

Environmental Appeal Board

APPEAL No. 97-HEA-30

In the matter of an appeal under section 8 of the *Health Act*, R.S.B.C. 1996, c.179.

BETWEEN: Ian Wright **APPELLANT**

AND: Environmental Health Officer **RESPONDENT**

BEFORE: A Panel of the Environmental Appeal Board
Carol Martin, Chair

DATE OF HEARING: September 16, 1997

PLACE OF HEARING: Gibsons, B.C.

APPEARING: For the Appellant: Tony West
For the Respondent: Timothy Adams

APPEAL

This was an appeal against the July 24, 1997 decision of the Environmental Health Officer ("EHO") to refuse to issue a permit for a sewage disposal system for Lot 20, Plan 13477, DL 1543, Group 1, N.W.D. Dames Road, Irvines Landing, B.C.

The Environmental Appeal Board has the authority to hear this appeal under section 11 of the *Environment Management Act* and section 8 of the *Health Act*. The Board, or a Panel of it, may, after hearing all evidence, decide to vary, rescind or confirm the decision of the EHO.

The Appellant is seeking an order that a sewage disposal permit be issued on the grounds that the EHO inappropriately refused to consider a high effluent quality "Glendon BioFilter" for the lot.

BACKGROUND

The permit applicant, Mr. Ian Wright of Indiana, U.S.A., has owned the lot north of Sechelt for many years. He would like to build a 2000 sq. ft. two bedroom, two-bathroom year-round residence on the property. The proposed new house is to be located on the .138 ha (~1/3 acre) waterfront lot, near the top of a rock out-cropping which rises from the shoreline of the Strait of Georgia. The two adjacent waterfront lots were developed some years ago, the houses also being located on exposed bedrock, quite close to the side property lines of the subject property. All of the lots in the area are hooked to a public water system, but the location, age and type of sewage disposal systems for the neighbouring houses is not known.

In September 1996, Mr. Wright wrote a letter to West and Associates, engineering consultants, outlining his attempts thus far to secure approval for a sewage disposal

system for the property, having applied initially for a health permit in late 1994 through Ray Hansen, Trucking, who had also dug the test holes. At that time Mr. Wright had been refused a permit for the property because it could not meet the regulatory requirements for on-site sewage disposal due to insufficient area and soil for an absorption field. In the letter Mr. Wright noted that, following the refusal, he had contacted several other engineers, stating that the consensus about his property, up to now, seemed to be, in Mr. Wright's words, "...an unusually difficult/challenging situation we have," or that they could "...design a system that will work but it won't be approvable and we don't want the hassle of fighting the Government to get approval."

Mr. Wright also noted in the letter to West and Associates that the EHO of the Coast Garibaldi Health Unit had told him, again in Mr. Wright's words, that the EHO was "...constrained by the wording of the law and must reject any waste disposal system that we propose as our site does not meet the requirements of the law."

On October 29, 1996, through West and Associates, Mr. Wright again applied for a "Permit to Construct...a Sewage Disposal System," indicating that the application was for an "innovative" system rather than for a "conventional" or "alternate" one. The system applied for, manufactured by West and Associates and known as the "Glendon BioFilter" package treatment plant, utilizes a 1200 imperial gallon septic tank with a pump chamber to carry clarified effluent into a sand pit lined with an impervious lining. The sand is said to wick the waste water upward to the surface where it can evaporate, theoretically cleansed of its contaminants by the sand. Any excess liquid is then allowed to run off the sand mound onto the surrounding ground. The sand filter itself covers an area of approximately 20' x 30' (50 cu. metres in volume), and is proposed to be located in the NE corner of the property, 3 metres from the road and adjacent property boundaries, presumably the only place on the small lot capable of accommodating it.

After consideration of the application and the relevant legislation and policies, the EHO, in his rejection letter of July 24, 1997, noted that he had found that the proposal does not meet the regulatory requirements of the Sewage Disposal Regulation, B.C. Reg. 411/85, nor does it comply with the "Policy for Innovative Technologies and Designs New to B.C.". The main reason given by the EHO for refusing to issue a permit was that the application, in his view, could not be approved as an alternate system because the lot has insufficient area for an absorption field as required by Schedule 2 of the *Sewage Disposal Regulation*, and, in fact, no absorption field was proposed in the application. He noted, as well, that according to Ministry of Health policy, innovative systems can be approved only under certain circumstances, primarily for remedial work on an existing failing system, or when there exists an acceptable backup option (in case of failure), such as a reserve field area which meets the requirements of the *Regulation* or where a municipality will guarantee a solution if the system should fail. In the case of Mr. Wright's application, there was no mention of a failing system, no reserve field area available, and no municipal bylaw to support either a holding tank or other guaranteed remedy.

On behalf of the owner, West and Associates appealed the EHO's decision to the Environmental Appeal Board on July 28, 1997. The grounds for the appeal were that the EHO "inappropriately refused to consider a high effluent quality "Glendon

BioFilter System" for Lot 20, and that the EHO failed to make a technical assessment of the design, and rather had rejected it on administrative grounds alone without considering its technical merits.

THE ISSUE

Did the EHO properly reject the system in accordance with the legislation?

LEGAL AUTHORITY

Approval and construction of sewage disposal systems is governed by the *Sewage Disposal Regulation*.

According to Section 2(1)(b), an owner of land shall ensure that sewage is discharged into a "sewage disposal system that is constructed or installed in accordance with the Act and this regulation".

Section 3(1), under the heading "Permits to Construct Systems," states that no one shall construct, or install, a sewage disposal system without a permit.

Section 3(3)(a) states that no permit shall be issued under subsection (1), "in the case of construction or installation, until site investigation tests set out in or required by Schedule 1 have been carried out to the satisfaction of the medical health officer or public health inspector, and either of them is satisfied that, having regard for the provisions of that schedule, the construction, installation and ultimate use of the system will not contravene the Act or this regulation". [emphasis added]

Section 3(4)(e) goes on to state that: it is a condition of every permit that the construction, and installation, "complies with the standards for the appropriate sewage disposal system set out in this regulation".

Section 6 refers to the standards to which sewage disposal systems constructed after 1985 must conform. It states:

Subject to section 7, no sewage disposal system...which involves the use of a septic tank or a package treatment plant is permitted unless the system conforms with the standards of construction, capacity, design, installation, location, absorption, operation and use set out

- (a) for conventional septic tank systems, in Schedule 2,
- (b) and for conventional package treatment plant systems, in Schedule 3

Section 7(1) states that, where an EHO is satisfied that a person cannot comply with the requirements in the two schedules, which set out minimum native permeable soil depths, maximum slope and percolation rates and the standards for absorption field construction, then the EHO has the discretion to issue a permit with conditions which will serve to offset or mitigate those specific shortcomings of the site which fail to meet the requirements of the *Regulation*, as long as the EHO is satisfied that the system will safeguard public health and that the site is capable of meeting all other requirements of the appropriate schedule.

Schedule 2 of the *Regulation* sets out the requirements for conventional septic tank systems. As the proposed system utilizes a septic tank, Schedule 2 applies.

Section 17 of Schedule 2 provides that:

The length of a drainage pipe in an absorption field shall be determined as set out in Appendix II, in accordance with the percolation rate and the estimated daily sewage flow. The minimum length of drainage pipe for any installation shall not be less than 45 m [150 ft.]....

Section 20 of Schedule 2 specifies details on the diameter, length, and layout of the drainage pipe in an absorption field.

ARGUMENTS AND EVIDENCE

The Appellant

Mr. Wright's agent, Mr. Tony West of West and Associates, stated that he believes that the EHO has ample latitude to approve the proposed "Glendon BioFilter" and sand filter sewage disposal system, which his firm designed, supplies and installs, because the Appellant can demonstrate that the use of the system should pose no threat to public health. Mr. West noted that the chances are remote that any effluent could move into the nearby ocean or onto an adjacent property, and, if it did, he could possibly connect Mr. Wright's system to a nearby approved ocean out-fall which serves a Pender Harbour pub. He stated that the deep soil in the area should be good enough to absorb any leakage from the sand filter, and if it were, by chance, to reach the water, the ocean would purify it.

In Mr. Wright's September 1996 letter to West and Associates Mr. Wright commented that, since he had been told that his property would not accommodate a sewage disposal system approvable under current legislation, he was seeking a high quality alternative system which, at least experimentally, had been tested and shown not to create a risk to public health. Among other things, he went on to say that he hoped the Appeal Board would sympathetically approve the innovative system for his property, perhaps after being convinced that the proposed new technology would, in this instance, accommodate the owner's needs and not endanger public health.

Mr. West submitted that, the fact that the "Glendon BioFilter" unit is approved for use in similar situations in the United States means that it must be acceptable, and thus approvable, in B.C. as well. The Appellant submitted that sufficient technical information and performance and monitoring data for the "Glendon BioFilter" package treatment plant had been provided to the EHO to demonstrate that there should be no risk to public health if the system is installed and used as proposed.

The Appellant agreed that the proposal could not be approved as a "conventional" sewage disposal system under the current legislation as the property does not have sufficient area for a "conventional" absorption field. In his September 4, 1997 Statement of Points, Mr. West stated that the Appellant agrees with the EHO that "...it is not appropriate to consider the system under Section 7 of the Regulation", because that section requires an absorption field with trenches and pipes

(Schedules 2 & 3). He notes that Section 7 "does not contemplate systems that do not rely upon trench-based absorption fields."

Mr. West then cited section 3(3)(a) of the *Sewage Disposal Regulation* which, in his interpretation, allows the EHO to issue a permit for any system, even where a proposed system does not conform to the requirements of the *Regulation*, as long as the EHO is satisfied that there will be no risk to public health.

Mr. West noted that there are no absorption trenches or pipes in the system proposed in Mr. Wright's application, as none are required with the "Glendon BioFilter" system, but the system has been approved by the Ministry of Health under its policy regarding innovative treatment and disposal systems. Mr. West suggests, therefore, that because similar "unconventional" or innovative systems have been considered in previous cases under section 3 of the *Regulation*, this application could also be approved by the EHO under section 3. He cited previous Appeal Board decisions which refer to section 3(3)(a). The Appellant maintains, therefore, that if it can be shown that effluent is not likely to be discharged onto the surface of land or into a body of water, and thus not create a public health risk, then section 3 ought to give the EHO the discretionary authority to issue a permit.

To demonstrate his belief that there would be no public health risk created through the use of the proposed system on the property in question, Mr. West provided a chart entitled "Glendon Testing Results" based on monitoring results of approximately 16 installations of the "Glendon BioFilter" in B.C. Mr. West, an engineer, explained that all the tests showed satisfactory results with regard to the level of contaminants [TSS, Nitrates, Fecal Coliform, and BOD] in the water that would be emitted from the sand filter after leaving the mound. In answer to questions arising from the list of monitoring results of other installations, Mr. West explained that all but one of the "Glendon BioFilter" units listed had been installed as repairs of existing systems or under the "Code of Good Practice" section of the *Regulation*, which requires a minimum of ten acres for approval. Only one installation of a "Glendon BioFilter" unit was listed as having been installed as an "innovative" system and it was located in Pitt Meadows where, the Panel was told, there is a Municipal bylaw through which the Municipality guarantees to back up an "innovative" system being tested experimentally in the event it should fail. Thus, all of the Biofilter systems approved to date have met the terms of the *Regulation* and the Ministry's innovative technology policy. As indicated above, Mr. Wright's situation does not meet the terms of the policy or the *Regulation*.

However, Mr. West explained that, while the application for a "Permit to Construct a Sewage Disposal System" had been submitted indicating that the Appellant was seeking approval for an "innovative" system, in fact he now believed that the EHO could approve the proposed system for the property under section 3(3)(a) of the *Regulation*.

In the Appellant's Statement of Points, Mr. West also argued that the policy regarding the use of "innovative" systems, even if it does apply, does not have the force of law and therefore cannot be used by the EHO as the sole reason for denying permits to applicants who demonstrate that their systems will not cause a risk to public health. Mr. West reiterated his belief that there is "ample latitude to approve the permit as requested as long as there is no risk to public health."

At the hearing, the Appellant agreed that the proposed system would not qualify for approval under current Ministry of Health policy and guidelines for testing “innovative” systems or new technology, but he reiterated that the EHO could approve the use of the Glendon BioFilter system and sand filter under section 3 of the *Regulation* because the engineering firm could show that other similar systems that have been installed in B.C. have had satisfactory test results.

Mr. West suggested that, with approval, the EHO could include conditions requiring an engineer’s certification, a future ozonator (if necessary), a service contract with the manufacturer, water conserving fixtures, a hot water circulating pump to avoid the need to waste water while hot water reached the tap, and that these conditions could be entrenched in a restrictive covenant pursuant to section 219 of the *Land Title Act*.

The Respondent

The primary reason given by Mr. Tim Adams, the EHO for the Coast Garibaldi Health Unit, for refusing to issue a sewage disposal permit as proposed for the subject property is that, in his view, the legislation governing on-site sewage disposal, the *Health Act* and the *Sewage Disposal Regulation*, does not grant a public health inspector the authority to approve experimental or “unconventional” systems such as the “Glendon BioFilter”. He contended that the legislation allows permits to be issued for “conventional” or “alternate systems” only, and does not recognize, as yet, an on-site system which uses a septic tank but does not dispose of the effluent from it into a conventional absorption field as described in the *Sewage Disposal Regulation*.

The EHO noted that, even with section 7 applications for alternate systems, under current law, an approvable absorption field must be installed to conform to the particular requirements of Schedule 2 or Schedule 3 of the *Regulation*. He noted that section 7 provides the EHO with discretionary authority only when a property cannot meet the requirements under the relevant schedule regarding percolation rates, degree of slope, depth of soil/distance to groundwater and absorption field construction. In this case the proposed system does not meet the requirements of several sections of Schedule 2 pertaining to an absorption field which cannot be relaxed under the *Regulation*. In particular, the *Regulation* does not give the EHO the discretion to waive the requirement for a conventional absorption field of a prescribed length where a septic tank is used.

With regard to the Appellant’s suggestion that the EHO could approve the “Glendon BioFilter” system under section 3(3)(a) of the *Regulation*, Mr. Adams pointed to section 2(1) of the *Regulation* which states that an owner must dispose of his household effluent only into a public sewer or into “a sewage disposal system constructed or installed in accordance with the *Act* and this *Regulation*.” (emphasis added) He argued that if section 3 were the only section needed to be considered by the EHO, then there would be no need for all the other sections of the *Regulation*, nor for the detailed construction requirements in the schedules or appendices.

The EHO also argued that, even if he were able to approve the proposed system under section 3(3)(a), he would have to be completely satisfied that there would be

no threat to public health. On the contrary, he cited several concerns regarding the safety of the system which included the fact that the monitoring of the proposed system for performance and safety had not yet been completed, and that leakage from the sand mound periphery could contain a higher level of contaminants including pathogens than is permissible. The EHO expressed additional concerns because the engineer's site plan of the proposed system, which had been included with the application, was different from the one presented at the hearing - the major difference being the inclusion of two septic tanks in the latter plan.

The Respondent added that the proposed system has been approved on other properties for testing under the innovative systems program which allows for the installation of certain systems, which do not yet meet the requirements of the *Regulation*, in specific situations so that they may be tested and monitored over a period of time. He noted, however, that this application could not meet the requirements of the Ministry of Health policy which provides guidelines for the approval of the testing of new technology, such as the "Glendon BioFilter" system, because the proposal does not include the necessary back-up option in case of failure and the innovative system, while still being tested, should not be used for new installations.

The Respondent stated that he would be prepared to approve the proposed system for the subject property only:

- after the *Regulation* is changed to allow such systems which utilize methods other than the conventional absorption field required by Schedule 2,
- if all of his technical concerns about the system could be addressed,
- if long term monitoring of the system could be guaranteed, and
- if approvable backup were permitted in the event of failure.

He noted that while many systems are approved for testing, not all of them can be approved under the normal permitting system and, in fact, none of the "Glendon BioFilter" units have yet received a permit as they are still being tested and are considered experimental in B.C.

The Respondent requested that the appeal be denied on the grounds that the EHO does not have the authority to approve permits for new systems that are considered experimental or unconventional and that he has concerns regarding safety to public health.

DECISION

If, as the EHO argues, the proposed system cannot be approved at all under the current legislative regime, this appeal would be dismissed - the proposed system could not be legally permitted under the legislation. However, this issue need not be decided at this time as the Panel finds that, even assuming the proposed system could be permitted under the legislation, this is not an appropriate case to do so.

Upon a careful consideration of all the evidence and argument made by the parties, the Panel is not satisfied that the proposed system will protect the public's health.

The system has had limited use in B.C. and is still considered experimental in this province. A failure of this relatively untried system would almost certainly result in contamination of neighbouring properties and adjacent waterfront. The site cannot sustain a conventional or alternate system. If the experimental system failed, there would be no alternatives available for an *on-site* system. Although the Appellant mentioned the possibility of hooking-up to the Pender Harbour pub outfall, it is only that, a possibility. No evidence was tendered as to whether this is truly a feasible option.

These factors, in addition to the small size of the property, the proximity of the system to the neighbour's property (**3** metres), the road (**3** metres) and to the ocean, and the uncertainty with respect to the plans (is one septic tank sufficient or are two septic tanks needed as proposed at the hearing) lead this Panel to conclude that the proposed system was properly rejected by the EHO. When the public's health is at issue, it is appropriate to err on the side of caution.

This appeal is dismissed.

Carol Martin, Panel Chair
Environmental Appeal Board

February 4, 1998