Appeal No. VA88/0/088

AN BINSE LUACHÁLA

VALUATION TRIBUNAL

AN tACHT LUACHÁLA, 1988

VALUATION ACT, 1988

Golden Vale Food Products Limited **APPELLANT**

and

Commissioner of Valuation **RESPONDENT**

RE: Offices, Effluent Treatment Works & Land situated at Lot 1A in the townland of Rathgoggan North, E.D. Rathluirc, Co. Cork

B E F O R E

Hugh J O'Flaherty - S.C.	**S.C. Chairman**
Mary Devins	**Solicitor**
Brian O'Farrell	**Valuer**

JUDGMENT OF THE VALUATION TRIBUNAL
ISSUED ON THE 12TH DAY OF JUNE, 1989

By notice of appeal dated 6th August, 1988, the appellants appealed against the respondent's decision fixing the rateable valuation of the above entitled hereditaments at £200.75.

The grounds of the appeal were as follows:-

1. That the valuation is excessive and inequitable and bad in law.
2. That the rateable valuation is bad in law, in that rateable valuations have been allotted to, or attributed to, items which are not rateable hereditaments or alternatively, in arriving at

the net annual value, the Commissioner of Valuation has erred in law in including therein the value or values of items which are not rateable hereditaments.

3. That the Commissioner of Valuation has erred in law in including in the valuation or assigning an annual value or rateable valuation to non rateable plant and machinery.

Mr. Desmond Killen F.R.I.C.S., A.R.V.A., of Donal O'Buachalla and Company Limited presented a written submission on behalf of the appellants dated the 14th May, 1989.

In the course of that submission Mr. Killen set out that the matter for consideration of the Tribunal is the rateability of the effluent treatment works in total namely £87 (misc.). The amounts of the valuations attributable to the disputed items, viz.

£50 A.D.F. Plant

£37 L.A.N.D.E.T. Plant

(Lagoon Aeration Nitrification and Denitrification Effluent Treatment Plant)

had already been agreed between the parties. It was now accepted by the respondent that the A.D.F. Plant is not rateable and that the valuation will be reduced by an agreed amount of £50.

Mr. Killen went on to describe the appellants as one of Ireland's largest and most progressive milk processors. Their manufacturing complex is situated on a 65 acre site at Charleville. It manufactures a range of products including fresh milk, milk powders, fat filled milks, milk replacers, vending powders, butter and a variety of natural and processed cheeses.

Mr. Killen referred to a previous decision of Judge Fawsitt in March, 1987, when the effluent treatment works in total was declared non rateable machinery as per Section 7 of the Annual Revision of Rateable Property (Ireland) Amendment Act, 1860.

Mr. Kevin Heery, who is a District Valuer with 18 years experience in the Valuation Office and holds a degree of Bachelor of Commerce from the National University of Ireland, presented his written submission on the 28th February, 1989.

In the course of that submission he set out that he had inspected the property on the 11th February, 1988, and found that it consisted of offices, effluent treatment works and land. He said that the valuation history of the premises was as follows:-

The valuation of Lot 1A Rathgoggan North was reduced from £120.00 to £33.00 as a result of the 1985 Circuit Court decision. At 1986 Revision this valuation was increased to £120.00. The 1986 Circuit Court case relating to this property has not yet been heard. No change was made in the valuation at the 1987 Revision. At the 1987 1st appeal stage he was deputed by the Commissioner to inspect the premises and report.

Mr. Heery said that having considered his report the respondent made no change in the total valuation of £120.00 but apportioned the valuation £33.00 (buildings) and £87 in the miscellaneous column.

The appellants and Cork County Council lodged appeals to the Valuation Tribunal.

The valuation of £120.00 had been agreed with Donal O'Buachalla and Company Limited on behalf of the appellants subject to the issue of the rateability of the L.A.N.D.E.T. effluent plant which amounts to £37.00 rateable valuation.

In view of the Tribunal's decision in respect of North Kerry Milk Products Limited (Appeal No. 88/205) the respondent had conceded that the valuation attributable to the Alternating Double Filtration Effluent System R.V. £50 should be deleted.

He says that the L.A.N.D.E.T. effluent treatment system consists of ten very large lagoons (basins) to which the effluent is circulated over a period of several weeks. The lagoons are carved out of the ground and banked at the sides. There is no need for waterproofing or other treatment as the ground is impervious to water and no seepage occurs. Aeration is carried out in the first two basins by means of a number of floating propeller type aerators. These aerators are not fixed but are moored to the banks by ropes. The number of these aerators can be increased or decreased as required.

The flow of the effluent from the factory into the system of the lagoons is entirely by gravity.

He said that the respondent considers that the lagoon system is rateable under the Valuation Act, 1986, in that the lagoons contained the liquid for a sufficient length of time to allow a natural process to take place. In the alternative, the lagoons are deemed to be rateable being in the nature of ponds/ reservoirs.

In addition, he submitted that the lagoons are to be valued under Section 3 (1) of the Valuation Act, 1986.

Prior to the oral hearing there was made available to the Tribunal a precis of the evidence that would be submitted by Mr. Dermot Madden B.E., Consulting Engineer with the appellants and Mr. Con Flynn, BSc, Chemist, with the appellants. Both Mr. Madden and Mr. Flynn attended at the oral hearing and their precis of evidence was adopted for the purposes of the hearing and elaborated upon by them in the course of the hearing.

ORAL HEARING

The Oral Hearing took place on the 18th day of May, 1989.

Mr. Marcus Daly S.C. (instructed by Binchy & Co. Solicitors) appeared on behalf of the appellants. Mr. Aindrias O Caoimh (instructed by the Chief State Solicitor) appeared on behalf of the respondent.

In opening the case, Mr. Daly gave an outline of the evidence that would be adduced. He said in the first place that he wished to contend that the plant in question was "machinery" within the meaning of Section 7 of the Annual Revision of Rateable Property (Ireland) Amendment Act, 1860, which was inserted by Section 7 of the Valuation Act, 1986. He appreciated, however, that the Tribunal had held in previous cases that the definition of "machinery" was to be given a more restricted meaning in the light of the Valuation Act, 1986. While wishing to keep his powder dry in relation to the question of machinery, his chief submission was that the plant was entitled to exemption under the Schedule to section 15 of the Valuation (Ireland) Act, 1852, inserted by section 8 of the Valuation Act, 1986 in that any constructions which are designed or used primarily to induce a process of change in the substance contained or transmitted are entitled to exemption from rateability.

In his evidence Mr. Madden set forth in the first instance a brief outline of the history of the development of the appellants various effluent treatment works.
In the early years 1961 - 1966 approx. when effluent volume was small i.e. 50,000 gallons per day, spray irrigation was used over 200 acre farm at Ballincolly appro. 1.5 miles from the factory at Charleville, Co. Cork.

Due to expansion of factory, volume of effluent was increased to 200,000 - 250,000 gallons per day. The irrigation system could no longer cope with effluent volume. As the subsoil was of heavy clay and boulder clay, it was decided to construct a series of Anaerobic lagoons.

The disadvantages were:

(a) The smells from lagoons

(b) The time required was up to 8 months

(c) Difficulty in polishing effluent

The effluent volume still increased, and an Alternating Double Filtration plant was commissioned and built in 1972 to cater for 300,000 gallons of effluent. The lagoon system was still being used.

In 1977 a B.M.K.O.(Biochemical, Mechanical, combination oxygen) pilot scheme was constructed and tested over a few years. Results were very good. An Aerobic Digester system was also installed and tested.

Because effluent volume was still increasing it was decided to upgrade the effluent treatment system.

In 1980, all current dairy waste treatments were investigated by Mr. P. Somers D.Sc. and Mr. C. Flynn B.Sc. of Golden Vale staff and himself. Finally they decided in favour of L.A.N.D.E.T. (Lagoon Aeration, Nitrification and Denitrification Effluent Treatment).

This had two advantages:

(a) Ability to withstand shocks of volume, strength and P.H.

(b) Requiring no sludge removal.

Planning permission was obtained for the proposed scheme from Cork County Council and construction work started early in 1981.

Mr. Madden went on to give a brief outline of the construction of the treatment works as follows:

Demolition of intermediate embankments of anaerobic lagoon system. Removal of sludge from bottoms of all lagoons and deposit off site. Refurbish all remaining embankments.

Reduce areas to required levels and construct all new embankments with excavated materials to form basins for L.A.N.D.E.T. Scheme.

Install 14" pipes with stoppers at both ends and flexible ducting pipes to transfer effluent from basin to basin.

In Basin No. 4, a 12" diameter pipeline was laid across on supports and clamped, with slots cut in pipeline at photic level to feed sump. Pump installed with capacity of 100,000 gallons per hour for transfer of oxygenated liquid through 16" diameter pipe to basins 1 or 2 as required.
Construct jetty with Hyab for installation and removal of aerators.

Finally, construction of Transformer House and supply of power by marine cables to aerators.

Mr. Madden said that the effluent treatment plant is operating satisfactorily since 1982. The volume of effluent now being treated can be as high as .75 million gallons per day in the peak period, vis-a-vis the A.D.F. Plant capacity of 300,000 gallons per day.

Mr. Madden produced plans and photographs which are attached as Appendix A to this judgment.

He described the working of the system. He said that it was a totally integrated system from basins 1 - 10.
Basins 1 and 2 are aerated to produce a microbial floc from soluble B.O.D. (Biochemical Oxygen Demand).

Basin No. 3 floc deposited and stabilised. Photic layer transferred from Basin 3 to 4.

Basin No. 4 has a pipe line to a sump from which a pump can return the oxygenated liquid again from the Photic layer back to Basins 1 or 2 to mix with factory effluent.
Basins 5 - 10 have the flexible piping etc. for transfer of Photic layer.

Basin No. 10 outfall has again the facility for variation in draw-off level.

Under cross examination by Mr. O'Caoimh, Mr. Madden said that the discharge is into a passing stream which joins up with the Meague river. He said that depending on the quantity of effluent the complete process would take between 40 and 60 days.

Mr. Con Flynn BSc. gave evidence and, in the first instance, he provided a glossary of terms which is reproduced as Appendix B to this judgment.

In the course of his evidence Mr. Flynn gave a history of the previous treatment plants that had been tried out. He then told of the design of the L.A.N.D.E.T. system.
It consists of:-

a) Aeration by means of a series of high speed aerators.
There are fourteen 15 Kilowatt aerators.

b) Continuous flow through.

c) Adjustable level of transfer from Basin to Basin.

d) Optimum diffusion through all basins.

e) Recycle facility from Basin 4 to basins 1 and 2.

f) Variable draw off level from final basin.

g) Capacity to treat 750,000 gallons per day and to cope with shock loading.

System description

Effluent enters the system at Basin No. 1 through a 14" pipe with upturn. There are ten aerators in this basin. The purpose and action of aerator impellors is to incorporate oxygen and convert portion of the organics into Biomass. There are four aerators in Basin 2.

Dissolved oxygen probes inserted in Basins 1 and 2 provide a continuous recording.

Oxygenation requirement is dependent on the volume and strength of effluent. The management of aeration basins (dispersive reactors) influences the course of purification that takes place in the other basins.

Basins 3 and 4 have photic, facultative and anaerobic layers of activity. Because of the aeration and breakdown which has taken place, phyto plankton, largely algae, proliferate. They absorb breakdown products and photosynthesise oxygen to the point of super saturation.
A recycle facility is in place for returning these oxygen enriched waters to basins 1 and/or 2.

In studying the phytoplankton 15 species of algae have been found in varying abundance principally:

Euglena.

Clamydymonas.

Chlorella.

Nannchloris.

The facultative bacteria play a role in breaking down partially degraded waste.

The anaerobic layer is where the "floc" carried over from aeration basins settles out and becomes digested by anaerobic bacteria.

Basins 5, 6, and 7 may be considered the early maturation stage. Grazers or zooplankton notably dahhnia and copepods consume the algae.

Basins 8, 9, and 10 are the late maturation section where the emergence of macro invertebrates (e.g. corixids and chironomids) is seen to consume the zooplankton.

There is further scope for macrophytes development toward the end of the system.

Because some of the algae are flagellates (i.e. are mobile) it may be opportune to draw off at a particular level of greater clarity at a given time - hence the facility variable draw off level. Mr. Flynn said that the system starts with solvent material generated in the area of waste and the solvent material is digested by bacteria and the bacteria themselves become consumed in part by zoological type organisms called protozoe. These are known as protozoen breakers. Mr. Flynn explained that there are more aerators in Basin 1 than in 2 because the effluent is strongest coming into Basin 1. It is partially broken down in Basin 1 and the process is continued in Basin 2. The effluent is oxygenated by encouraging a process to commence which continues right throughout the system and which also dictates the course of breakdown which takes place through the entire system. The particular management that is applied to those basins as well as the facility that is created there also dictates the course of action right throughout the system. Mr. Flynn explained that effluent from the factory varies in strength and volume so that management has to vary accordingly. There are indicators in the basins which tell the amount of oxygen that is in the water all the time. There is a continuous recording. The oxygenation

requirement in Basins 1 and 2 is monitored and so therefore it is known what aeration power should be applied.

What they have is an aerobic system right through. Mr. Flynn explained that there is always an operator in charge.

Mr. Flynn explained there is a two tier constituent coming into Basin 3. There is soluble B.O.D. which is a breakdown of the organics of milk still in soluble form and there is also the biomass floc coming through. The biomass is heavier than the soluble liquid and tends to settle out in Basins 3 or 4 or 5 but the greater quantity will settle out in Basin 3. Because it is heavier it sinks and as it sinks it falls to what is called the anaerobic layer where anaerobic bacteria grow and break it down.

Mr. Flynn also explained that there was a recycling facility for returning the flow to Basins 1 and 2 but it is not used at the moment.

In summary, Mr.Flynn said that what they had was a controlled system requiring a high energy input. There are 220 kilowatts of installed energy for aeration alone which is applied intelligently according to the oxygen rating in the system. It is a controlled aeration producing a change and controlling the result of the changes. The system produces a progression and controls it, according to Mr. Flynn.

Mr. O Caoimh, for the respondent, said that he was advancing two main arguments:-

1. He said that what we have here are lagoons. This constitutes land development and he referred to the schedule to Section 48 of the Valuation (Ireland) Act, 1852, inserted by Section 3 of the Valuation Act, 1986. At reference No. 2 in that Schedule among the categories of fixed property are stated to be:-

"All lands developed for any purpose other than agriculture, horticulture, forestry or sport, irrespective of whether or not such land is surfaced, and including any constructions affixed thereto which pertain to the development".

2. An alternative line is that it comes within the category of fixed property being plant and they are quite definitely to be considered ponds or reservoirs which are mentioned at reference No. 3 to the Schedule attached to Section 15 of the Annual Revision of Rateable Property (Ireland) Amendment Act, 1860, inserted by Section 8 of the Valuation Act, 1986.

He also advanced the subsidiary argument that while there was certainly an inducing of a process of change in Basins 1 and 2 that the remaining "lagoons", to use, as he said, a neutral term rely on what goes on and that what happens in the remaining lagoons is essentially a natural process.

Mr. Daly had in opening, anticipated the argument that it might be suggested that these were ponds or reservoirs and had put before the Tribunal certain dictionary definitions.

FINDINGS

In the first instance the Tribunal would reject the submission that the installations herein could be regarded as "machinery". The Tribunal finds it unnecessary to repeat the reasons for this decision which it has set forth in a number of cases, most recently in the Premier Molasses Company Limited case (Appeal No. 88/123; Judgment delivered 13th March, 1989). The Tribunal is confirmed in its view by the recent decision of the High Court (Mr. Justice Costello) in Pfizer Chemical Corporation V The Commissioner of Valuation (Judgment delivered 9th May, 1989).

The Tribunal next considers whether what is involved in this case constitutes lands developed for any purpose other than the exempted purposes at Reference No.2 to the Schedule to section 48 of the 1852 Act. The Tribunal has no difficulty in deciding that, of course, there is involved a development of lands but that is to beg the question. The real question is whether they are constructions entitled to exemption by reason of the Schedule to section 15 of the 1860 Act. It

is, in effect, conceded by the respondent that as regards Basins 1 and 2 without any doubt a process of change is induced in the substance contained or transmitted and the Tribunal is of the view that, in relation to each basin, the process of change is ongoing. It would regard the constructions as an integrated whole which should be regarded as one and which are "locked together" but, if it is wrong in this conclusion, nonetheless it reaches the conclusion that in relation to each basin there is taking place, admittedly over a length of time - but that makes no difference, a process of change in the substance contained or transmitted.
To repeat what Mr. Flynn said (and the Tribunal, of course, accepts in total the evidence given so ably by Mr. Madden and
Mr. Flynn) the system produces a progression and controls it.

That leaves the question whether these constructions are to be regarded as "ponds" or "reservoirs".

The Tribunal, naturally, has derived help from the various dictionary definitions that have been put before it but it feels that it can reach a conclusion even without resort to a dictionary definition by asking the question: would any reasonable person regard any of these constructions as ponds or reservoirs? The essential point about a pond or a reservoir is that it will contain, in the sense of storing, water or other liquid. What goes on in these works is a process of change and that cannot stand with the idea of "still water". They are not ponds or reservoirs but treatment works or plant.
As a matter of interest in the Second Edition (1989) of the Oxford English Dictionary "pond" in its first sense is defined as:-

> A small body of still water of artificial formation, its bed being either hollowed out of the soil or formed by embanking and damming up a natural hollow. Often described according to its use, etc., as a compensation-pond (for a canal, etc.), duck-pond, fish-pond, mill-pond, parish or village pond, skating- or curling-pond, etc.

Similarly, "reservoir" in the same work is described as:-

> A more or less capacious receptacle (of earthwork, masonry, or the like), specially formed or constructed to contain and store a large supply of water for ordinary uses.

Other definitions given include "a tank or cistern for water", "a place or area in which water naturally collects in large quantities" and "a place or sphere where something is collected or tends to collect, after the manner of water".

The determination of the Tribunal, therefore, is that the constructions herein are constructions which are designed or used primarily to induce a process of change in the substance contained or transmitted referred to at Reference No. 1 to the Schedule attached to Section 15 of the 1860 Act by reason of Section 8 of the Valuation Act, 1986.

APPENDIX B

GLOSSARY OF TERMS

L.A.N.D.E.T - Lagoon Aeration Nitrification Denitrification Effluent Treatment system.

NITRIFICATION - Conversion into nitrates by bacteria.

DENITRIFICATION - Removal of nitrogen or its compounds.

FLOCCULULUTATION - To aggregate into larger mass.

BIOMASS - Bacterial "floc".

AEROBIC - Requiring free oxygen for respiration.

FACULTATIVE - Capable of respiring at low oxygen levels.

ANAEROBIC - Capable of growing in the absence of oxygen.

B.M.K.O. - Biological Mechanical Combination Oxidation.

PHYTOPLANKTON - Vegetable plankton.

MACROPHYTE - Plant Life.

B.O.D. - Biochemical Oxygen Demand.

MINERALISE - To stabilize or Break down to its elements.

SHOCK LOADING - Extremes of volume, strength, temperature or P.H.

PHOTIC - Effected by light.