

RULS-AD-1972-40

5/30/1972

- DEPOSITION OF JACK McCORMICK

PGS-39

1 THE ALLAN-DEANE CORPORATION, :  
2 a Delaware Corporation, :  
3 qualified to do business in :  
4 the State of New Jersey, :

5 Plaintiffs, :

6 vs. :

7 THE TOWNSHIP OF BEDMINSTER, :  
8 a Municipal Corporation, :  
9 of the State of New Jersey, :  
10 and THE TOWNSHIP OF :  
11 BEDMINSTER PLANNING BOARD, :

12 Defendants. :  
13 -----

DEPOSITION UPON  
ORAL EXAMINATION  
OF  
JACK McCORMICK

RULS - AD - 1972 - 40

14 T R A N S C R I P T of the deposition of  
15 Jack McCormick, called for Oral Examination in the above  
16 entitled action, said deposition being taken pursuant to  
17 Rules governing Civil Practice in the Courts of New Jersey  
18 by and before ANTHONY LaBRACIO, a Notary Public and  
19 Certified Shorthand Reporter of the State of New Jersey,  
20 at the offices of Bowlby, Woolson & Guterl, Esqs., 17 East  
21 High Street, Somerville, New Jersey, on Tuesday, May 30,  
22 1972, commencing at 10:30 in the forenoon.

23 A P P E A R A N C E S:

24 WILLIAM W. LANIGAN, ESQ.,  
25 Attorney for the Plaintiff.

McCARTER & ENGLISH, ESQS.,  
By NICHOLAS CONOVER ENGLISH, ESQ.,  
Attorneys for the Defendants.

BOWLBY, WOOLSON & GUTERL, ESQS.,  
By EDWARD D. BOWLBY, ESQ.,  
Attorneys for the Defendants.

1 JACK MCCORMICK, having been duly sworn  
2 according to law by the Officer, testified as follows:

3  
4 DIRECT EXAMINATION BY MR. LANIGAN:

5 Q Mr. McCormick, for the record, state your  
6 full name and address. A It's Dr. Jack  
7 McCormick, 860--do you want the home address?

8 Q Both. A Office address,  
9 860 Waterloo Road, Devon, Pennsylvania. Home address,  
10 Mainline-Burwin Apartments, Burwin, Pennsylvania,  
11 Apartment B 305.

12 Q What is your business?

13 A I'm an Ecologist now involved in consulting.

14 Q How long have you maintained a business at  
15 that address? A Off the record, may I  
16 ask you, what do you mean by "business"? I have been at  
17 this address since 1963.

18 Q How long have you maintained a business in  
19 ecology at that address? A I was at  
20 this address from 1963 to July of 1971 as an employee of  
21 the Academy of Natural Sciences of Philadelphia, Chairman  
22 of the Department of Ecology. On July the 1st, 1971, I  
23 established a private consulting business at the same  
24 address in the same facility.

25 Q What is your educational background?

1 A How far back?

2 Q From college. A My under-  
3 graduate work was done at Butler University, Indianapolis,  
4 Indiana. I got a Bachelor of Science Degree in Botany  
5 In 1951. From 1951 through 1955 I was in a graduate  
6 program at Rutgers University in New Brunswick. I received  
7 a Ph.D. in Botany with a major in organisms and environment.

8 Q In what capacity were you employed in this  
9 Academy of Natural Sciences? A Do you  
10 want me to start with that employment?

11 Q Yes. A I was the Chairman  
12 of the Department of Ecology and Land Management from  
13 1963 through 1971.

14 Q Is this a teaching position?

15 A That particular position was not. It was largely  
16 research.

17 Q For whom? A For the Academy  
18 of Natural Sciences. I did teach at the University of  
19 Pennsylvania.

20 Q To whom do they supply this research?

21 A The Academy?

22 Q Yes. A For the good of  
23 the public, I guess.

24 Q Was this done on a contract basis for clients  
25 or-- A No. It was done on a

1 grant basis.

2 Q And the Academy simply makes studies?

3 A In my department, yes. It was research of various  
4 aspects of vegetation.

5 Q And you have been contacted and employed by  
6 the Township of Bedminster?

7 A I've been contacted by Mr. Nicholas English and  
8 employed by his firm.

9 Q When? A I don't remember  
10 the exact date. It was sometime earlier this year.

11 Q Do you have a copy of the employment agreement  
12 or the letters or correspondence?

13 A I may have.

14 Q Would you produce them, please?

15 MR. ENGLISH: Off the record.

16 (Off the record.)

17 MR. ENGLISH: We had a conversation. I said  
18 I'd like him to help us and he indicated to me some  
19 idea what the rate will be.

20 A The first meeting was before the New Jersey Academy  
21 of Sciences annual meeting. That was on or about the 11th  
22 of April.

23 MR. ENGLISH: It was before that.

24 A Yes. We met several weeks before that.

25 MR. ENGLISH: I would have to guess around

1 February.

2 A Late February or early March.

3 Q Have you personally visited the Township  
4 in connection with your consulting?

5 A Yes, sir.

6 Q How many times?

7 A Approximately three times.

8 Q Do you know the approximate dates?

9 A I have these recorded in my mileage records I keep.  
10 I don't have them with me. Approximately sometime in mid  
11 April and a couple of times in May.

12 Q Did you write a report or furnish a report  
13 to the Township as a result of your visits to the Township?

14 A Not a written report, no.

15 Q Have you furnished one verbally?

16 A I have furnished, verbally, reports to Mr. English.  
17 I might say, on these reports I do have manuscript memos  
18 that I've kept for my own files.

19 Q Do you have them available?

20 A I don't have them with me. They would be in my files.

21 Q Can you produce them at a later date after  
22 this hearing?

23 MR. ENGLISH: I object to that. These are his  
24 own memoranda and have not been furnished to counsel.

25 Q They are in the nature of your findings, are

1 they not? A They are simply notes that  
2 I made during the trip. Not organized. Just miscellaneous  
3 notes. I went along the road and made various kinds of  
4 notations. They're not formalized reports in that sense  
5 of the word. I was never asked to make a formal report.

6 Q But are there findings and conclusions  
7 contained in those notes? A Certainly  
8 not conclusions. I'm not sure what you mean by "findings."  
9 They are observations. What I would call general field  
10 notes that I keep. The species of the trees and so on.

11 Q Will you rely upon these as part of your  
12 testimony at the trial? A On these  
13 memos per se?

14 Q Yes. A I might.

15 MR. LANIGAN: Then I would like them produced.  
16 If he's not going to rely upon them, obviously I  
17 don't need them.

18 A They would be relied upon simply to reinforce my  
19 memory of certain things. They are not, as I say, extensive  
20 reports. They are simply memoranda.

21 MR. LANIGAN: Well, will counsel agree, if  
22 he's going to rely upon them at trial to refresh  
23 his recollection then I'm entitled to see them?

24 MR. ENGLISH: You would if he in fact used  
25 them.

1 MR. LANIGAN: He says he is going to.

2 THE WITNESS: I said, "I might."

3 MR. LANIGAN: On the grounds that he might  
4 use them you ought to produce them.

5 MR. ENGLISH: Will it be satisfactory if I  
6 sent you a Xerox copy of them?

7 MR. LANIGAN: Of course.

8 Q Mr. McCormick, what did your trips to the  
9 Township of Bedminster disclose?

10 A That there is vegetation in Bedminster Township and  
11 that there is certain topography which I verified  
12 topographic maps are essentially correct.

13 Q Which topographic map?

14 A The United States Geological Survey Topographical Maps.

15 Q For the entire township?

16 A Yes.

17 Q And you verified that it is correct?

18 A I verified they are correct. One must remember  
19 these are 20 foot contours. Therefore, they don't show  
20 every minor configuration of the landscape and so on. The  
21 copies I have are dated 1954. I only have one with me.  
22 There are three others that I have. I believe two of those  
23 cover parts of the township have very small parts.

24 Q Apart from vegetation and verifying the  
25 contour what else did your findings disclose?



1 A I also looked at soil maps that had been provided  
2 by the Soil Conservation Service and made observations at  
3 a few points which also verified the general validity of  
4 those maps.

5 Q So that your findings were limited to  
6 verifying maps which were already in existence?

7 A Well, extending--these maps are in existence but  
8 they are single resource maps. In other words, the  
9 topography maps show only topography and to some extent  
10 the location of houses, the location of general forest  
11 areas and that sort of thing. Soils maps show only soils.  
12 Other resource maps, for example, show only particular  
13 aspects of a single resource. As an ecologist I'm  
14 interested in the inner action of these resources. I was  
15 examining from that point of view of the inner action of  
16 these resources.

17 Q What is the result of your finding?

18 A The result of my finding is that in truth Bedminster  
19 Township is an area that can be considered or is in the  
20 upper watershed of the Raritan River. It's an area highly  
21 impermeable of geologic materials, an area of low density  
22 development. Is there anything--can you ask me anything  
23 more specific? It's difficult. I'm not trying to be  
24 difficult myself.

25 Q I understand.

A It's hard

1 for me to answer such a blanket question.

2 Q Those are your findings, then?

3 A Yes.

4 Q Do you have any other findings, any specific  
5 findings, with reference to the township?

6 A Well, excuse me for being difficult. Such a  
7 blanket question, it's very difficult for me to respond to.  
8 If you want me to discourse all day long on Bedminster  
9 Township and what I saw there and so on, fine. But if  
10 you can direct your question more specifically to some  
11 aspect I'd be glad to try to respond to that.

12 Q Perhaps I can help. Did you make any  
13 combined resource map? A No. I was  
14 not asked to. Mentally, you know, one always does this.  
15 Physically, I did not redraw any such map.

16 Q Apart from verifying what is already in  
17 existence and what is known about the soils, did you find  
18 anything unusual or different not disclosed by any previous  
19 study?

20 MR. ENGLISH: You mean previous study that  
21 he's already referred to?

22 MR. LANIGAN: Or that's in existence that he  
23 has some knowledge of.

24 A Yes, I would say so.

25 Q What? A Information that

1 is different from anything that I had seen in any other  
2 place.

3 Q What is that? A Essentially  
4 the township has a rather unique and unusual resource in  
5 the nature of the colluvial materials that are at the  
6 base of the Watchung Mountains and these materials appear  
7 to be a very excellent aquifer that is perched above the  
8 general level of the Raritan River and above the remainder  
9 of the township. From an observation point of view, with-  
10 out any measurements that I've made myself, it appears that  
11 this area is one of the most important local aquifers.  
12 To my knowledge this has not been so stated before.

13 Q Are there others throughout the State of  
14 New Jersey? A Other aquifers?

15 Q Yes. A Yes, there are.

16 Q They exist everywhere, don't they?

17 A Aquifer areas per se exist over large areas,  
18 particularly the southern part of the State. Now, there  
19 are aquifers and aquicludes. Many of the States are  
20 aquicludes. In other words, areas which are very low in  
21 water absorption. They do not readily absorb precipitation  
22 or store large amounts of water. Among the aquifers  
23 there's a range in terms of the amount of water they can  
24 hold, the rapidity with which they absorb water and so on.  
25 So, we began to characterize aquifers from those which are

1 most efficient in water storage and those which are least  
2 **efficient.** So, yes, there is aquifers throughout the  
3 **State.** Aquifers do not necessarily all behave the same way  
4 or perform the same function.

5 Q Did you perform any examination or examine  
6 in any detail the areas surrounding the Township of  
7 Bedminster? A By "surrounding,"  
8 how far do you mean?

9 Q Perhaps within a radius of five or ten miles.

10 A Yes. I drove around the township within that radius  
11 you speak of.

12 Q I'm talking now outside the township.

13 A Yes.

14 Q What is the character of those areas with  
15 respect to water absorption and the so called aquifers?

16 A Generally similar.

17 Q So that Bedminster is simply one of many  
18 similar areas in the Central Jersey area?

19 A Again I would have to qualify that on what we're  
20 talking about in terms of similarity. If we're talking  
21 about similarity of geology, yes, it's similar to many  
22 other areas, similar to topography to many other areas.  
23 If we begin to superimpose upon the conditions of the land  
24 and particularly the lack of urbanization, no, it's not  
25 similar to many areas which lie particularly to the south

1 and southeast and east of it. If we're talking about  
2 its position in the watershed, no, it's not similar to  
3 those areas which lie in the watershed below it. It's  
4 part of the upper watershed area. There are many features  
5 which are more or less unique to the township.

6 Q In terms of water characteristics and in  
7 consideration to the area to the west and north it is  
8 substantially the same, is it not?

9 A Yes. They're all parts of the upper Raritan water-  
10 shed.

11 Q How big an area does that comprise?

12 A The upper watershed?

13 Q Yes. A I don't have those  
14 figures. I don't know off hand.

15 Q So you have no idea what part the Township  
16 of Bedminster plays in the actual watershed percentage  
17 wise? A Percentage wise? I have

18 the figures worked out. I don't carry them with me in my  
19 head.

20 Q A rough idea. 1%?

21 A Any rough idea that I would give would be very  
22 unsuitable. I don't think it would be ethical for me to  
23 try to give any recollection without my notes.

24 Q Do you have your notes with you?

25 A Those notes I don't have with me.

1 Q Can you look at those notes and let us know  
2 after the hearing what percentage the Township of  
3 Bedminster is of the watershed?

4 A I'd be glad to.

5 MR. ENGLISH: You mean in terms of acreage  
6 or area?

7 MR. LANIGAN: Yes.

8 THE WITNESS: May I ask you further, presumably  
9 you wish this as a percentage of the upper north  
10 branch watershed?

11 Q If that's the watershed you're talking about.

12 A Okay.

13 Q Is there any other watershed applicable  
14 to Bedminster? A Part of the Bedminster  
15 Township drains into the Lamington River which by definition  
16 could be considered part of a north branch. It's a  
17 tributary of the Raritan at a point that's along the south  
18 edge of the township. One can consider the Lamington  
19 watershed as a separate entity or considered as part of  
20 this watershed. Of course, both of them are part of the  
21 whole watershed drainage of the Raritan River. It's a  
22 matter of human definition.

23 Q Assuming it's part of it, did you examine the  
24 soil and water characteristics of the other municipalities  
25 of that watershed? A Above Bedminster

1 Township or outside Bedminster Township? I examined them  
2 from an observational point of view.

3 Q Which ones? A And examining  
4 the published information that's available for them.

5 Q Which ones? A I can't name  
6 them by the names around here. I have information on  
7 Hunterdon County. I depended largely on that as far as  
8 published information is concerned.

9 Q What is the nature of that published  
10 information?

11 MR. ENGLISH: I don't know if he finished  
12 his answer.

13 Q I'm sorry. Did you finish?

14 A Yes.

15 Q What is the nature of that published  
16 information? A As far as the information

17 I have with me is concerned, one of the studies is Geology  
18 and Ground Water Resources of Hunterdon County, New Jersey,  
19 published in 1966 and written by Haig Kasapach, who is with  
20 the New Jersey Department of Environmental Protection. I  
21 also looked at soils maps prepared by the New Jersey  
22 Agricultural Experimentation which, as I recall, were  
23 prepared by John C.F. Tedro. I don't have copies with me.  
24 These are the parts of my general literature file.

25 Q Will you rely upon those at the trial?

1 A Again, I could not say that I would or wouldn't. It's  
2 possible I might use them.

3 Q If you do will you please produce them?

4 A Yes, I would.

5 Q Prior to the trial?

6 THE WITNESS: In this case I would rely on  
7 you for that. I said I might use them if necessary.

8 MR. ENGLISH: There's a problem, Mr. Lanigan,  
9 in that I have not yet sat down with Mr. McCormick  
10 to determine what parts I want him to cover. He is  
11 in doubt as to what he's going to rely on and so am  
12 I. There may be a time problem between now and June  
13 21st in getting a lot of this stuff out. I'm not  
14 trying to be difficult. I do have things to do as  
15 trial counsel for the defense besides attending  
16 pleasant conferences and depositions with you.  
17 There's some practical limitations on getting all  
18 this stuff together and making it available for you.

19 MR. LANIGAN: On the other hand, if he's  
20 going to rely upon the document or a chart and he's  
21 here and has made his study I would certainly feel  
22 that I'm entitled to have it produced and have some  
23 knowledge of what it is rather than have it sprung  
24 on me in the second day of a trial. If it exists  
25 and he's going to rely upon it he could either tell



1 me what it is so I can get a copy of it or he can  
2 produce it. Of course, to the extent that he is  
3 not going to rely upon it I will not be confronted  
4 with it and there would be no prejudice at that  
5 time. I'm only interested in having the benefit  
6 of a soil map, if one exists, rather than being  
7 confronted with it on the second day of trial.

8 MR. ENGLISH: Well, I appreciate your problem  
9 and I'm perfectly willing to go on record as  
10 expressing a desire to cooperate with you. I think  
11 counsel on both sides have tried to in the past. I  
12 prefer not to be pinned down to a precise commitment  
13 as to the time and place if we have to meet the  
14 present schedule. I'll do my best to get whatever  
15 I can to you because I appreciate your concern about  
16 surprise.

17 MR. LANIGAN: Thank you.

18 Q Do you have maps which you had doctored up  
19 or which you have prepared, Mr. McCormick?

20 A No. I showed you these maps which were prepared by  
21 the Soil Conservation Service to indicate the difficulty  
22 with which I would have in supplying you with copies.  
23 These are copies of the original maps. Should we photocopy  
24 these I think they would be largely indecipherable. These  
25 are available and I would suggest the best thing to do would

1 be to request copies from them. They are public documents  
2 so they're easily available. The materials that we have  
3 that I have generally looked at like John C.F. Tedro--and  
4 In no way am I trying to avoid your question. We maintain  
5 a comprehensive library of New Jersey material which  
6 probably exceeds 150, 200 volumes, and in just backgrounding  
7 this information, and I really can't specify exactly what  
8 I looked at, I've looked at so many things.

9 Q Let's talk about the areas contiguous to the  
10 Township of Bedminster particularly with respect to the  
11 north and the west. Did you physically inspect those areas  
12 as part of your consultation?

13 A Excuse me. We observed them. We superficially  
14 examined them, I would say. In no way have I done an  
15 in depth observation outside the township. I have generally  
16 made what I would refer to as a reconnaissance survey.

17 Q Based on your reconnaissance then can you  
18 conclude the areas are not unlike the Township of Bedminster?

19 A In part they are similar and in part alike.  
20 Geologically there's a discontinuity to the north. There's  
21 also discontinuities to the west.

22 Q In what particular respect is Bedminster  
23 different than those other areas which constitute, I believe,  
24 part of the same watershed?

25 A It's different because of its geology and the fact

1 it's triassical shale and bedrock material.

2 Q And the others are not?

3 A Some part of the others are not. Every area on  
4 this earth is unique from a biologist and naturalist and  
5 ecologist's point of view. Some are more unique than  
6 others, but the particular characteristics and combination  
7 of characteristics that exist in Bedminster Township is  
8 unique as is the combination that exists in other areas.

9 Q You have a similar combination in Readington,  
10 do you not?

11 A I'm sorry. I don't  
12 recognize it by that name.

13 Q The area immediately to the west in Hunterdon  
14 County?

15 A There are parts in  
16 Hunterdon County similar. You don't have this Watchung  
17 ridge there. You don't have this--

18 Q How much of the Watchung ridge exists in

19 Bedminster?  
20 A Again, you're asking me  
21 for a figure which I don't carry with me. It's a small  
22 part. The Watchung ridge after all goes up and blends in  
23 and becomes the Orange Mountains and so on.

24 Q Are you familiar with the property owned by  
25 the plaintiff in this litigation?

A Generally so. I've seen a map of it. I've driven  
over it, around it.

Q Isn't it a fact that the entire Watchung

1 ridge is almost contained in plaintiff's property?

2 A You mean insofar as that part which lies in  
3 Bedminster Township is concerned?

4 Q Yes. A I would say that  
5 that is apparently true from my recollection of a map.

6 Q And a great portion of the plaintiff's  
7 property is a flat slope from the ridge?

8 A A great portion of the plaintiff's property is this  
9 colluvium which apparently has very important value as--

10 Q Excuse me. Would you explain exactly how  
11 that works, Doctor? A It would be very  
12 useful if we had a map that had Route 287, the new Inter-  
13 state Highway, on it. Unfortunately my map is too old.  
14 But if I can generalize, the hardrock ridge that we call  
15 the Watchung ridge extends upwards from the edge of  
16 Bedminster Township and includes--as I understand, your  
17 client's property includes that part of the bedrock ridge.  
18 This area is virtually impermeable to water so that any  
19 water falling on it goes through a very thin soil and  
20 begins to fall off that part of the ridge which slopes off  
21 the main part of Bedminster Township. The water then flows  
22 down the inner face between the soil mantle and the bedrock  
23 itself. Then it enters this colluvium, this broken rock  
24 material that has traveled by gravity and has collected  
25 organic material and developed a soil itself. This is a

1 loose and permeable material. The water that enters that  
2 is absorbed into that. Now, the new Interstate Highway  
3 that's been built along the south side essentially acts  
4 as a dam and any water that was formerly moving towards  
5 Bedminster Township is being blocked by that dam which  
6 means then essentially this material that's under your  
7 client's property has large unused capacity for the  
8 absorption of water. Part of that water flow into the  
9 property has been cut off. This means it can absorb more  
10 water coming down that slope. More water is going to  
11 infiltrate into that area. This material then, you might  
12 say, is suspended above most of the area of Bedminster  
13 Township and above the Raritan River. Gravity acting on  
14 this water then pulls it down into the deeper parts of this  
15 colluvial material and again it's still sloping out towards  
16 the Raritan. There are a number of springs at the bank  
17 of the Raritan where this water flows into the Raritan. A  
18 lot of this is probably subsurface, so we don't normally  
19 see it. This will support the base of the river, particularly  
20 during dry periods. The river continues to flow and it is  
21 supported by springs and underground waters rather than  
22 precipitation. So, as far as base level flow is concerned,  
23 even though this colluvium is a small percentage of the  
24 township--again, I can't cite a specific figure, --this by  
25 far is the most important aspect to the aquifer in terms

1 of the surface water in the area.

2 Q You mean the State of New Jersey by the  
3 construction of Route 287 interfered with that?

4 A If it were the State of New Jersey or whether the  
5 government that constructed it. Certainly, apparently, it  
6 did interfere with that. Not with the flow on the property  
7 itself, but the flow into the property.

8 Q Is there anyway to remedy that? A I would think  
9 there would be but I would defer to an engineer to rectify  
10 it. In other words, by providing some sort of subsurface  
11 culverts.

12 Q I'm talking about the State Highway or the  
13 Federal Highway problem. Is there anyway to remedy that?

14 A That's what I'm saying. By subsurface culverts.

15 Q Do you know whether that has been done?

16 A To my knowledge it hasn't.

17 Q Has not? A There's another  
18 aspect. Essentially the water that would normally flow  
19 a subsurface is being channeled through the highway and  
20 into the client's property. I believe the stream that  
21 flows into is unnamed on that map.

22 Q With respect to plaintiff's property, talking  
23 about that ridge of rock, you've described the condition  
24 as it presently exists, have you not?

25 A Excuse me. What ridge, the Watchung mountain?

1 Q Yes. You've talked about the water coming  
2 off of that now. A Yes.

3 Q And it's been coming off there for as long  
4 as time, presumably? A Well, as long  
5 as there's been a Watchung mountain.

6 Q Are you familiar with the fact part of the  
7 plaintiff's application envisions no change to the side of  
8 that mountain? A The plan that  
9 I've seen indicates there would be roads installed on the  
10 side of the mountains and I have not seen a detailed plan.

11 THE WITNESS: I've seen the one you provided.

12 MR. ENGLISH: The most detailed one that I've  
13 gotten.

14 THE WITNESS: I've seen plans which show  
15 general locations but not specifics. I have not  
16 seen anything that I recall that shows the precise  
17 location of any plan buildings or parking lots or  
18 anything of that sort. I have seen something which  
19 indicates there would be a road on the face of the  
20 Watchung mountain.

21 Q Do you realize there's an acknowledged  
22 impossibility in building or developing the greater portion  
23 of that mountain? A Excuse me? Could  
24 you repeat that?

25 Q Do you realize that there's an acknowledged

1 inability to develop the greater portion of that mountain  
2 because of the topographical features of the mountain?

3 MR. ENGLISH: You mean acknowledged by  
4 Allan-Deane Corporation?

5 MR. LANIGAN: Yes.

6 A By hearsay. I understand that Allan-Deane does not  
7 plan to put any building on the slope and so on.

8 Q What problem will be created then if there  
9 isn't going to be any development in that area?

10 A The colluvium materials, they're essentially, when  
11 the slope breaks, going to more generally slope off toward  
12 the Raritan River.

13 Q Is it your position there can be no develop-  
14 ment on that portion of the soil?

15 A Again I would ask you what you mean by, "no  
16 development"? Do you include farming as development?

17 Q Yes. For example, is it suitable for farming  
18 and agriculture?

19 A With proper  
20 conservation methods.

21 Q Is it suitable for any other type of  
22 development?

23 A It would be suitable,  
24 I would think, for many kinds of recreation developments;  
25 for developments which do not require impermeable cover.

26 Q Would it be suitable for one acre zoning?

27 A With my understanding of the effects of one acre



1 zoning, the streets that are required, the sidewalks that  
2 are required, the housing that would be built with  
3 permeable roofs and so on, I would think not.

4 Q Do you realize that the land is already  
5 zoned for one acre zoning in one portion of the lower part  
6 of the property as it abuts Route 206?

7 MR. ENGLISH: I object.

8 A The maps that I have seen--I believe I have the  
9 Bedminster map with me somewhere--indicates that that type  
10 of zoning is an extremely limited part of the area and has  
11 historic precedence in the fact it's already developed.

12 Q We're not talking about history. We're  
13 talking about it's suitability. You have concluded that it  
14 is not suitable for that purpose from an ecological stand-  
15 point?

16 A Excuse me. Do you ask me if I  
17 have determined it's not suitable for that purpose? In  
18 general, yes, I would say it is not suitable for one acre  
19 zoning over this area. If you're asking me specifically,  
20 then the only thing I can say, I'm afraid even an ecologist  
21 has to build in a "grandfather clause" in his approach  
22 towards things and we can't correct all the mistakes of the  
23 past.

23 Q Is it suitable for any residential development?

24 A Yes, I would say so. When you ask me that kind of  
25 thing I tend to begin to envision in my estimate what kind

1 of residential development. Very, very low density.  
2 **Extremely** low density. Again, I think we're talking about  
3 **the flexibility** in terms of natural resource zoning. To  
4 put kind of a figure on it, maybe one house on 50 acres  
5 would be appropriate for such a thing. Maybe it would be  
6 less than that. Again, without scientific study I don't  
7 think it's possible to come up with a definite--

8 Q That's with respect to the plaintiff's  
9 property? A That's with respect to  
10 this area that I've identified as being the colluvial  
11 deposits for the space of the Watchung mountain.

12 Q How about with respect to the remaining  
13 portion of the township, is your position the same with  
14 respect to this one for every 50 acres?

15 A In some areas I would say there should be zero  
16 no matter what the amount of acreage. Floodplain on the  
17 Raritan River and its tributary should not be developed  
18 at any density. There are large areas of the township  
19 which are not in the floodplain. Those areas have this  
20 **impermeable** shield of bedrock. I might say, I formerly  
21 owned a house on this shale in New Brunswick. Essentially  
22 there's the same sort of features. These areas are very  
23 poorly suited to on site sewerage. The soil is not  
24 permeable so that the treatment that one receives by  
25 passing the effluent from a septic tank to the soil is

1 very poor unless large areas are involved. So that this  
2 requires large lots to protect the water quality of the  
3 local streams and ground water and so on. I wouldn't want  
4 to say five acres is suitable for such drainage. Maybe  
5 five acres is too conservative. Maybe it should be ten or  
6 twenty.

7 Q If the area is sewered is your answer the same,  
8 are your feelings the same?

9 A If the area is sewered?

10 Q Yes. A You're talking  
11 now about sanitary sewers?

12 Q Yes. A Storm sewers and  
13 so on?

14 Q Yes. A If it sewered this  
15 brings up a complex thing. First of all you're talking  
16 about water quality in terms of just the sanitary flow.  
17 You're saying if I put in a pipe and don't discharge it to  
18 an on site field is that going to help things. It would  
19 help things locally. Now, where are you going to send the  
20 sewage? Where is the effluent going to be discharged?  
21 You're also introducing the aspect of a higher density  
22 urbanization or settlement of this area. With that you're  
23 bringing hard surfacing. You're bringing a number of large  
24 acres of impermeable surfaces in roads, streets, in the  
25 buildings themselves and appurtenances to those buildings;

1 driveways, parking lots, so on. This would be detrimental  
2 to the area. Highly detrimental to the water producing  
3 aspect of this area.

4 Q Mr. McCormick, do you have a background in  
5 sewage disposal or sanitary engineering?

6 A I'm not a sanitary engineer. By, "background," do  
7 you mean do I have experience in this field?

8 Q Yes. A As a professional  
9 consultant, yes, I do.

10 Q We're talking about treated effluent,  
11 obviously?

A What kind of treatment?

12 Q The treatment which would permit a discharge  
13 into a stream. I'm assuming when we talk about sanitary  
14 sewers in my question to you that these sewers would provide  
15 for a treatment. Now, is there any danger or any disturbing  
16 of the soil or the area if the sewers are properly  
17 installed and the effluent is properly treated?

18 A Very definitely.

19 Q How? A First of all on your  
20 collection network the pipes that bring the sewage to the  
21 plant, this would be an arterial system that would essentially  
22 diffuse through the entire area that is to be sewered.  
23 Large collector pipes, then smaller distributor pipes, and  
24 finally smaller pipes which actually connect to the various  
25 residences and buildings and so on. These systems have

1 an infiltration factor which allows a certain percentage  
2 of water to flow into the pipes. This is important to the  
3 system because it maintains low flow periods. It tends  
4 to keep water in the pipes to keep sewage flowing. This  
5 taps the local water supplies. There are possibilities  
6 that small streams essentially will disappear into the  
7 pipes, that the sewage collection pipes themselves will  
8 have such infiltration that will cause streams flowing  
9 along the surface to then be taken into the pipe to be  
10 absorbed into the pipe and flow through the pipe itself.  
11 This in essence will begin to rob the surface drainage of  
12 the area. There may also be the possibility up land areas  
13 of infiltration, the flow of sewage water out of the pipes  
14 that will tend to pollute ground water in the area. The  
15 water cycle would be interrupted. The water that formerly  
16 was taken out of the well used for household purposes  
17 discards into a septic field, say, in the area. Now, if  
18 it's discharged into a collective system and shipped to a  
19 treatment plant--and we don't know where--then this means  
20 the hydrologic cycle is interrupted and short circuited.  
21 Water that normally would go into the ground is being  
22 shipped somewhere, presumably. Other aspects are, the  
23 discharge point--wherever that is. You have not identified  
24 that for me so I can't really comment on it specifically.  
25 --but it depends upon the volume of flow of your treatment

1 plant, how many million gallons per day, how many persons  
2 it serves. It depends on the degree of treatment. It  
3 depends on the characteristics of the receptor stream.  
4 The stream is depended upon to dilute the sewage effluent  
5 that comes from the plant. The plant may be primarily  
6 secondary, tertiary, or it may have components which add  
7 to it which make it quaternary.

8 Q We're talking at least a three treatment  
9 facility, obviously. A You're talking  
10 at least tertiary.

11 Q Yes. A Tertiary treatment  
12 then would take out a large percentage. Probably 98% of  
13 the solids. Then you're into what I call a numbers game  
14 because 98% of a little bit is still a little bit; 98%  
15 of a lot is a lot more. So this would depend on what the  
16 population is. If it's too low then you wouldn't be able  
17 to afford a tertiary plant.

18 Q Are you making the position there can be no  
19 discharge into a stream? A No. Not  
20 at all. I'm simply saying we have to determine what the  
21 receiver stream is. We have to determine what the uses are  
22 already of that stream. The Raritan is important in the  
23 water supply of the dense low urbanized areas of New Jersey.  
24 Even though we're out here in open space this area is  
25 supporting the population or helping support the population

1 of our densely urbanized area of New Jersey.

2 Q To what extent did you examine that?

3 A In what way do you mean?

4 Q Have you made a study of how much water is  
5 being supplied to how many people from this particular area?

6 A It's my understanding that other people will testify  
7 to the specific gallonages involved and so on.

8 Q You've made no specific study?

9 A Well, I have made a study but I would not call it  
10 an in depth study. In fact I've been working on the other  
11 end of the pipe and determining the water that's available  
12 for future uses in Hackensack, Newark, Jersey City, and  
13 so on. I recognize that the systems are inner connected  
14 and this area is supplying the Newark area with water  
15 currently.

16 Q Are you familiar with a Schuylkill?

17 A Yes, I am.

18 Q That's Philadelphia water supply, is it not?

19 A In part. The Maiden Lane is on a Schuylkill.

20 Q There's discharge of effluent in that river?

21 A There certainly is. If you ever tasted Philadelphia  
22 water you'll know the problem with such things. We're  
23 trying to rectify that. What I think, we owe this to  
24 ourselves and civilization now, is to prevent such things  
25 to happen.

1 Q But with modern technology that can be  
2 prevented with proper treatment facilities?

3 A No. I don't want to arbitrarily--I can't answer  
4 that question yes or no. I would say with treatment  
5 facilities per se, no, it can't be corrected. With  
6 correct planning and with excellent, with high technological  
7 treatments, yes.

8 Q What do you mean by, "correct planning"?

9 A In other words, there are places we should not put  
10 treatment plants. There's places we should not discharge  
11 highly treated effluent. If you begin to get into the  
12 point where you're going into some sort of a distillation  
13 process and producing virtually distilled water and then  
14 reusing it and discharging it, we may get into that place  
15 where we could have a discharge point area. But  
16 technologically and economically we are not to that point.

17 Q Do you have an opinion as to whether there  
18 should be treatment facilities at all in the Township of  
19 Bedminster?

20 A If you have people you  
21 have treatment facilities. Now, currently, the treatment  
22 facilities are largely on site treatment facilities. In  
23 many cases these seem to be working well. But this again  
24 requires a large land area for the drainage field.

25 Q I'm talking about treatment plants. Do you  
have an opinion as to whether they can be permitted at all



1 in Bedminster? A Well, can you give me  
2 some definition of what kind of treatment plants you mean?

3 Q Is this an area where there should be no  
4 treatment facility? You said there are some such areas.  
5 Is Bedminster one of them?

6 A You're talking about large treatment facilities  
7 rather than a treatment facility maybe specifically put in  
8 to treat the material that's coming out of an already  
9 settled area?

10 Q Well, yes. A My answer to  
11 that would be that back fitting might be essential in some  
12 of those areas.

13 Q What do you mean by "back fitting"?

14 A To put in a treatment facility which would improve  
15 the on site facilities that are already being used. Not  
16 to expand the area.

17 Q There is no treatment facility for the  
18 Village of Pluckemin? A Not to my

19 knowledge. Currently there is a small facility that's  
20 been built, I think, by the Highway Department to service  
21 their own buildings.

22 Q Across the street from plaintiff's property?

23 A Yes.

24 Q Have you examined that plant?

25 A No.

1 Q You don't know where it flows or how it  
2 gets to the river? A No. As I say, I

3 would only presume I know where it goes. I haven't looked.

4 Q You examined the other facility in the  
5 Village of Bedminster? A I haven't

6 examined it. Again, I have looked at it.

7 Q You know where it flows?

8 A Again, I would presume it flows to the north branch  
9 of the Raritan River simply from its position.

10 Q Have you examined the only other one in the  
11 township on Cowperthwaite Farm?

12 A I'm not familiar with that. May I ask, the name  
13 that you just mentioned, is that Bedminster or Far Hills?

14 Q It's in the township--

15 MR. ENGLISH: You mean on Cowperthwaite Road?

16 A I have not examined anything on Cowperthwaite Farms.  
17 I was not aware that there was a plant there.

18 Q Is it possible to construct a plant to  
19 service a particular piece of property such as the

20 plaintiff's property if it's done with advanced technology  
21 so that there will be no detriment to the river or the

22 watershed? A You're talking about  
23 sewage per se?

24 Q Yes. A Yes, there is.

25 Q Did you make any studies with respect to

1 storm drainage? A Again may I ask you  
2 to further specify that? I have observed the area during  
3 a rain storm. I have done studies of storm drainage and  
4 other areas in some detail. I'm not sure exactly what  
5 your question is.

6 Q Take the township as a whole. Did you do  
7 any drainage study for the township?

8 A No. Not even a reconnaissance observation.

9 Q Did you do any drainage study with respect  
10 to plaintiff's property? A Not only  
11 during observations, during a rainfall.

12 Q What were your observations?

13 A That the rain was falling and was running off over  
14 land in many areas; that there is signs of considerable  
15 erosion in some places; some streams were obviously heavy  
16 silted, others were much less silted during a fairly  
17 intensive rain.

18 Q Do you believe it's possible with proper  
19 retention basins and drainage plants to retain the drainage  
20 on a specific piece of property so that there is no damage  
21 or danger to the river?

22 A May I ask  
23 you, are you talking about specifically storm flows?

24 Q Yes, and drainage in general from a particular  
25 tract. A We're talking about a general  
tract, not a specific one?

1 Q Talking about plaintiff's tract.

2 A I would have to say that I have not inspected the  
3 tract sufficiently for me to give any kind of an expert  
4 opinion. If we could talk more generally about, you know,  
5 a tract somewhere, then, generally, there are many ways.  
6 If the tract is large enough and the economic resources are  
7 suitable there are ways to protect, but these tend to  
8 become extremely expensive dollar wise and in terms of the  
9 amount of land that's required to make these adjustments.

10 Q What amount of land would be required?

11 A This would again depend upon the area, the  
12 configuration of the bedrock slopes and so on. That's the  
13 reason I'm hesitant to try to say anything specific about  
14 the plaintiff's property.

15 Q A couple of hundred acres?

16 A We're talking about percentage, really. We can't  
17 talk about specific acres. It may be as much as ten to  
18 twenty percent of a particular acreage. Again, we get into  
19 a point some acreages are so small you can't do anything on  
20 them. You have to talk about a fairly large parcel of land.  
21 Then it would depend upon the characteristics of that  
22 particular parcel, how much of that parcel would be  
23 required for the conservation safeguards.

24 Q One final area. Did you make a physical  
25 examination of the Raritan River watershed?

1 A Again, I made a reconnaissance observation of a  
2 portion of the Raritan River watershed. Over my lifetime  
3 in New Jersey I think I've probably been on most of the  
4 Raritan watershed.

5 Q Is it polluted now or unpolluted?

6 A Again, there are parts that are polluted, there are  
7 parts that are relatively not.

8 Q Which parts are polluted?

9 A Generally downstream parts are heavily polluted. The  
10 upstream parts tend to be less. There are exceptions.  
11 This would depend on the patterns and--

12 Q Do you have any exceptions in mind to the  
13 polluted area upstream? A I'm sorry, I  
14 don't quite understand your question.

15 Q You said there are some exceptions upstream  
16 and there are pollution areas. Do you know those off hand?

17 A Generally they would be around the areas of dead  
18 settlement.

19 Q Pollution from what?

20 A In the areas of dead settlement from sewage plants.  
21 The effluent from sewage plants, also from industrial  
22 sources.

23 Q Would you include silt, fertilizer, and other  
24 pollutants? A These would be non-point  
25 sources in those terms.

1 Q They exist in the township?

2 A In the township itself?

3 Q Yes. A If you're talking  
4 about non-point sources, then the fact there are cattle  
5 in the township, there's agricultural activity in the  
6 township, these are no doubt contributing to the stream.

7 Q And polluting the stream, are they not?

8 A Again, so we get our semantics right, could you  
9 define for me how you're using pollution? Is this past  
10 a certain critical point or is this--

11 Q What is your definition? You said there  
12 are certain areas where you shouldn't have any discharge of  
13 effluent. What is your standard in that case?

14 A Again, I would say at a certain critical point, which  
15 would depend upon the similar capacity of a stream, there  
16 are nutrients from the area from farm animals, agricultural  
17 fertilizers, there is settlement being reproduced by the  
18 activities of those farm animals. Even a cow just grazing  
19 will disturb the soil in the area. Animals wandering up  
20 and down fence lines tend to wear paths. Yes, in an  
21 agricultural utilized area there is non-point--or, there  
22 are non-point sources of pollution.

23 Q That's occurring right now?

24 A Now we have not done any measurements in this area,  
25 but from my observation I would say it's obvious there are

1 these sources of pollutants in the area.

2 Q Do you have any standards as to what is  
3 pollution and what is not?

4 A There are various standards. That's the reason  
5 I was asking you specifically what term you were using.

6 Q What ones do you rely upon?

7 A We rely upon the definition which a particular  
8 client that we're working for--well, as far as I myself  
9 am concerned I would consider anything that is above the  
10 normal conservation from any particular stream--streams  
11 vary--any conservation above that normally in the stream  
12 would be pollutant in my own terms.

13 Q Do you have a particular standard for the  
14 area for which you have examined?

15 A No. No one has specified any particular terms for  
16 this area.

17 Q And you have no specified standards?

18 A Only what I just told you as my own personal outlook  
19 on these things. There's no legal definition to my  
20 knowledge. At least, none I've been asked to follow in  
21 this area.

22 MR. LANIGAN: No further questions. Thank you.

23 MR. ENGLISH: No questions.

24 MR. BOWLBY: I have no questions.

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THE ALLAN-DEANE CORPORATION, :  
a Delaware Corporation, :  
qualified to do business in : CERTIFICATE  
the State of New Jersey, : OF OFFICER  
Plaintiffs, :  
vs. :  
THE TOWNSHIP OF BEDMINSTER, :  
a Municipal Corporation, of :  
the State of New Jersey, and :  
THE TOWNSHIP OF BEDMINSTER :  
PLANNING BOARD, :  
Defendants. :

I, ANTHONY LaBRACIO, a Certified Shorthand Reporter of the State of New Jersey and a Notary Public, do hereby certify that prior to the commencement of the examination the witness, Jack McCormick, was sworn by me to testify the truth, the whole truth and nothing but the truth.

I DO FURTHER CERTIFY that the foregoing is a true and correct transcript of the testimony as taken stenographically by and before me at the time, place and on the date hereinbefore set forth.

I DO FURTHER CERTIFY that I am neither a relative nor employee nor attorney nor counsel of either of the parties to this action, and that I am neither a relative nor employee of such attorney or counsel, and that I am not financially interested in the action.

  
A Notary Public of the State of N.J.