

Room 569, Fifth Floor,  
Mowat Block, Queen's Park,  
Toronto, Ontario M7A 1A2

IN THE MATTER OF

The Lakes and Rivers Improvement Act:

AND IN THE MATTER OF

The proposed refusal of the application of Norman Flindall for approval of the location of a dam on Smithfield Creek on Lot 23, in Concession B of the Township of Brighton, in the County of Northumberland.

REPORT TO THE MINISTER OF NATURAL RESOURCES

Pursuant to an appointment dated the 14th day of April, 1977 made by the Honourable Frank S. Miller, Minister of Natural Resources, the undersigned has conducted an inquiry into the proposed refusal of an application for approval of the location of a dam on Smithfield Creek by the applicant under The Lakes and Rivers Improvement Act.

Mr. V. L. Freidin of the Ministry of the Attorney General appeared on behalf of the Ministry of Natural Resources. The applicant, Mr. Norman Flindall, appeared in person. Mr. Charles Brian Bell, the owner of part of Lot 24 in Concession B in the Township of Brighton appeared and stated that he was a riparian owner. He requested to be made a party to the proceedings, and no objection being taken, Mr. Bell was added as a party. The applicant stated that a Mr. Douglas Greenley might wish to become a party. Mr. Greenley was in the court room and indicated that he merely wished to observe.

The grounds to be relied upon by the Ministry and set out in the notice under subsection 3 of section 8b of The Lakes and Rivers Improvement Act are as follows:

- '1. 1,400 lineal feet of trout and salmon spawning beds and habitat would be flooded out.
2. The riffles which help to aerate the stream and create habitat for insect larvae which trout feed upon would be eliminated.
3. Fish movement in this stream would be impaired.
4. The water temperature will be considerably higher as a result of ponded water, thus lowering the quality of the stream as a trout habitat.
5. The construction of the dam will create

siltation of the stream, clogging, spawning beds with sediment.

6. Well shaded and protected areas which give excellent cover to the fish will be eliminated.”

A jurisdictional issue appeared early in the inquiry. Although the documentation appeared to be limited to the question of the approval of the location of a dam as required by clause a of subsection 1 of section 10 of The Lakes and Rivers Improvement Act, the applicant's position was that he was not applying for approval of the location of the dam but that he was merely applying for approval of the plans and specifications of the reconstruction of an existing dam.

The application form provided by the Ministry for use of applicants appears not to make a distinction between clause a and b of subsection 1 of section 10 of the Act. It must be noted that nothing in the application provided any realistic plans or specifications of the proposed dam and the plan attached to the application while it referred to an existing dam, contained no illustration of the size or shape of the dam proposed to be installed. While the evidence did not clearly establish the date of the removal of a dam believed to have existed in the past, there are berms of soil that were constructed sometime in the past running at right angles to Smithfield Creek and one of the witnesses for the Ministry admitted the existence in the distant past of some sort of dam that held back the water of the creek. The evidence of the applicant established that there had been no headpond on the land during the last forty years. There was an argument that by reason of the berms directing the spring runoff into the main channel and thereby preventing the flooding of adjacent lands the berms in themselves constituted a dam. However, it was apparent that, assuming the berms should fall within the technical definition of a dam, the proposal was not to reconstruct or repair the berms but to create a new dam across the bed of the creek and create what would, in layman's parlance, be a new dam on the bed. It was said that two logs in the vicinity may have formed part of the original dam but there was other evidence that was consistent with these logs being trees that had fallen in the course of nature. It is not in my

jurisdiction to make a determination of this legal issue and I proceeded on the basis that the application was for the approval of the location of a new dam.

The first witness for the Ministry was Dr. Douglas P. Dodge who is the supervisor of the Environmental Dynamics Section of the Fisheries Branch. Dr. Dodge has a Masters and a Ph.D. degree, in the obtaining of which he specialized in the management and biology of rainbow trout, and has been employed by the Ministry for seven years in respect of matters related to the environmental aspects of the fisheries in the province. Dr. Dodge outlined the long term policy of the province respecting fishery management in Lake Ontario. He pointed out that prior to 1850 almost all of the streams on the north shore of Lake Ontario produced Atlantic Salmon. With agricultural settlement, installation of dams, reduction of water quality through over use of fertilizers and overharvesting the species was destroyed. In the interval there has been an introduction of undesirable species such as alewives and smelt and the long term policy of the province is to carry out a program of rehabilitation based on the rainbow trout species.

As background information respecting the program and the application under consideration the witness produced as Exhibit 4 a map showing various information respecting the streams flowing into Lake Ontario. In addition to the former and existing species found in the streams the map showed the interference in the streams such as dams that prevent the migration of migratory species of fish. In this regard the map shows that Smithfield Creek is blocked to the migration of fish by a dam located part way up the creek.

The witness indicated that in the long term program for rehabilitation in these areas, which is based on the rainbow trout species, the Ministry has two proposals for the rehabilitation of salmonids in Lake Ontario. The first proposal is the rehabilitation of a lake species, such as lake trout or some similar species, that is not dependent on migration into the streams for the completion of its lifecycle. Secondly, it is proposed to re-establish a migratory species such as rainbow trout or Atlantic salmon which will use the

streams. Included in the program is the removal of barriers that interfere with the migration of migratory species such as rainbow trout or the bypassing of such barriers with fishways. However, fishways are not a panacea as fishways select against some species and some sizes of species that do adapt to fishways.

A further aspect of the program is the maintenance of habitat with a view toward the prevention of the erection of dams and other works that prevent the reproduction of migratory species. Under this aspect of the program a review of applications under The Lakes and Rivers Improvement Act is done.

The witness indicated that rainbow trout is a migratory species. According to the literature, if a rainbow trout survives one spawning it will return to the same location for further spawning and the young will return to the area in which they were spawned. Where the number of spawning areas are reduced the fish will crowd into remaining sites with a resultant loss in production. Where a dam is constructed, there is a loss of spawning areas and secondly, there results a loss in production. With reference to spawning grounds the witness indicated that the map, Exhibit 4, indicates that there is a total length of 1,759 miles of streams flowing into Lake Ontario which could provide habitat and spawning grounds and that only 153 miles are available to species that migrate to and from Lake Ontario in their lifecycle. One hundred and sixteen miles are partially open leaving 1,490 miles blocked to migration.

With reference to the success of the program the witness indicated that the population of rainbow trout in Ontario is continuing to expand. There are three reasons for this expansion. The sea lamprey control program is showing results. The fishway program of bypassing dams has assisted. Thirdly, the deterioration and removal of old dams has permitted access to spawning grounds that were not previously available.

On cross-examination the applicant sought to have the witness admit that a fishway would be a suitable alternative to the barrier that would be created by the proposed dam. The opinion of the witness was that a fishway would be an alternative to the situation where it

is added to an existing dam but would not make a reasonable alternative to the construction of a dam. The applicant also posed a hypothetical situation of a five mile stream with the fish making the most use of a central portion. He postulated that if the centre were destructed the extremities could provide a replacement habitat. The hypothesis being agreed, the witness indicated the possibility of such an occurrence.

The second witness for the Ministry was Terrence Eccles, the lands technician in the Napanee Administrative District, whose job is to gather data in the field in respect of matters such as the one under consideration for submission to more senior officials for an application of their expertise to the data. From the witness's description of the lands of the applicant it is apparent that the portion of Smithfield Creek crossing the applicant's land is significantly suitable for the reproduction of rainbow trout. His report on the area reads as follows:

‘Most of this 1,400 feet of stream bed which will be covered by the pond consists of a course (sic) sand and gravel bottom. There is a frequent succession of pools and riffles along with a diversity of fish cover such as fallen logs, larger boulders, undercut banks and a thick cover of vegetation along either side of the stream. Overhanging poplar and willow trees along with thick underbrush provide excellent shade and bank stabilization. This dense shade also keeps water temperatures low and hides spawning fish from predators. These excellent spawning facilities together with the large quantity of clear, cold and well aerated water make this portion of Smithfield Creek ideally suited for trout and salmon.

Salmon and rainbow trout migrate up these waters each spring to spawn. Brook and brown trout inhabit this stream on a permanent basis.”

An aerial photograph produced by the witness shows that Smithfield Creek originates in part in a swampy or wooded area and in part in Matson Lake. These two tributaries flow in an easterly direction toward the community of Smithfield. North of the community and after the confluence of the tributaries the course of the creek changes and flows southerly through Smithfield and subsequently through the appellants property and ultimately into Presqu'île Bay of

Lake Ontario. The witness indicated that on the applicant's land the creek has an average width of ten feet and an average depth of 18 inches. This was observed in November, 1976. The proposed dam would create a headpond approximately 1,100 feet in a north and south direction and having a width of approximately 300 feet. He made these calculations by referring to the berms at the proposed location and the apparent outline of an ancient headpond. The witness has not been able to establish the dates between which this headpond was in existence. He indicated that a 1953 aerial photograph did not show the existence of the headpond.

The witness made a subsequent inspection of the site of the proposed dam on May 12, 1977 and he prepared a sketch of the property showing in considerable detail the various attributes of the portion of the creek that make it a good quality trout habitat. At this time the stream was deeper and faster. The diagram is supported by a series of 13 photographs taken by the witness showing that the stream meanders considerably and has a number of gravel areas that provide suitable spawning sites, deep pools which provide cool water in which the trout can be safe from predators, dense vegetation covering the stream keeping the water cool and providing insects for food, and riffle areas which are small rapids creating an aeration of water resulting in an entrapment of oxygen for the fish and undercut banks providing places for trout to congregate. The sketch showed 14 spawning beds, 12 deep holes and 19 major riffle areas.

On cross-examination the applicant pointed out to the witness that one of the sources of the stream was Matson Lake and the witness indicated that he had not traversed the creek to its source. He also attempted to have the witness admit that the log crossing the creek at the proposed location may have been a log from the original dam. The evidence is so vague that it is very difficult with the limited photograph and the limited description in the evidence of the log and other logs across the stream to come to any conclusion regarding the origin of these logs. The applicant also questioned whether the measurements were accurate and the location of the meanderings of the stream were accurately described on the diagram. In comparing the aerial photograph with the diagram, it appears that

there are some discrepancies in the diagram as to the numerous directions of the flow of the stream but I fail to see any significance in the fact that the illustration of the meanderings may not be geographically accurate. The witness further admitted that the stream had a minimum flow of 4,000 gallons per minute, which flow had been inserted on the back of the application by some Ministry official. He further brought out that the witness had not examined the portion of the creek downstream from County Road 64. However, the witness had visited the area between the proposed site and such road but had no data with him. The witness also admitted that there is a problem of siltation in the stream resulting from spring freshets but stated that, compared with other streams, there is no significant amount of siltation.

The third witness on behalf of the Ministry was Alexander Palilionis. The witness is a biologist and has worked with the Ministry since 1976. His duties involve fish management in the Napanee Administrative District. He inspected the proposed site during the summer for the purposes of the hearing. He indicated that a prior inventory of Smithfield Creek had been conducted in 1975 and the report thereof was filed as Exhibit 11. This report indicates that rainbow trout had not been found in the Smithfield Creek above the dam at Smithfield. This dam in this witness's opinion was approximately 1/2 mile above the proposed site. Between the period of June 6 and June 10, 1977 he and his assistant travelled the part of the stream from the mouth to the existing dam to quantify habitat and to note barriers to migratory species. The first barrier that is significant is the dam above Smithfield.

The witness described the part of the creek on the applicant's lands as having numerous good spawning sites and good refuge areas. He conducted a water chemical and temperature test finding that the site was very suitable for trout having temperatures of approximately 15 degrees centigrade. Also the dissolved oxygen content of 9.6 mg/l is ideal for a trout population. With reference to the effect of a dam on water temperature the witness indicated that if a dam is erected the water is slowed down and held in the pond and

heats up resulting in a lower concentration of oxygen. The creation of a headpond in the witness's opinion would destroy the entire site from the point of view of trout habitat. He also indicated that if the headpond were flooded without the removal of the trees, the surface top soil and vegetation, the headpond would be subject to eutrophication from the nutrients and the initial stages of pond formation will likely be accompanied by swamp gases, algae blooms and high water turbidity. These results would be temporary in the headpond but ultimately if a healthy discharge is obtained the undesirable effects would move downstream accompanied by low dissolved oxygen concentrations, warmer temperatures and higher siltation rates.

With reference to the fish populations in the creek the witness had sampled the creek and found a number of species inhabiting the creek. At sites above and below the proposed dam site rainbow trout were found and speckled trout were found both below and above the proposed site. The rainbow trout ranged in size from 2 centimetres to 13 centimetres indicating that the stream is being used as a spawning site. In addition other species of minnows and similar smaller species were found.

The witness emphasized the importance of the riffle areas as they are primarily spawning sites and provide habitat for the younger trout. The larger pools provide habitat for the more mature rainbow trout in their early years of development prior to the time that they migrate to the lake. In addition the riffle areas, having a higher velocity of water, have higher dissolved oxygen content and carry the invertebrates and other foods for the young trout.

The witness produced a number of photographs showing small barriers that should not effect migration, conditions in the silted pond of the dam at Smithfield and some species taken during sampling. The witness also gave evidence regarding conversations with local residents respecting the existence of the old dam. The witness also pointed out that if the proposed dam is constructed the owner would have a serious problem respecting seasonal maintenance of the water levels. The information gathered by the witness from the local residents indicates that there are enormous spring runoffs which would

have the result that the fall and winter level of the pond would be required to be lowered several feet. Some difficulties were reported in respect of the upstream dam at Smithfield and more serious problems could be encountered at the proposed site. Further the witness indicated that if the proposal were carried out it would create an effective barrier to the migration of rainbow trout and his report indicates that this problem could only be evaded with the construction and operation of a fish ladder.

The applicant cross-examined this witness on his lack of investigation of the area south of County Road 64. In discussing the height of barriers that would effect the migration of rainbow trout the witness indicated that anything over four feet in height and having an abrupt incline would be detrimental to the migration of rainbow trout. Further he indicated that this would be applicable during high spring flows and not during low water. The witness indicated that he had not really studied this matter but that in his opinion a two foot barrier would create difficulty.

The appellant brought out through the witness that rainbow trout live in the stream for a period of two years prior to migrating to Lake Ontario and that subsequently they return and in returning would pass through the part of the creek lying south of County Road 64. The witness indicated that he had no knowledge of the length of this portion of the stream but did indicate that in his opinion and for his scientific purposes Presqu'île Bay was part of Lake Ontario. The witness admitted that there were a greater number of riffle areas above the proposed site as compared with the proposed flooded area. The reason was given that in the higher area there is a more rapid reduction of elevation. However, the witness was not prepared to admit that these riffle areas were of any better quality than those on the applicant's land.

The applicant suggested to the witness that there were a number of springs adjoining the stream which, upon the flooding of the headpond, would tend to keep the waters in the headpond cool. He also referred to a pond on the adjacent property which he proposed to divert to his headpond if such an arrangement could be made for the purpose. The witness indicated that he had no evidence of brown trout

being present in the stream although the stream inventory conducted in 1975 and the report of the witness Eccles, indicated such to be the case. When asked if it would be possible for all of the existing populations of fish to survive below the proposed dam the witness indicated that in his opinion such would not be the case.

The fourth witness of the Ministry was John Tilt, a biologist with the Ministry since 1972, who is in charge of the stream survey program of Ontario. In his work in this regard the witness was familiar with streams flowing into Lake Ontario that are east of Oshawa, has supervised a number of crews and has examined the Smithfield Creek. This witness indicated that the distance between Presqu'île Bay and County Road 64 is approximately one-half mile. This information was taken from a chart filed as Exhibit 20 that had been prepared for the Lower Trent Conservation Authority illustrating the gradients of the Smithfield Creek. The witness was requested by the Napanee Administrative District to estimate standing crop estimates and in his report of September 8, 1977 signed by K. H. Loftus the witness indicated the standing crop estimates at two stations on the creek. His covering report indicated that the estimates were low compared with estimates in Wilmot Creek for a number of reasons but he reported that the potential for rainbow trout is good. Stream cover and gravel bottom (substrates) are good but water temperature could be a problem if the dam in Smithfield is replaced or were to be replaced. The witness further indicated that the maximum temperature for brook trout is 70 degrees Fahrenheit and that brook trout do not navigate fishways.

The witness further stated that having regard to the difference in size between Smithfield Creek on the one hand and the Ganaraski River and Wilmot Creek on the other hand, the Smithfield Creek ranks almost with the other two which are the best streams for rainbow trout production of those emptying into Lake Ontario.

The witness was asked whether he had conducted a survey of Mayhew Creek and it appeared that a survey had been done by the witness in 1969 subsequent to the reservoir for the Town of Trenton, which is sometimes referred to as Tremor Lake, being constructed in the river. The witness was not aware of a stream inventory having been made prior to this dam being constructed. The witness was questioned

regarding other creeks such as Butler Creek which he surveyed in 1969 and on a tributary of which there is one dam. The witness indicated that on a comparative basis Smithfield Creek nurtured higher populations and contained colder water than other creeks in the area that were examined. The witness indicated that during his survey he started at the marshes on Presqu'île Bay and proceeded up the creek a distance of one half a mile before coming to County Road 64. When the survey of 1969 was performed the area between the marshes and County Road 64 was open pasture land. Although the witness had not taken water samples he indicated that from his experience the temperature of the Smithfield Creek during August 1977 was significantly lower than 70 degrees, a maximum desirable temperature for trout.

Mr. Charles Brian Bell gave evidence that he and his wife own and farm property downstream of the subject lands. There is an intervening owner between these lands and the lands of the applicant. There is a large orchard on the Bell lands and some of the lands are used for growing vegetables. Water is taken from the creek for spraying purposes and irrigation. He stated that during the summer the greatest depth of water that can be expected to be found at his property at the place where the water is taken from the river for these purposes is eight inches to one foot. During the current summer it was necessary to take water from a well which was also dependent on the creek. He objected as a downstream owner to the idea of someone else having control over the flow of the water. His position was that in dry seasons he is now using a well and that the flow of water should not be reduced.

During cross-examination by the applicant, it appeared Mr. Bell had been made aware of the applicant's proposed construction by Ministry staff. None of the staff advised Bell that there was a minimum flow of the creek and his concern was that from his experience there was not sufficient water in the creek to conduct his spraying and irrigation operations. He did admit that he had mentioned on some previous occasion that he would not object to a "side pond" which did not affect the flow of the stream. The evidence further brought out that the Bells have owned the property only for a period of one year and would not be familiar with the range of variations that

may occur. At least this was the way that Mr. Flindall put the question and it would appear to presume that there are significant variations in the flow of the river notwithstanding the limited range of flows shown on the back of the application. In this regard one might recall that during 1977 the early part of the summer was fairly dry but in August and September there was more rainfall than usual and if there are significant variations in the flow it would seem that problems that existed in 1977 would be more severe in a summer that would have to be classed as a dry summer.

The evidence for the applicant was that he owned a 41 acre parcel at the north end of the lot. The northerly 24 acres measuring 80 rods by 48 rods were acquired by his father 50 years ago and the applicant purchased 17 acres adjoining his father's parcel on the south approximately 40 years ago and subsequently acquired his father's parcel. Over the years he has had long range plans for developing both properties. In the early forties he attempted to work his portion for agricultural purposes but due to lack of rainfall he decided to stop this use until such time as the land could be irrigated. In the northerly part there is a large cedar swamp which has been maintained by thinning and cutting of dead wood making it a viable forest area. An area in the easterly part of the property has been summer fallowed. He also acquired a parcel of land from the Great Northern Railroad which provides access to the southerly part of his property. At no time during his memory was there a headpond on the properties.

His project is to develop the property for the growing of raspberries, small fruit and vegetables. He filed as Exhibit 25 a letter from the Smithfield Experimental Farm which was, according to the applicant's evidence, an indication of the need for irrigation. However, on examination of the letter there is no quantification of the need but merely a general indication of a need for supplemental moisture and an invitation to further discuss the matter.

The applicant gave considerable evidence regarding successful attempts to prevent the installation of a sanitary land fill project on adjoining property at some cost to himself. I have considerable doubt as to the relevancy of this evidence although the

applicant appears to believe that had he not taken such action the fish habitat would have been destroyed as a result of the installation of such project.

Realizing that a permit from the Ministry of the Environment was required to take water from Smithfield Creek the applicant made an application to take 20,000 gallons a day from the proposed headpond and 1,000 gallons a day from a "dug pond" to be fed by surface runoff. The purposes of the taking were said to be irrigation, commercial and industrial. A permit has been withheld by the Ministry of the Environment pending approval to construct a dam from the Ministry of Natural Resources. It is noted that the application for a permit indicates that the estimated usual low summer flow is 10,000 units. On the application it does not indicate whether the units were gallons per minute or cubic feet per second.

In support of his application to the Minister of Natural Resources the applicant filed a letter of approval from adjacent owners, one of which appears to have the same surname as the applicant. A number of letters and other correspondence with the Ministry were filed but they are not useful in determining the real issue before this inquiry. The only area of significance in the correspondence is the advice that a dam in the Village of Smithfield had been approved in April, 1968, which date was prior to the present legislation governing the issue of approval.

The applicant admitted that the application did not fully include the plans and specifications for the proposed dam. There are some variables at this time. He feels that it would be desirable to build a bridge with the dam as the township road to the north of his land has been closed and it may be advisable to build a road crossing his property and combine the dam and bridge structure. He also indicated that certain measurements in his application may have been misleading particularly the indicated heights and slopes of the proposed structure. In his view the dam would not require a height in excess of 4 and 1/2 feet and he would be prepared to insert a fish ladder or a fishway in the plans and specifications at the time such are prepared.

With reference to the significance of County Road 64 the evidence of the applicant was that this portion of the creek had been denuded of its cover and commercial and industrial operations that create the risk of escape of toxic substances or pollutants into the creek are conducted on the adjacent land. There was nothing in the evidence to establish that there was any such escape or that such emissions, if they did exist, would prevent the migration of rainbow trout through the lower stretch of the creek to the upper spawning grounds such as those on the applicant's property. As I can best understand the point it appears that the applicant's view is that the failure to control activities on such lands is some justification for permitting his proposals. He filed a number of coloured photographs of this area but in the absence of any scientific evidence I cannot come to any conclusion regarding the effect of these developments.

The applicant made reference to a book entitled 'My Friend the Trout' by Eugene Connath where it was said "it has been proved that brown trout living in a pond above a dam grow to a greater size."

The applicant filed a sworn statement by Ivan C. Flindall who outlined the history of a number of mill dams in the area and his version of the role these dams played in the management of fish and wildlife resources. I find it difficult to accept that the concepts of management outlined in this document are compatible with the management principles given in evidence by the expert witnesses for the Ministry. One would have thought that the applicant might have cross-examined these witnesses on the role of muskrat and mink and the comparative merits of programs supporting these populations. It is obvious from this document that the deponent concludes that mill dams provide spawning areas for fish and this concept was in direct conflict of the evidence of the biologists. The applicant also filed statements purporting to be sworn by two contractors who indicated their commitment to conduct the construction of the dam. Included in these documents are references to a proposal, in the event approval of the dam is not granted, of straightening, deepening and widening the creek. This approach was also taken in cross-examination of several of the witnesses and includes, of course, the removal of the trees, shrubs and other cover from the land bordering the creek.

During cross-examination of the applicant it appeared that his calculation of the quantity of water to be retained in the headpond may be considerably in error and that it was doubtful that a headpond of the extent contemplated by the applicant was essential to provide 20,000 gallons of water a day for irrigation purposes. Counsel for the Ministry inquired as to whether there were other purposes such as housing development and the only additional purpose which the applicant would admit to would be the use of the dam for the provision of power to pump the water through an irrigation system. When asked why he should not draw the water from the river directly he replied that his downstream owner had difficulty at times and accordingly, he felt it was necessary to have a headpond. The applicant admitted that a headpond would result in greater evaporation of the supply of water and that the removal of vegetation along the stream would equally increase the evaporation of water.

The witness took the position that he had been a conservationist all his life and was prepared to cooperate with the Ministry in the project he wished to undertake. He admitted that spawning areas do perpetuate fish life but he felt that the spawning areas that he would remove could be replaced by spawning areas in the headpond and the use of other parts of the creek. In addition he indicated that he would be prepared to open the dam during the spawning run. However, he did not indicate whether he appreciated the effect of emptying the headpond during these two occasions of the year on either the aesthetics of the headpond or the proper management of the flow of the stream.

The witness indicated that he had now learned that he cannot straighten the stream without approval under The Lakes and Rivers Improvement Act. He is concerned that the spring freshets cause serious erosion and silting and one might comment that such issues would be relevant to the present application. He also indicated that he was prepared to negotiate for a diversion to the proposed pond of the flow of the spring situate on land to the east of his property. It is noted that this spring is the source of a stream that presently

flows through adjacent property and such a proposal would deprive adjacent landowners of the use of water which normally flows through their lands.

The applicant indicated that he agreed with Dr. Dodge that the headpond by reason of its depth would eliminate existing spawning areas but he was prepared, subject to the biological advisability thereof, to build alternative spawning beds along the borders of the headpond which would create 2,000 feet of spawning grounds as contrasted with less than 1,000 feet that now exist.

In reply evidence, Dr. Dodge commented on the last mentioned proposal indicating that in his opinion, the proposed spawning beds would not be a reasonable substitute because it would be difficult to attract the fish onto the beds and create a current that would make the new beds attractive to fish. Secondly, after spawning, the increased water temperatures would restrict the growth and development of the young. Thirdly, rainbow trout are a stream species of fish, not a pond species, and do not adapt to such situations. Also ponding affects temperature and there would be a probability of the temperature increasing to a warmth at which the existing waters, which are known to be borderline, would result in loss of productivity downstream of the pond. On cross-examination the applicant inquired whether his proposal to divert springs into the pond would overcome the objections to the creation of new spawning beds. Dr. Dodge gave the opinion that some fish would spawn on spring fed parts of the bed of the pond. The evidence is that brook trout adapt to this environment and sometimes brown and rainbow trout adapt but the resultant spawning is not as much as would have occurred if the pond had not been created in the first place. When pressed as to the effect of double the quantity of spawning areas the witness indicated that his position did not change. The witness replied that such a result might be possible but was highly improbable. He also indicated that such conditions might be suitable for brook trout or brown trout but are not advisable for rainbow trout.

Notwithstanding objections I permitted the witness to be asked whether the area stretching for 1 and 1/2 miles below the

proposed dam, being one mile to County Road 64 and a further 1/2 mile to the bay, which area was, in part, adequately provided with cover would not accommodate the existing populations. The witness indicated that this was a hypothetical possibility but improbable. He suggested it was unreasonable to give up a good area for an unknown option. Ponds are not good areas for young rainbows. The witness further confirmed that if the vegetation were to be removed from the applicant's land the areas to the south would not provide adequate habitat for the populations that presently exist. It would be in effect asking one half of the stream to absorb the whole population. The witness indicated that there was a fixed capacity of the entire stream, and if a portion of this capacity is removed and there is no other place for the population to go there will be a loss of the area utilized for other purposes. The witness would not agree that the 1 1/2 mile area south of the proposed pond would accommodate the populations that would leave the applicant's land if the vegetation on his land were removed.

The argument of counsel for the Ministry was that the evidence clearly showed that the proposed dam would remove the existing 1,100 to 1,400 feet of prime spawning area for a number of fish including brook trout and rainbow trout. The evidence did not indicate that reasonable alternatives could be provided against a background of only 153 miles remaining out of a possible 1,759 miles of habitat for migratory species. The further reduction of 1,400 feet of the subject property and the additional 1/2 mile above the proposed pond to the existing dam at Smithfield are a significant and unwarranted reduction of this minimal habitat. He emphasized that the policy established by the Ministry is not to allow new dams and that the approval of the dam flies in the face of the rehabilitation program of the government to restore Lake Ontario to some semblance of its original potential for the production of desirable species. Counsel also emphasized that the evidence failed to disclose significant reasons for construction of the dam other than the need for irrigation and that there were concerns of riparian owners that their flow of water would be interfered with.

Charles Brian Bell, the downstream riparian owner, stated that his concern related to the water rights, and that the dam constituted an interference with his water rights. He indicated that a spring fed 'side pond' could be a suitable alternative for the applicant and that there was no evidence to dispute such an alternative.

The argument of the applicant was that with reference to the adequacy of the existing habitat for migration of species, the Ministry ought to increase the habitat by causing the removal of dams that are in a state of disrepair and are no longer in use. In contrast his proposal would be a dam that would be utilized for agricultural purposes.

The applicant indicated that he was prepared to consider a number of proposals in respect of the construction of the dam but that he felt the Ministry was taking an arbitrary position and was refusing to discuss or negotiate any alternatives with him. He indicated that he felt that he was being discriminated against in that he was not allowed to develop a property that he has owned over 40 years. He felt the Ministry was making an example of his property as contrasted with the lack of controls that had been exercised on property south of the county road. He stated that his first statement for needs of water was preliminary and he had been given no opportunity of reducing his original statement. Finally he submitted that the Ministry ought to require the owner of the land south of the county road to rehabilitate it.

In his reply argument counsel for the Ministry submitted that the proposal of the applicant was not the repair of an existing dam but was in effect the construction of a new dam. He also submitted that while the berms may in themselves create a diversion that might be construed as a dam, the proposal is not in connection with repair of the berms. Further such argument warrants little weight as the evidence indicates that the effect of the berms occurs only during spring runoff. In his submission the application for a concrete structure could only be construed as an application for a new dam. With reference to a program of dam removal counsel pointed out that such a program was in effect but the existence of such a program was not relevant to the issues at hand. The issues at hand were the

proposed construction of a new dam and did not relate to the effectiveness of the program of the Ministry respecting removal of obsolete dams.

Turning to the matter of findings of fact, there was very little conflict in the evidence respecting the relevant matters. There was a dearth of scientific evidence to support a number of allegations on various aspects of the case, particularly by the applicant and by Mr. Bell. With reference to the applicant, he brought no expert opinion as to the effect of his proposal and I am left solely with the evidence of the biologists of the Ministry with respect to the questions of fish habitat. Similarly with Mr. Bell's evidence there was no engineering evidence to establish flows or the quantity of water that he requires and the ability of the creek to meet his requirements either with or without the proposed dam. As far as his evidence is concerned he has found from one summer's experience which was not a dry summer that he was unable to use the creek as a complete source of water for his irrigation needs. Indeed his evidence was that he had to use a well for the purposes for irrigation. The significant question is whether the proposal would have any effect on the flow as it normally reaches Mr. Bell's property and in the absence of proper engineering advice or evidence it is difficult to come to any conclusion as to the effect of the proposal on downstream riparian rights.

In this regard the applicant had adopted a minimum flow shown on the back of his application of 4,000 gallons per minute as a minimum flow for all times. This would produce a daily flow of five million, seven hundred and sixty thousand gallons. Such a flow would appear to be sufficient to meet the applicant's needs of 20,000 gallons a day and presumably the needs of Mr. Bell would not be significantly in excess of the applicant's needs and in total such needs should have a negligible impact on the flow of the creek. However, I have considerable doubt as to the validity of this figure. The evidence of Mr. Bell was that the stream dried up to a degree that he was unable to draw water from it. Mr. Palilionis's report indicated a flow of approximately .14 cubic metres per second which

would give a flow of 8.4 cubic metres per minute. A cubic metre of water contains approximately 220 gallons of water and this would give a flow of 1,840 gallons per minute. Extended to a daily basis, the flow would be over 2 1/2 million gallons per day and surely would not be indicative of a dry summer flow. These estimates of flow were made in early June, 1977. I am satisfied from the evidence of both the applicant and Mr. Bell that the agricultural industry in the watershed has a need for supplemental moisture. I am not satisfied that the minimum flow of 4,000 gallons per minute shown on the back of the application under The Lakes and Rivers Improvement Act is accurate and that there is any validity to the answer given to Mr. Bell by the applicant that such a flow should adequately supply his needs. Mr. Bell's needs have not been quantified. Similarly I have doubts as to the validity of the applicant's estimate of his needs. He indicated that he might be able to reduce this amount. It may well be that upon a proper assessment of his needs, which did not appear to have been done although suggested by the Ministry of Agriculture in its letter from the experimental farm, this estimate is so low as to be meaningless. Until the needs of the agriculture industry are quantified and some method of determining whether they can be met it appears to me to be premature to consider the creation of reservoirs for a supply of water for such purpose and, in the absence of firm evidence of the flows in dry summer periods, I cannot conclude that the concerns of Mr. Bell are realistic or answered. I appreciate that with proper operation of a proper dam the low summer flow should be passed through the dam at all times but the downstream riparian owner, who has the legal right to have such flow through his property, can be involved in expense and time consuming litigation if such proprieties are not observed by the operator of the dam. Even such legal remedies as are available may not be attained in sufficient time to save an endangered crop.

The duty of this tribunal is to come to an opinion whether the refusal of the approval of the proposed dam is fair, sound and reasonably necessary for the achievement of the purposes of The Lakes and Rivers Employment Act. These purposes are set out in section 1a of the Act and read as follows:

'la. The purpose of this Act is to provide for the use of waters of the lakes and rivers of Ontario and to regulate improvements in them, and to provide for:

- (a) the preservation and equitable exercise of public rights in or over such waters;
- (b) the protection of the interest of the riparian owners;
- (c) the use, management and perpetuation of the fish, wildlife and other natural resources dependent on such water;
- (d) the preservation of the natural amenities of such waters and on the shores and banks thereof; and
- (e) ensuring the suitability of the location and nature of improvements in such waters, including their efficient and safe maintenance and operation and having regard to matters referred to in clauses a, b, c and d, their operation in a reasonable manner. 1971, c.50, s.50(1)''

It will be noted that this section was first enacted in 1971 and created a legislative declaration of the reasons for the prohibitions contained in the statute and establishes and limits the areas of consideration in respect of the powers given to the Ministry under the Act to control the location and the plans and specifications of dams. In this particular case clauses b and c and probably d are applicable. At common law an owner of land bordering a stream had the right to erect a dam on the stream provided he did not interfere with the quality or the quantity of the flow passing the downstream properties. This principle has been incorporated into the matters to be considered by the Ministry and illustrates that, in considering applications, the Ministry should consider not only the public interest but the rights of private owners. Clauses c and d have broader applications in that they contemplate the effect not only on downstream owners but also on the land in question and the upstream owners and in addition to such private rights an element of public interest in such matters is recognized. Notwithstanding that the rights mentioned can be construed as being private in certain circumstances, the effect of adding the purpose of use, perpetuation and preservation is consistent with the recognition of a public interest

in such use, perpetuation and preservation. In other words, one might interpret the subject matters of these clauses solely with regard to the interest of the applicant as owner of such rights.

However, I believe it is apparent that the intent of the Act is not merely to prevent the landowner from affecting his own property rights whether it be intentional or otherwise but to confirm that there is a public interest in such use, perpetuation and preservation. The reason for the other provisions added to the Act in 1971, i.e. sections 8a, 8b, and 8c, was to provide a means of weighing such public interest against the rights of the landowner. The day has long gone when the landowner could do as he desired with his own land or dispose of his own land in any manner he saw fit. Zoning, planning and subdivision control legislation have changed the freedom of action historically enjoyed by the owner of land, particularly land that has not been developed. This new legislation recognizes areas of land use that ought to be managed, perpetuated and preserved and the controlling mechanisms of The Lakes and Rivers Improvement Act are by this new legislation related to these factors that are set out in section 1a of the Act.

At the outset, with regard to the applicant's desire to use his land for the purpose of a headpond, I am not satisfied that the applicant established a real need for the construction of a dam and its consequent headpond. Underlying his whole project is a life long ambition which may have a certain amount of sentiment associated with it. His evidence from the Ministry of Agriculture indicated a need for additional moisture for his purposes but this was not defined on any scientific base. In fact the witness admitted that his estimate of 20,000 gallons a day was not related to any base and could have been reduced. As I have indicated above, this approach may not be realistic and it may well be that with proper evidence it could be shown that the agricultural industry carried on in the watershed would be benefited by a dam. Similarly it may be that such evidence would show that the need of such industry could adequately be met by the extraction of water from the creek by pumps or some other method that is less costly and does not have the adverse effects on the natural resources.

The applicant denied any desire to use the pond for industrial or commercial purposes other than agriculture. He did indicate however, that power might be provided to operate the irrigation machinery. I doubt, however, that the production of hydraulic power for this purpose would be economically feasible if one were to consider the cost of the dam. No evidence was produced in this regard but I suspect that if plans and costs estimates of pumps or other engineering devices for irrigation purposes were drawn up, the cost of construction and operation would, be significantly less than the cost of constructing and maintaining a dam plus the machinery necessary to create the power referred to by the applicant. To sum up on this aspect of the matter, while the applicant at common law would have had a prima facie right to construct a dam, he did not provide evidence against which the new principles set out in the 1971 legislation could adequately be assessed.

Turning to the new principles and with reference to the issue of use, management and perpetuation of fish, wildlife and other natural resources dependent on such waters, the evidence indicated that the part of Smithfield Creek that would be flooded is a good, if not an excellent habitat, for rainbow trout and brook trout. Numerous spawning areas some of which are accompanied by riffles, provide excellent habitat for spawning for very young fish. The evidence establishes that such areas provide water with dissolved oxygen and food for the very young species and in addition such species were proved to be present. Good habitat for more mature fish, particularly rainbow trout during their first two years prior to migrating to Lake Ontario, is found in the deep pools and under the overhanging banks. It is beyond doubt that there would be a significant loss in the habitat destroyed and any alternative habitat that could be provided in a headpond could not equate to the habitat that would be destroyed. Further the construction of the dam will interfere with the migrations of rainbow trout not only into the area that will be flooded but also into the area of one mile or a mile and a half above the proposed headpond which currently provides habitat, spawning areas and migration routes for rainbow trout.

With reference to clause d of section 1a of The Lakes and Rivers Improvement Act, the Concise Oxford Dictionary defines “amenity” as “Pleasantness (of, places, persons, etc.); pl. pleasant ways.” In Webster's New International Dictionary, 2nd ed., the meaning most applicable to natural features reads,

‘2 a feature, trait or characteristic conducting to pleasantness: as the amenities of literature.’

The land itself would remain; and also ... its amenities and advantages for building would be unimpaired. J. S. Nicholson.”

For the Ministry to have established the application of clause d, I am of the opinion that evidence of the aesthetics of the areas and the proposed results ought to have been produced before me. The evidence indicates that the creek is quite natural in its present condition but I cannot recall any evidence to show that the proposed result would be less pleasant for human purposes if used in the way the applicant proposes.

Accordingly, the weighing process involves a clearly established excellent habitat for brook and rainbow trout on one hand and on the other hand, a project that on the evidence may not be either the best or an adequate method of meeting the needs of the applicant which has an accompanying detriment of the loss of quality of existing habitat and the interference with the migration of trout not only into the headpond but into the stream above the headpond. The argument of the applicant was that he would provide a fishway but the expert evidence which was not disproven was that a fishway or fish ladder is not used by brook trout with the resultant interference with the migration of this species and that with regard to rainbow trout, a fishway discriminates against some sizes and ages of this species. Surely the known should prevail over the unknown. Further one may add the risk to downstream owners of the flow of the stream being interfered with through improper operation of the proposed dam. I am reasonably satisfied that there would be some interference with the achievement of the purposes of the Act if the location of the proposed dam were approved.

Turning to the purpose of the hearing, under subsection 4 of section 8b of the Act, the person holding the hearing is required to consider whether the proposed refusal is fair, sound and reasonably necessary for the achievement of the purposes of the Act. Subsection 4 is analogous to subsection 5 of section 7 of The Expropriations Act which reads as follows:

“7(5) The hearing shall be by means of an inquiry conducted by the inquiry officer who shall inquire into whether the taking of lands or any part of the lands of an owner or of more than one owner of the same lands is fair, sound and reasonably necessary in the achievement of the objectives of the expropriating authority.”

The leading authority on the interpretation of this subsection is Walters et al. v. Essex County Board of Education (1971) 3 O.R. 346 in which Stark, J. said at p. 349,

"In applying the words used in the Act, namely, 'fair, sound and reasonably necessary in the achievement of the objectives of the expropriating authority' and lacking any judicial pronouncement as to the meaning of these words, the inquiry officer adopted the suggestion made by Mr. John W. Morden in the Special Lectures of the Law Society of Upper Canada, 1970, 'Recent Developments in Real Estate Law', p. 226, where that writer had suggested, 'that it would be more realistic to regard the formula as conveying the broad standard -- having regard to the objectives of the authority is this expropriation reasonably defensible.' Similarly, as to the meaning of 'fair' the inquiry officer adopted Mr. Morden's suggestion, 'that it involves a balancing of the public interest allegedly being advanced by the expropriation with that of the private interest of the owner'."

Having regard to the tests of "reasonably defensible" and "balancing of interests" it is apparent from the above discussion of the evidence, that on the presentation before this tribunal, the Ministry has shown a preponderance of public interest over the private interest. This conclusion does not preclude the applicant from properly assessing his need and the capabilities of the creek and again applying for approval. However, in such assessment the applicant may find that his needs cannot be met or may be met by methods other than the construction of a dam.

The applicant argued that the position of the Ministry had been arbitrary and they refused to negotiate the conditions of installation of a dam with him. On the question of arbitrariness, assuming that such did exist, I may say that the statutory amendments of 1971 providing for an inquiry are designed to provide an applicant with the full opportunity of presentation of his case and meeting the case of the Ministry, of which full particulars must be, and were in this case, made available before the inquiry and while there may be an appearance of arbitrariness, in reality, firmness of purpose, in the preliminary reviews of an application, the inquiry is the vehicle for the consideration of the conflicting positions. I cannot accept such an argument as being significant in the consideration of the merits of an application.

The applicant also argued that the Ministry was discriminating against him. He seemed to relate this argument to the evidence on which he based his argument of arbitrariness including a lack of opportunity to bargain or barter in the matter. This argument presupposes that a proper refusal of approval ought to be subject to change through negotiation. I cannot accept this proposition. If alternatives or modifications can bring an application within the new principles of the Act, such would be quite proper but to say that a proper case of refusal should always be subject to variation through a process of bargaining is not within the contemplation of the Act. I am not of the opinion that the Ministry's position ought to be subject to variation through argument or bargaining of extraneous issues. If an applicant wishes to modify an application, he is perfectly free to do so. Perhaps the applicant's real point is that the Ministry did not suggest alternatives to him but this in itself is surely not a relevant issue in considering the merits of an application by a person holding an inquiry.

It may have been that the applicant had intended to base an argument of discrimination on evidence of permission to construct other dams or the lack of prohibition of the change of the creek below County Road 64. There was no evidence before me of any approval having been granted since the legislative enactments of 1971. The only approval of a dam in the area granted by the

Minister occurred in 1969 and there was no evidence to indicate that the applicant was being dealt with in a manner other than other applicants are dealt with. Assuming that the owners of the land south of County Road 64 had committed a breach of The Lakes and Rivers Improvement Act, it does not follow that failure to enforce a statute in one instance affects the obligation of the Ministry to apply the Act in other cases. There may have been limitation principles, lack of knowledge of the alleged offence or other principles affecting the other case which are not relevant to the case at hand. One significant factor was that whatever had been done on this land, it did not appear to affect the migration of rainbow trout. At least no evidence of such occurrence was placed before me.

The last point of the applicant was that the Ministry ought in its program to require the removal of obsolete dams and permit the construction of new dams which would serve a purpose and in so doing, the Ministry should assume the responsibility of keeping the existing minimal habitat of rainbow trout at existing levels. The evidence indicated that the Ministry had such a program and beyond this, I concur with counsel for the Ministry that such a point is not relevant. The issue is the particular dam and its effect on the natural resources of the stream and riparian owners on the stream and not whether this effect can be considered to be offset by the restoration of additional habitat. The evidence was that the program of the government was to restore as much as possible of the suitable habitat for migratory species that existed in the past and was not limited to maintaining the existing habitat. The point appears to be inconsistent with government policy as established by the evidence and adds nothing to the merits of the application under review.

Accordingly I am of the opinion that the proposed refusal of the application is fair, sound and reasonably necessary for the achievement of the purposes of The Lakes and Rivers Improvement Act.

DATED this 25th day of November, 1977.

Original signed by G.H. Ferguson

G. H. Ferguson.