

Room 569, Fifth Floor,  
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Toronto, Ontario M7A 1A2

IN THE MATTER OF

The Lakes and Rivers Improvement Act;

AND IN THE MATTER OF

A proposed order under subsection 2 of  
Section 11 of the Act requiring the  
Removal of an unauthorized dam on Irish  
Creek on Lot 9 in Concession II of the  
Township of Puslinch in the County of  
Wellington owned by Philip N. Cassis.

REPORT TO THE MINISTER OF NATURAL RESOURCES

Pursuant to an appointment by the Honourable Frank S. Miller, Minister of Natural Resources dated the 27th day of February, 1978, the undersigned has held an inquiry as to whether the proposed order under subsection 2 of section 11 of The Lakes and Rivers Improvement Act requiring the removal of reconstruction of a dam on Irish Creek on Lot 9 in Concession II in the Township of Puslinch in the County of Wellington is fair, sound and reasonably necessary for the achievement of the purposes of the Act. Mr. M. W. Bader of the Ministry of the Attorney General appeared on behalf of the Ministry of Natural Resources. Philip N. Cassis appeared in person.

There were a number of preliminary submissions that may effect the issue of the proposed order and which I expect counsel for the Ministry will advise upon before a decision is made to take such action but in my opinion these matters are outside the terms of reference of the inquiry the undersigned was appointed to conduct. As indicated in previous reports it is my opinion that the terms of reference of an inquiry do not include recommendations in respect of the legality of issuing an order ore refusing to issue an approval.

One matter in respect of the preliminary submissions that may warrant comment is that after the preliminary submissions Cassis was asked on a second occasion if he wished to have counsel and he requested an adjournment for this purpose. Such an adjournment was

vigorously opposed by counsel for the Ministry, it being argued that the submissions of Cassis confirmed that there was adequate knowledge of the hearing, by him, his wife and their associated persons whose association appears most vague and perhaps not yet established and the history of commitments and delays on the part of Cassis warranted proceeding with the inquiry. It was apparent that these persons had had knowledge of the hearing and had been in intense negotiation respecting the property during the previous week and were in consultation with solicitors and other advisors and, with some reluctance, the motion was denied.

The evidence indicated that the subject lands are a seventy-acre parcel of farm lands on which there are no buildings. The lands were owned by Peter Gartner and Mary Gartner for a period of approximately ten years. According to Cassis the owners incurred considerable indebtedness including a number of mortgages on the subject lands one of which was in favour of Cassis or perhaps his wife and the acquisition of the subject lands was part of a complex realization of the Gartner indebtedness. He received what he called a quit claim deed in early 1977 for the subject lands. The filed document appears to be a deed in the usual form rather than a quit claim deed. It is noted, that under this deed Cassis took the property in trust although he produced no documentation to show the particulars of the cestui que trust. His description of his relationship with other persons appeared to be vague and to be yet unresolved including the identity of the other persons. The deed is some evidence that Cassis held in a representative capacity.

The stream known as the Irish Creek rises in forested areas which were described as swampy areas in an area approximately one to two miles northerly of the subject lands. Two tributaries upstream of the subject lands, according to the National Topographic Series map filed as Exhibit 6, have undefined channels in a marshy, treed area. However, the channel appears to be well defined immediately upstream from the subject lands. This defined channel enters the subject lands at approximately the northeasterly corner of the subject lands and

flows in a southwesterly direction across the subject lands leaving them at a location approximately 400 feet southerly from the northwesterly corner of the subject lands. It then continues in a southwesterly direction across a 13.2 acre parcel owned by Mr. Firmi and a 9.638 acre parcel owned by Mr. Layzell. These two properties appear to have been severed from the subject lands sometime in the past as the subject lands lie in part to the south thereof. A residence is situated on the northerly part of each of the properties where the elevation is approximately 40 feet higher than the elevation of the bed of the creek. Behind the houses there is a steep bank which is treed. The area southerly of the creek is cleared and used for agricultural purposes. The same use is made of the portion of the subject lands south of the creek.

The creek continues in a southwesterly direction for approximately two miles until it intersects a tributary flowing northerly out of Puslinch Lake through a marshy area. It then continues in a northwesterly direction for a distance of approximately three or four miles joining the Speed River which ultimately flows into the Grand River.

During Gartner's ownership an application was made to the Grand River Conservation Authority for permission to dredge and make other improvements of the part of Irish Creek on the subject lands. Following negotiations a permission issued on November 17, 1976 as No. 179/16 authorizing the construction of a bridge across the stream. This permission required the installation of one 48 inch culvert and two 36 inch culverts in the project, the erection of a 38 foot concrete wall of 12 inches in width along the faces of the bridge and the installation of a grill work. Presumably pursuant to the permission and prior to November 26, 1976 Gartner employed a firm known as Fred Prior and Sons of Guelph to enlarge the channel and construct a bridge across the stream at a location approximately 1,000 feet from the northeasterly corner of the subject lands. The channel was widened to a width of between twenty and thirty feet and was deepened with the spoil being placed on the banks. The bridge was

constructed by the installation of one 48 inch culvert and the placing of fill around and over the culvert. No concrete wall or other erosion preventing device was installed.

On November 26, 1976 a complaint from a municipal counsellor, Mrs. Barbara Bulmer, was made to the Ministry of Natural Resources and the matter was investigated by John Winters, the District Lands Co-ordinator. Following these investigations charges were laid under The Lakes and Rivers Improvement Act and The Conservation Authorities Act and a conviction was made under the former by which Gartner was fined \$200. The charges against the contractor were dismissed.

The Ministry officials attempted to have Gartner rectify the bridge to conform with the plans approved by the conservation authority. These arrangements were not undertaken by Gartner and in June of 1977 Winters became aware of the sale to Cassis. There were a number of negotiations between Cassis and Cassis' solicitor and the Ministry officials none of which resulted in the reconstruction of the bridge, although the spoil was removed by Cassis hiring a bulldozer and obtaining the consent of the farmer who was occupying the subject lands under the lease issued by Gartner. Winters gave other evidence but it deals merely with negotiations and prosecutions and in my opinion is not relevant to the issue to be dealt with by this inquiry. The significant evidence was the evidence produced by the engineer with two exceptions.

Firstly, Winters' evidence indicated that the engineering advice respecting this matter in the early stages had been provided by an engineer of the Grand River Conservation Authority who is no longer on the staff of the conservation authority. Secondly he produced photographic evidence showing the culvert in the County Road No. 34 along the north limit of the subject lands through which Irish Creek passes prior to entry on the subject lands and of the crossing and its culvert that constitute the dam in question. These photographs were taken on or about April 7, 1978 and illustrate the situation during the spring runoff of this area.

Exhibit 8 illustrates the county culvert which empties into a ditch and on that occasion had an unused capacity. The illustrations of the culvert in the structure in question indicate that the water had raised almost to the top of the culvert and that the capacity of the culvert was almost utilized. The photographs also illustrate that a considerable quantity of water was backed up between the county road and the structure. The photographs also indicate that part of the roadbed over the structure has been washed away. The evidence of the witness also indicated that while there was an unusual winter in 1977 - 78 without mid-winter thaws, there was an unusual spring with no flood warnings.

The significant evidence of the Ministry was given by Maurice Lewis, P.Eng., the Regional Engineer for the Central Region of the Ministry of Natural Resources who had had thirteen years work in engineering matters related to the programs of the Ministry of Natural Resources including fish ladders, channel improvements, dams, etc. His specialty is civil engineering and his duties include the processing of applications under The Lakes and Rivers Improvement Act.

This witness described the structure as a gravel roadway measuring twelve to fourteen feet across at the top and having a 48 inch culvert. He stated that there was a fair amount of erosion on the slopes of the embankment which rise two or three feet from the top of the culvert.

Lewis investigated the technical soundness of the dam. He reviewed the records of the conservation authority and made calculations himself. From his calculations he determined that the area drained into the structure measures 2,580 acres. He indicated that the standards used by the Ministry of Natural Resources under The Lakes and Rivers Improvement Act and by the Ministry of Transportation and Communications in setting standards for highways are the same. Applying the standards for a one in ten year flood he calculated that the culvert in the structure should have a capacity of 350 cfs.

Lewis indicated that at the time of inspection by him on the Friday prior to the hearing, the 48 inch culvert in the structure contained one foot of silt and gravel at the upstream end and one

foot of water. He stated that the capacity of the culvert is considerably less than the one in ten year flow of 350 cfs and the result of this installation would be the overtopping of the structure and the washing out of the roadway in the event of a flow of 350 cfs. He indicated that there is evidence of erosion on the upstream side at present which would be caused by the velocity of water at the intake and the steep slopes that have been left at the side of the structure without protection.

**In** response to a question of counsel for the Ministry as to the effect of traffic over the structure, Lewis indicated that there is a possibility of reduced flows resulting from heavy traffic crossing the structure and in fact the diameter of the culvert had increased by two inches either from heavy traffic or damage prior to installation.

The witness confirmed that the construction of the structure did not conform with the permission issued by the Grand River Conservation Authority in that the two 36 inch culverts were not installed and the concrete wall had not been erected. He also mentioned that the fancy grill work was not installed but there was other evidence that indicated that the conservation authority did not require this in the permission given by it. The witness was asked his professional opinion on whether the culverts required by the permission would prevent flooding and erosion. The witness's opinion was that the proposed culverts are less than the standards for the one in ten year flow. **In** his opinion there would be some overtopping of the structure in such a flow but in his opinion the amount of overflow would be minimal. He indicated that the possibly of erosion or washout could be minimized if rip rap were installed on the slopes in the manner required in the proposed order of the Ministry of Natural Resources. He indicated that rip rap should be placed on the upstream and downstream aide of the structure.

Counsel for the Ministry inquired as to the result of a washout and the witness indicated that a considerable amount of material would be washed downstream, and depending on the amount

and size of the flood there could be a movement of the culvert itself to a downstream position crossing the stream and creating blockage of the flow with the result of further upstream flooding. He indicated that there was an additional possibility of the existing culvert blocking and causing upstream flooding.

The witness indicated that the culvert through the county road was of multiplate construction with a horizontal span of seven feet and a height of 5.3 feet. The cross-sectional area of this culvert would be 28 square feet. This compares with a cross-sectional area of 27 square feet for the three culverts required by the permission. The cross-sectional area of the 48 inch culvert is 12.5 square feet.

On cross-examination the witness indicated that the date of his inspection was May 26, 1978 and that the purpose was to assess the feasibility of the requirements of the conservation authority in its permission. The witness did not examine the entire area but merely attended at the two culverts. He indicated that water of depths of 3/4 to 1 foot was ponded at the upstream side of the county culvert. When questioned on his ability to give evidence to the fact that erosion had occurred on the roadway when he had not seen the condition thereof on any prior occasion, the witness indicated that the roadway is wider in the area adjacent to the structure and narrows in the area above the culvert through the structure. He also stated that there were gullies in the immediate vicinity indicating that erosion had occurred. When asked as to whether the cause of the gullies was "sloppy" construction the witness indicated that this was possible but he was again of the opinion that it would have been caused by storm erosion. He also indicated that in his opinion the pipe should have been longer.

When asked if he would have required the same conditions as the conservation authority had required he indicated that he would not have required a concrete wall but would have preferred rip rap. He also questioned the adequacy of the culverts indicating that he might have required two 48 inch culverts and one 36 inch culvert.

The witness was cross-examined on the issue of the significance of the size of the culverts and he indicated that in addition to the size being relevant the slope of the culvert would effect the ability of the culverts to pass the water. He indicated also that he felt that a larger culvert would be more effective than the three culverts required by the conservation authority.

He was also cross-examined on the jurisdiction to enforce blockages of culverts on private land, and he indicated that there was an inspection program for this purpose. If blockages are found during such inspections advice is given to the landowner who is expected to repair the situation at his expense.

On reexamination the witness was asked what in his opinion would occur if the county culvert was filled to its full capacity of water and the witness indicated that in his opinion there would be overtopping of the structure followed by the washing out thereof. Additional questions to the witness through the Bench indicated that the capacity of the county culvert is 200 cfs, of the three culverts required by the permission is 270 cfs and of the 48 inch culvert is 130 cfs. The witness also admitted that it is usual for lesser standards to be imposed on private driveways than on public roadways. He further pointed out that on highways there is usually a flatter grade across the area of the flow than there is on private driveways with the result that the same volume of water will have a much greater depth on private property and accordingly a greater ability to create erosion. This factor should offset the factor of lesser use that occurs in private situations. His reason for recommending longer culverts than those recommended by the conservation authority was to provide a greater slope to the edges of the embankment which appeared to be practically perpendicular and supported by a concrete wall in the proposal of the conservation authority. On further questioning from the Bench the witness indicated that the one in ten year standard was the minimum standard with the exception of temporary detours and that the standard being applied to the application of the existing structure was in effect the minimum standard that is applied in any permanent circumstances. He further indicated that his calculation

mentioned above did not include the effect from the freeboards and if this was added to the county culvert and to the proposal by the conservation authority, the capacities would equate the minimum standard. The witness admitted that the waterway was part of the Grand River watershed in which the regional storm is considered to be the Hurricane Hazel standard which is higher than the one in 100 year storm. The reason given by the witness for the adoption of the minimum standard considerably below the regional storm standard was the use of the structure.

The witness also indicated that there is a real probability in the event of a washout of silt moving into the Firmi and Layzell properties the easterly boundary of which is approximately 200 feet downstream from the structure. The witness indicated that there would be a headpond of over 500 feet in length, 20 to 30 feet in width and approximately 10 feet in depth and upon the blockage and subsequent washout of the structure there would be a downstream effect for a considerable distance downstream. The witness indicated that this would be the most serious situation. A less serious situation would occur where the structure is overtopped and in such circumstances he expected there would be some erosion and a good chance that the embankment would wash out and this material would be carried downstream and deposited on other properties. When asked as to what type of a storm would create this condition the witness indicated that this condition would occur in a one in five year storm.

Cassis pointed out that there were no buildings on the subject lands and that the buildings on the Layzell and Firmi properties are situated above the 40 foot bank covered with tree growth between the residences and Irish Creek.

During his sworn evidence Cassis stated that the Firmi and Layzell properties are completely wooded, with the exception of the houses that are located above the bank, measuring approximately 40 feet in depth. The wooded bank lies between the houses and Irish Creek and extends in a northerly direction along the westerly portion of the subject lands lying to the west of the roadway constructed by Gartner.

Cassis described the part of the bed of the creel immediately south of the county road as being filled with rocks and stones and having water approximately two to fourteen inches in depth. He stated that he had caused to be removed the spoil placed on the banks by Gartner's contractors. He gave evidence that the culvert did not overflow during this spring which followed in his opinion, one of the worst winters on record for snow and frost nor during the spring of 1977. Further it did not wash away during these two springs. He submitted in his opinion that this showed that there was a considerable strength to the structure.

Cassis gave evidence that for a distance of 800 feet below the structure the channel widens out and then becomes shallow and filled with rocks and stones.

He stated that the only water of decent depth, i.e. four or five feet, is situate in the channel between the county culvert and the structure and in the channel downstream of the structure to a point 800 feet downstream. Downstream from this point the channel is filled with rocks and stones and the water is only six inches deep. This body of water is situate on Cassis' land and the lands of Firmi and Layzell. A sketch prepared by him showed a channel extending from the structure in a south-westerly direction across his property, the property of Firmi and one-half way across the Layzell property, which would measure according to the deeds and sketch produced by Winters approximately 800 feet. Cassis stated that this "stream" had been there many, many years before he came on the scene.

On cross-examination, Cassis indicated that there was about an equal volume of water above and below the structure and that there is about four feet of water above the culvert and five feet below the culvert. He thought both areas were created by dredging and not by nature.

The argument of the Ministry was based on a background of assurances of Cassis and Cassis' solicitor on his behalf to the effect that the structure erected by the predecessor in title in

contravention of The Lakes and Rivers Improvement Act would be removed or reconstructed to a satisfactory design. It was pointed out that at no time during the period of one year since the land had been acquired by Cassis had any representations been made that the standards required by the Ministry were excessive or inappropriate and during this time there had been every indication that the standards recommended by the Ministry would be complied with. Counsel submitted that the expert evidence showed that the structure was not technically sound for the conditions of the creek in that the Ministry had adopted the standards set by the Grand River Conservation Authority and its engineers and the evidence of the engineer at the hearing established that these standards were minimal. It was submitted that the structure was capable of creating damage not only to the subject lands but also to the lands of riparian owners and in so doing would constitute an infringement of riparian rights. It was submitted that the public interest requiring protection by The Lakes and Rivers Improvement Act rises from the interference with riparian rights and accordingly one of the purposes of The Lakes and Rivers Improvement Act is the protection of the interest of riparian owners. It was submitted that the failure of any riparian owner to appear at the hearing should not be taken as conclusive of the lack of concern of riparian owners and that there is an obligation on the Ministry to protect such interests regardless of the position taken by the riparian owners. It was further submitted that the hazard to riparian rights would continue and if not dealt with at this time it would be necessary to institute further proceedings against subsequent owners if Cassis is not required to remove or reconstruct the structure at this time.

The argument of Cassis was that the unusual circumstances of land acquisition should be considered in dealing with the proposed order. The circumstances include the acquisition of title as a trustee on behalf of several creditors and the holding of the land in a speculative position and the continuing position of an agricultural lessee whose crops remained on the land until last fall creating

problems of organizing a suitable disposition of the subject lands. Secondly it was suggested that, against this background, the action taken by Cassis was reasonable in that he had, in spite of the tenancy, arranged for the removal of the spoil that was causing an undesirable appearance. Further delays were caused by the complications of the real estate transaction.

With reference to the soundness of the structure Cassis argued that the winter of 1977 - 78 was generally known as one of the most severe winters from the point of view of frost and snow that have been experienced and having survived this winter and one previous winter it should be concluded that there is no serious problem of stability of the structure. He submitted that the Ministry had appeared not to have established any serious problem prior to the witness Lewis attending on the lands on the Friday previous to the hearing. He also made reference to a prosecution at which the Crown failed to appear. He relied on the failure of the riparian owners to appear although their houses were valued at \$200,000 and in view of this value it must be assumed that the riparian owners were not concerned with the existence of the structure. He also submitted that an order at this time may be premature in that there is a probability of the land being acquired for gravel extraction and that the operators would be in a far better position to make any change, in the structure both by reason of their presumed ownership of the necessary equipment and the possibility of the needs of the operator being inconsistent with the location or the specifications of the structure. Accordingly he submitted that the existing use should continue particularly when it appeared that the risks are primarily related to the lands now owned by him.

**In** reply counsel for the Ministry pointed out that the evidence indicated that there had been engineering considerations in respect of the structure throughout the entire period of concern, such engineering considerations having been performed by the Grand River Conservation Authority. He also submitted that the zoning of the property and the dismissal of charges at which the Crown had

been unable to attend were not relevant and the failure to raise with the Ministry during almost one year of correspondence any objection to the engineering should prevent the issue being raised at this time.

Turning to the matter of the finding of facts, as I understand the evidence, there are, by virtue of the definition of the word "dam" extending the meaning to include any work forwarding, holding or diverting water, two dams within the meaning of The Lakes and Rivers Improvement Act. Firstly there is an excavation of the bed of the creek from a point approximately 25 feet from the northerly limit of the Cassis lands to a point midway across the Layzell lands. This excavation has created an instream dug pond which is holding back water to a depth of four or five feet at a place where the normal flow is approximately one foot in depth. As such, the excavation is a work that has the effect of holding back water. Secondly, the road crossing which crossed the excavated portion approximately midway between its ends will hold back the water flowing through the enlarged channel in part and constitutes a dam within the meaning of The Lakes and Rivers Improvement Act. The limitation, i.e. the fact that some water is passed through the culvert, is not sufficient to take the structure out of the definition of the dam as such is only a matter of degree and all dams have some device for passing part of the flow.

I find on the basis of the evidence of the witness Winters that there had been an engineering review of the standards necessary for such a structure from the beginning by the engineer for the Grand River Conservation Authority. His evidence indicated that this engineer was no longer on staff and I see nothing unreasonable in having another engineer who is on staff review the matter for the purpose of the hearing particularly when he indicated that the standards were minimal. This engineering evidence indicates that, based on the specifications for a one in ten year storm which was the lowest standard used by engineers the flow from the drainage area would be 350 cfs. The flow through the structure as constructed would only be 130 cfs and I accept the evidence of the witness Lewis that the structure would reasonably be expected to fail in storms of a

lesser intensity than a one in ten year storm.

The investigation of the witness Lewis on the ground was limited to an examination of the county culvert and the structure and he did not traverse the remainder of the creek on the Cassis' lands or on the lands downstream therefrom. Accordingly it appears that he was unaware that the bed of the creek downstream from the structure had been excavated in the past. His evidence was to the effect that a failure of the dam would result in material being washed downstream including a possibility of the movement of the culvert with the possibility of upstream flooding resulting from the blockage of the channel by the culvert. He also indicated that the blockage of the existing culvert in its present position might cause upstream flooding. On examination by the Bench he stated that the damage that might be expected would be experienced for a considerable distance downstream but he did not quantify this distance. Further there was no evidence regarding the extent of upstream flooding from blockage of the existing culvert. I do not know whether such flooding can reasonably be expected to effect upstream or adjacent properties and accordingly I can make no finding that such a result is probable as a result of upstream flooding.

Had the structure been erected in a bed of a creek that is in a condition of nature I would have no hesitancy in finding that there is a reasonable probability of silting and erosion of downstream riparian owners. In this case however, it appears on the evidence of Cassis and undenied by the evidence of the Ministry that there is part of a headpond below the structure which, it would seem, would form a settling basin some 800 feet in length. I would expect, although there was no professional evidence on the subject, that the siltation process from the carriage of sediment suspended in natural occurrences would occur firstly and perhaps primarily on the part of the headpond above the structure. This may be the reason why the depth of water upstream of the structure was said to be four feet as contrasted with five feet downstream of the structure. It may well be that the siltation process has commenced in the upper part of the

headpond. The evidence of Lewis inferred that there was more silt at the upper end of the culvert in the structure than at the lower end. He said that there was one foot of silt at the upper end and did not report any silt at the lower end. The evidence does not assist in determining the period of time it would take for the siltation process to offset the benefit, if any, of the dredging project and it may be noted, from a legal point of view, that this aspect of the situation was not in issue.

The significance of the existence of a headpond in the area downstream of the structure is that in the event of a failure of the structure there is a comparatively substantial headpond which would act as a retaining and settling basin and would, I suspect, in the absence of any evidence on the subject, be adequate to absorb the heavier material in the structure before it would move downstream to the natural channel. The volume of material in the structure would be,

$$\begin{array}{rcl} 30 \text{ feet (length)} \times 15 \text{ feet (width)} \times 10 \text{ feet (height)} & = & 4500 \text{ cu.ft.} \\ & \text{less} & \\ \text{the volume of the culvert} - \frac{(22 \times 4 \times 12)}{7} & = & \underline{150 \text{ cu. ft.}} \\ & & 4350 \text{ cu. ft.} \end{array}$$

The volume of the part of the headpond, assuming there is presently five feet of water where the normal flow is one foot in depth is,

$$800 \text{ feet (length)} \times 30 \text{ feet (width)} \times 4 \text{ feet (height)} \text{ or } 96,000 \text{ cu. ft.}$$

Even if the basin extends only to the easterly boundary of the Firmi property and the depth of the excavation were only one foot there would be a basin of 200 x 30 x 1 cu. ft. or 6,000 cu. ft., which is greater than the volume of the material in the structure. It is difficult to envisage how the material in the structure, which from the photographs appears to contain some gravel or stone,

would be carried beyond the artificial basin, except for the very fine parts which could become suspended and would probably have some relation to what would be put in suspension in a state of nature by a storm sufficient to cause a failure of the structure.

It is appreciated that one of the results of the ponding of water in the lower part of the headpond and the settlement of silt during the ponding process would be the creation of a greater erosion capacity of the water. However such a result would be caused by the first mentioned "dam" i.e. the dredged channel and not by the "dam" in issue.

The only purpose of The Lakes and Rivers Improvement Act argued by counsel for the Ministry was the protection of the rights of riparian owners. The evidence of Cassis indicated that the lower part of the headpond extends totally across the Firmi property and part way across the Layzell property, such properties being the immediate downstream riparian lands. There is no evidence to indicate that the owners of these properties were party to the creation of the headpond or whether it was created as a trespass on their land. Assuming they were notified of the hearing, and there was no proof of service on these landowners although such service was directed by the undersigned at the time of setting down the hearing, there is a possibility that these owners were party to the deepening of the channel or had no objection to such deepening and accordingly did not appear at the hearing to support the position of the Ministry. If there was active or even passive acquiescence in the dredging, it is readily apparent that such owners would be in a difficult position to object, unless the project was carried out in a manner other than originally contemplated.

I cannot conclude that the Ministry has established that there is a probability of a significant interference with the protection of the right of riparian owners. Apart from the lands of Firmi and Layzell the land further downstream appears from Exhibit 6 to be in a state of nature and to be swampy and marsh. No evidence of any harm to these lands was shown. Also there was no evidence of the

extent of possible upstream flooding and I cannot make any conclusions in this regard.

Although not argued on behalf of the Ministry another purpose of The Lakes and Rivers Improvement Act contained in clause E of section 10 reads as follows:

"(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 manne."

The key words of the clause, as applicable to this case, are "ensuring the suitability of the nature of improvements in such waters including their efficient and safe maintenance and operation..."

In other words, one of the purposes of the Act is to ensure that "dams" are safely engineered and constructed. Section 10 of the Act requires the approval of both the location and the plans and specifications of "dams". Surely the safety of the dam both during its construction and operation can only be considered to be one of the primary, if not the most important, purposes of the Act. This role is particularly essential in connection with smaller "dams" where the landowner does not or cannot afford the services of an engineer. The lives and safety of individuals, whether they be the landowner, trespassers, licensees or invitees, are exposed to risks if such structures are unsafely constructed or maintained.

The evidence of the witness Lewis clearly establishes that the structure is unsafe from an engineering point of view. The minimum engineering standard requires a discharge capacity of 350 cfs and the capacity of the one culvert in the structure is 130 cfs. Lewis' evidence indicated that the structure would probably fail in a storm of lesser intensity than the one in ten year storm in respect of which the minimum standards are designed. The evidence of two winters is not conclusion, particularly as the recent spring runoff was unusually moderate. In addition there has not been installed any protective device to prevent erosion from rainfall or from storm flows. Accordingly, I can only conclude that the structure is an unsafe structure.

Turning to the question of whether the proposed order is fair, sound and reasonably necessary for the purposes of the Act, it is noted that these words are identical with the considerations to be made by an inquiry officer under subsection 5 of section 7 of The Lakes and Rivers Improvement 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 the 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. 8said 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.'"

The first question, in the light of the tests approved in the Walters case is whether the proposed order is reasonably defensible having regard to the objectives of the Act. As I have indicated above one of the primary purposes of the Act is to ensure the safe erection of structures falling within the definition of "dams" and I am satisfied that the evidence conclusively establishes that there are serious shortcomings in the engineering or lack of engineering in connection with the structure. In my opinion the

prevention of the erection of "dams" similar to the structure is and has long been the rational of The Lakes and Rivers Improvement Act and I cannot see how it could be said that the proposed order was not completely defensible having regard to the technical unsoundness of the structure.

With reference to the question of fairness, there does not appear to be any great divergence of private interest and public interest to be weighed. The concerns of the public are most similar to the concerns of the landowner. The risk of injury to persons, who probably would have a cause of action against the occupier, should be the concern of the owner as well as the public. The only area of doubt arises in the issue of prematureness and the lack of any independent supporting data to support the existence of an agreement to sell to a gravel operator and the need for a zoning change, in respect of which the evidence of Cassis was far from creating a clear understanding of the situation, tend to offset any advantage that may exist in delaying the issue of the order. There is no serious assurance that a new owner would come into existence and carry out the necessary work in a reasonable length of time.

Accordingly I am satisfied that the proposed order is fair, sound and reasonably necessary for the purposes of The Lakes and Rivers Improvement Act and I recommend its issue.

DATED at Toronto this 13th day of June, 1978.

Original signed by G.H. Ferguson

G. H. Ferguson.