers appropriate:

i. The Approved System will be monitored and maintained as follows:

1) During the first two years of the operation of the Approved System the Treatment Plant will be inspected (and necessary repairs made) on a quarterly basis by either the manufacturer of the Treatment Plant or other qualified business or person.

2) In subsequent years the Treatment Plant will be monitored on an annual basis and the Ozonation Unit twice a year.

3) Additionally, the Environmental Health Officer may inspect the Approved System from time to time as the Environmental Health Officer deems fit on reasonable notice to the owner.

ii. The Approved System will be installed in accordance with the plans and specifications prepared by B.H. Levelton & Associates as amended herein.

iii. Until the Approved System has been installed as required and has been verified by an engineering firm as noted above no residence is to be built upon the Property.

iv. A residence on the Property shall not be occupied unless the Approved System is properly maintained.

v. The owner releases and indemnifies the Ministry of Health from any and all claims for damages or compensation however made by the owner or third parties including successors in title to the land.

e. Any of the terms and conditions, where appropriate, can be included in the conditions attached to the permit to be issued by the Respondent. The Respondent can also include, in the permit conditions, those periodic inspection and maintenance requirements for the Approved System is set out in the proposed restrictive covenants.

f. The Environmental Health Officer must advise the Appellant by letter, on or before February 28, 1997, whether or not the Appellant requires a registered statutory covenant.

g. The Appellant must register the statutory covenant within sixty days of receiving the above-described letter if the Respondent requires a registered statutory covenant.

h. The permit, together with the amended specifications and the conditions, should be issued within 15 days of the registration of the statutory covenant.

i. The permit will be valid for one year following issuance.

Katherine Hough, Panel Member
Environmental Appeal Board

January 14, 1997