

# DECISION

## NOTICE OF INTENT FILINGS

### FOR LOTS 1 AND 2

### 8 SPRING HILL ROAD

OCTOBER 6, 1999

**Applicant:** Deanne Angell

**Representatives:** Mark Donohoe, Acton Survey and Engineering  
Steven Graham, Graham and Harsip, P.C.

**DEP File Numbers:** 85-644 and 85-645

**File Date:** January 8, 1999

### DECISION

On October 6, 1999 the Acton Conservation Commission voted to deny this Notice of Intent filing under the Massachusetts Wetland Protection Act G. L. Chapter 131 Section 40 ("The "Act") and the Town of Acton Wetland Protection Bylaw (Chapter F: Environmental Protection, "The Bylaw").

No filing was submitted for work on Lot #3. Therefore, no work is denied or authorized on Lot 3 under this decision.

The Commission presents the following A) Findings of Fact, B) Conclusions of Law, and C) Reasons for Denial.

#### A) FINDINGS OF FACT

##### 1. Hearing History

The Commission held hearings on these Notices of Intent (NOI's) on February 3, March 3, May 5, June 2, and July 7, September 8, and September 22, 1999. The hearing closed on September 22, 1999. Attorney Steven Graham of Graham and Harsip, P.C. and Professional Engineer Mark Donohoe of Acton Survey & Engineering, represented the applicant. Direct and indirect abutters, Laura Arnstein, Susan Mitchell-Hardt, David E. Hardt, Kimberly Appelmans, Jack Applemans, Frederick D. Seward and Susan Seward were represented by Attorneys Stephanie Kiefer and Glenn Wood of Fasanella, Johnson & Wood, P.C. Biologist Brian Butler of Oxbow Associates represented the abutters William Sawyer and Joan Gardner (15 Spring Hill Road, Concord). Attachment A lists the letters, written testimony, and other documents submitted to the Commission as part of the hearing.

##### 2. Proposed Work and History of the Lot

The applicant proposes to construct two single-family homes including associated excavation, grading, utility installations, septic disposal system, driveway and landscaping with a bridge at a wetland crossing. The existing lot is about 7.3 acres in size and the applicant wishes to subdivide the lot into three separate Lots - two new Lots (1 and 2) and Lot 3, site of the applicant's existing home. A separate Notice of Intent was filed for each home, but the Commission heard both lots simultaneously.

Almost all of the proposed work will occur within the 100-foot Buffer Zone of a Bordering Vegetated Wetland (BVW). In order to access the upland portion of the property, the applicant proposes to build a common driveway with a bridge over an intermittent stream and the associated BVW. Based on a letter of September 3, 1999 from Mark Donohoe, the final revised wetlands crossing will require a direct wetland alteration (filling) of about 1,500 square feet, a portion of which will be replicated in place upon completion of construction. A 2,000 square foot (s.f.) compensatory replication area is proposed at the northern corner of the property near Spring Hill Lane. The area of uplands to be altered on Lot 1 is 24,000 s.f. and 21,000 s.f. on Lot 2. A small area (less than 8000 s.f.) of upland on Lot 3 will be altered. About 5,000 square feet of the driveway is in the forty foot buffer zone of the BVW. The applicant proposes to remove 60 to 100 trees in the upland area.

The edges or corners of the houses are exactly 40 feet set back from the wetland boundary. Parts of the initial plans (a proposed turnaround in northwestern part of property on Lot 1) were revised after initial hearing with the Commission to comply with the 40-foot setback requirements in the Town's Bylaw.

The BVW is a jurisdictional wetland as defined by both the Massachusetts Wetlands Protection Act (the "Act") and the Acton Town Bylaw (the "Bylaw") and is protected by both. The Conservation Commission has observed the wetland boundary in the field and agrees with its delineation. Observations of soils near the new wetlands crossing in the presence of the Commission members confirmed the wetland delineation.

According to the applicant, percolation "perc" tests were performed on the lot in the winter of 1999 and the ground is suitable for a Title 5 system. However, the applicant has not applied for a Board of Health septic system permit. The BOH permit is conditioned on the approval and acceptance by the Commission of the wetland boundary as delineated by the applicant. The edge of the leach field from the BVW is about 80 feet, slightly more than the 75-foot setback required by Title 5 and the Town of Acton Board of Health.

A deep rock water well for Lot 2 is proposed to be located approximately seven feet from the edge of wetlands. There is an existing well on Lot 3 at the existing house. The applicant filed the project as a Limited Project under 310 CMR 10.24 or 310 CMR 10.53 of the Act. The applicant has not filed the project as a waiver from the Town bylaw and its setback requirements (as defined in Section F8.3) of the Bylaw. The Bylaw under section F4.5 permits issuance of Orders of Conditions for Limited Projects. Specifically, the applicant is proposing the wetland crossing as a 0-foot setback to allow access to upland site (under the Town Bylaw Section F8.3) where reasonable alternative access is unavailable.

The applicant stated early on during the hearing that denying this project would result in a loss of economic value of the property and should be considered a "hardship" under Section F10 of the Bylaw. No other hardship has been claimed or demonstrated.

### **3. Site Conditions and Wetland Resource Areas**

Site walks with Commission members present were conducted on January 28, 1999, March 3, 1999, April 20, 1999, and September 19, 1999. The site has also been visited by Patricia Huckery and Brian Butler in the presence of Commission members.

This BVW is significant because it is part of a large wetland system adjacent to and part of the 184-acre Town-owned Conservation land (Spring Hill Conservation Area). This BVW borders on intermittent streams draining upstream wetlands and ponds and marshes. The

northerly stream is associated with a large wetland system connected to the Spring Hill Conservation Area. The southerly stream appears to be affected by runoff of nutrients from an abutting horse farm, as the vegetation in the southerly stream appeared to be more luxuriant than in the northerly stream.

The site is a significant, relatively healthy forested wetland dominated by red maple, white pine, pitch pine, yellow birch, slippery elm, sweet pepperbush, swamp azalea, highbush blueberry, cinnamon and sensitive ferns, sedges and sphagnum moss. Red oak, white oak, red maple, hay-scented fern, witch hazel, sarsaparilla and "princess pine" dominate the upland area, based on observations by Charles Caron, wetland scientist hired by the applicant to delineate the wetland. Observations on the site by Conservation Commission members indicate the presence of these additional species - royal fern, interrupted fern, and in the upland, by large ash trees.

Part of the site is clearly altered. A fire pond was dug in the 1960's and the fill from the pond was placed adjacent to it.

Directly upstream of the northern stream (on property owned by Cynthia Harvey, an abutter) lies a significant forested wetland and open water marsh. Streams feed this wetland from the Spring Hill Conservation Area.

During the hearings, there was discussion as to whether the streams in the property were intermittent or perennial. Although the USGS 1987 Maynard Quad topographic map indicates a solid blue line feeding into the fire pond, evidence was presented by the applicant that the stream entering the fire pond was dry during the summer of 1998 (see Appendix A). Thus, the Commission agreed that all the streams on the property were considered intermittent and the Rivers Protection Act did not apply. However, the stream downstream from the fire pond exiting out of the culvert under Spring Hill Road north of the site appears to be perennial. This stream eventually makes its way into Spencer Brook.

#### **4. State-Listed Species and Other Habitat Values**

Two State-protected species of "Special Concern" (listed pursuant to the Massachusetts Endangered Species Act MGL c.131A) -- the Mystic Valley Amphipod, *Crangonyx aberrans*, and the Spotted Turtle, *Clemmys guttata* -- have been observed on the property or on an abutting property. Patricia Huckery of the Natural Heritage and Endangered Species Program (NHESP) has determined that a major part of the BVW is important habitat to both of these species.

Brian Butler collected several specimens of the Mystic Valley Amphipod (MVA) on the upstream Harvey property and the applicant's property (and submitted a rare animal observation form to the NHESP). Identification of the amphipods was confirmed by Dr. Douglas Smith (University of Massachusetts Professor of Zoology), and by NHESP in the field in April. In addition, Mr. Butler (and the abutter Cynthia Harvey) observed Spotted Turtle on the adjacent Harvey property and submitted a rare animal observation form to the NHESP. The Spotted Turtle is known to occur in Acton according to NHESP fact sheets. NHESP agreed that this wetland system including the applicant's property is likely habitat for the Spotted Turtle.

The MVA is a small crustacean inhabiting lowland aquatic habitats in eastern Massachusetts. According to Patricia Huckery, they are often found in cool, shallow, slow moving water with abundant leaf litter, such as red maple swamps, as well as more stagnant waters of vernal pools. The amphipods live their whole lives in the small streams in these forested wetland

systems. Based on guidance from Patricia Huckery, the applicant delineated the MVA habitat in the field. The upstream extent of the habitat is proposed as the edge of water-stained leaves indicating more persistent water flow. Ms. Huckery believed that the upstream extent of the habitat was more important to the amphipod as feeding habitat rather than breeding habitat. However, as the applicant's engineer has admitted, the extent of this area may move from year to year. (Quote from a hearing: "It could be found more upstream, depending on the year".) Thus, it is entirely possible that MVA may inhabit the stream at the revised wetland crossing.

The Spotted Turtle inhabits a variety of wetland habitats in Massachusetts, including forested wetlands and small ponds, with aquatic vegetation and upland habitat as is found at this site. Although it lives most of its life in or around the water, nesting occurs in upland well drained soils such as open meadows, fields or along roadsides. Although the Spotted Turtle has not been observed on the applicant's property, parts of the property may serve as migratory and aestivating habitat. According to the NHESP fact sheet on the Spotted Turtle development, road construction and habitat fragmentation are great threats to the turtle (the types of development/impacts proposed by the applicant). Nest predation by skunks, raccoons, and foxes (all associated with residential developments) also impact turtle populations. According to the NHESP letter of July 26, the wetland habitat for the Spotted Turtle extends to the edge of the BVW. The BVW at the proposed crossing is suitable habitat for aestivating turtles and also provides migration habitat as the turtles move between the suite of upland and wetland habitat types in the area.

According to Brian Butler, the pond area on the Harvey property probably provides feeding, migratory and breeding habitat for a variety of migratory birds and waterfowl as well. Cynthia Harvey has observed Virginia Rails and Wood Ducks in the wetlands on her property upstream from the applicant's property. Mr. Butler also stated that based on his observations of the Angell property, the upland habitat is suitable habitat for a diverse suite of cavity-nesting and migratory birds.

In addition, the fire pond appears to exhibit vernal pool characteristics because the streams feeding the pool are intermittent. However, Mark Donohoe indicated that he has seen sunfish (bluegills) in the pool. During the summer-long drought of 1999, the pool did not completely dry up, suggesting that the pond is not a vernal pool. Nevertheless, the pond does provide open water habitat for other wildlife such as amphibians, reptiles and birds.

The Commission had asked the applicant to perform a habitat evaluation (as per guidance in the Act) to better characterize the effects of the project on the amphipod. However, the applicant felt that due to lack of information on the natural history of the amphipod, it would be too difficult to perform a habitat evaluation. The applicant suggested that guidance from the NHESP on the limit of habitat of the amphipod (based on the presence of "water-stained" leaves) would be sufficient, as Mr. Donohoe, a professional engineer, admitted that he is "far from an expert on this".

Little information was submitted by the applicant on the sensitivity of the MVA to pollutants. However, Dr. Smith points out in an email (Appendix A) that the MVA is probably as sensitive as other amphipod species to pollutants, such as associated with road runoff. One of the Commissioners, who has experience in this matter, pointed out in the hearing that because of their sensitivity, some species of amphipods (not the MVA) are routinely used in toxicity testing studies. Dr. Smith points out that a healthy habitat for the MVA includes adequate flow, vegetation, shade, and organic matter.

The applicant also elected not to perform a habitat evaluation of the Spotted Turtle.

In summary, the applicant's property is a significantly species-rich wetland/upland habitat supporting not only endangered species but also a diverse population of more common animal and plant species. Both of the species of "Special Concern" require healthy wetland and pond habitat to survive. The property's location adjacent to a significant Conservation Area and other resources (e.g. the pond on the Harvey property) supports the finding of significant wildlife habitat.

## **5. Proposed Mitigation**

The applicant proposes to mitigate the impacts of the work by providing replication of lost wetland habitat, construction of environmental hedges, and construction of retention basins (or "polishing" basins) filled with wetland-type vegetation.

The wetland crossing and replication areas are located away from the Mystic Valley Amphipod (MVA) habitat, as recommended by NHESP in its letter of April 26, 1999. In response to the NHESP letters, the final plan moves the wetland crossing to a site upstream (about 110 feet ) from the estimated MVA wetland habitat. MVA wetland habitat was estimated by the applicant (with guidance from NHESP) as the area along the intermittent stream in which flooding obviously occurs, as evidenced by water-stained leaves. The habitat line was delimited during the spring of 1999. The bridge is constructed with concrete abutments with a pressure treated wood deck lying about one foot above wetland grade. There is no culvert to allow amphipods to go through, but this design would probably allow them to travel through. The driveway is constructed with concrete barriers on the side to control runoff into drains and basins that are vegetated with wetland plants to promote uptake and infiltration. Overflow will run off into wetland through a rock swale. However, these barriers prevent migration by turtles or other animals and limit effective habitat.

The plans were not revised to specifically avoid Spotted Turtle wetland or upland habitat.

The environmental hedges are proposed to be planted along a 40-foot line from the edge of the wetland to control runoff from severe slopes adjacent to houses and to the raised septic systems. The mix of plants and shrubs would provide some habitat value, and possible shading to wetland habitat.

## **6. Conservation Restrictions**

The existing home was built in 1969, according to the owner Bill Angell at the September 8, 1999 hearing. A minimum four or five acre conservation restriction was put in place for the undeveloped part of the property in 1965 and was set to expired on or about 2015 if renewed. However, the restriction was not renewed in 1995 and is no longer in place. Information on the restriction is in the public record in the Registry of Deeds.

The conditions of the deed restriction were present when the applicant bought the property.

## **7. Town of Acton Wetland Protection Bylaw**

Section F1 of the Bylaw states that its purpose is "to protect the wetlands, vernal pools, and adjoining buffer zones of the Town of Acton by controlling activities deemed to have a significant impact upon wetland values, including but not limited to the following: public or private water supply, groundwater, flood control, erosion control, storm damage prevention, water pollution prevention, fisheries, and wildlife habitat."

Section F2 of the Bylaw states that "No person shall remove, dredge, fill, or alter any bank, wetland, vernal pool, or land within the 100 foot buffer zone of a wetland, vernal pool, or any brook, stream, river, pond or lake, or land subject to flooding, ...without first filing a Determination of Applicability, or a written Notice of Intent...." The Bylaw considers the Buffer Zone as a jurisdictional resource area.

Section F8.1 of the Bylaw states that the applicant shall bear the burden of proving that the work proposed in the application will not harm the interests protected by the Bylaw.

The Acton Conservation Commission, under its Bylaw and Regulations, has established specific minimum setback distances for activities from the edges of jurisdictional wetlands and vernal pools. These setbacks establish a 25-foot buffer of undisturbed natural vegetation (the "no cut" zone) and a 40-foot buffer from the edge of driveways, roadways and structures (the "no structure" zone). The Bylaw, at Section F 8.3, expressly states:

No activity shall be allowed within these setbacks except as provided below. These setbacks are the minimum and may be extended further if deemed necessary for the protection of the interests of the Bylaw by the Commission.

Section F8.3 of the Bylaw also establishes a 0-foot setback for "wetland-dependent structures (drain outfalls, weirs, etc.), fences, and structures necessary for upland access where reasonable alternative access is unavailable." The applicant has suggested that the 0-foot setback should apply to the driveway and bridge because it is the only reasonable access to an upland portion of the lot.

Section F4.5 states that the "... Commission may issue an Order of Conditions for limited projects listed under Section 10.53(3) of ... the Act". The applicant has applied as a Limited Project under the Act for "construction of a new driveway where reasonable alternative means of access from a public way to an upland area of the same owner is unavailable."

Section F10 states that "due consideration shall be given to possible effects of the proposal on such interests and to any demonstrated hardship on the petitioner by reason of denial as brought forth at the public hearing". The applicant stated early on during the hearing that denying this project would result in a loss of economic value of the property and should be considered a hardship under Section F10 of the Bylaw.

Section F4.6 of the Bylaw (and Section 1.4 of the Regulations) allows for waivers from strict compliance with the Bylaw "when, in the judgement of the Commission, such action is in the public interest and is consistent with the intent and purpose of the Bylaw." As presented in the applicant's project plans and NOI application, the proposed residential project requires waivers to both the 25-foot undisturbed natural vegetation and the 40-foot driveway, roadway, structure setback under the Bylaw. The applicant did not apply for a waiver of the Bylaw setback requirements. Instead, the applicant argued that to gain access to upland property, the applicant was entitled to a 0-foot setback. It is the position of the Commission that a waiver is required.

## **8. The Massachusetts Wetland Protection Act and State Policies**

The Act and regulations state the importance of protecting bordering vegetated wetlands. The Regulations at 310 CMR 10.55(l) state, in part:

Bordering vegetated wetlands are probably the Commonwealth's most important inland habitat for wildlife. The hydrologic regime, plant community composition and structure, soil composition and structure, topography, and water chemistry of bordering vegetated

wetlands provide important food, shelter, migratory and over wintering area and breeding areas for many birds, mammals, amphibians and reptiles.

Under the Act at 310 CMR 10.55 (4)(a) the main performance standard for protection of a BVW is that activities proposed "shall not destroy or otherwise impair any portion of the BVW." Recently, DEP acknowledged the importance of a buffer of undisturbed vegetation (or setback) in its Wetland Protection Program Policy "Buffer Zone: Activities in the Buffer Zone" (Policy 99-1). Specifically Policy 99-1 states in part, "activities in the 100-foot buffer zone are sufficiently likely to alter a resource area." DEP presumes that under many circumstances, if a minimum setback distance of 50-feet of undisturbed vegetation in the Buffer Zone along the resource area is provided, the BVW will not be altered.

Although the Act and its Regulations do not include the BVW Buffer Zone as a resource area, as does the Acton Bylaw and its Regulations, the Act is administered in a way that acknowledges its vital importance. In The Matter of Priors Crossing, Inc., Docket 92-156 (Final Decision, May 16, 1996), the DEP held that, "[m]ost important for this discussion, the regulations recognize that activity in the buffer zone to a BVW is likely to harm the BVW." In that decision, the DEP determined that conditioning of activities within a BVW buffer zone should be evaluated under the same performance standard in which direct BVW alteration is evaluated.

Under the Act at 310 CMR 10.53, the Commission may, at its discretion, issue Orders of Condition for certain "Limited Projects", including those for construction of a driveway where reasonable alternative means of access from a public way to an upland area of the same owner is unavailable" [10.53(3)(e)]. In exercising its discretion, the Commission shall consider the magnitude of the alteration and the significance of the project site to the interests of the Act. In addition, the Commission may not permit projects that will have "any adverse effect on specified habitat sites of rare vertebrate or invertebrate species, as identified by procedures established under 310 CMR 10.59 (Natural Heritage and Endangered Species Program).

According to Wetlands Protection Program Policy DWW 88-2 (Interpretation of 310 CMR 10.53 (3)(e) Limited Projects: Access Roadways or Driveways), the Commission should consider the following attributes of the project in determining whether to grant Limited Project status: size of the upland area accessed relative to the wetland loss; public water supply; rare species habitat; special environmental attributes.

Under the Act at 310 CMR 10.59 and elaborated on in Wetlands Program Policy DWW 90-2 (Rare Species: Standards and Procedures for Determining Adverse Impacts to Rare Species Habitat) the applicant must prove that the alteration will not have any short or long term effects on the habitat of the local populations of the species.

## **9. Values of Wetland Buffers and the Importance of Setbacks**

A summary of scientific studies (see Attachment B) on the values of buffers (or setbacks) between structural activities and important resources such as wetlands or streams indicate that a minimum of 50 feet of undisturbed vegetation is necessary to attenuate the effects of increased runoff and associated pollutants, and a minimum of 100 feet is usually necessary to protect wildlife habitat interests. These scientific studies were introduced into the record during the hearing. During the course of the hearing a former Acton Conservation Commissioner and professional hydrologist (Peter Shanahan, Ph.D) presented oral and written testimony on the intent and purpose of the Bylaw setback requirements. Dr. Shanahan's

written testimony also summarizes further scientific evidence of the importance of buffers for protecting wetland functions and values.

The Buffer Zone and setbacks requirements serve an important function in protecting the interests of the Act and the Bylaw.

## **B) CONCLUSIONS OF LAW**

### **1. Interests Protected**

The Commission finds that the activities proposed will have a significant impact upon the following wetland values as identified by the Town Bylaw: private water supply, groundwater, flood control, erosion control, storm damage prevention, water pollution prevention and wildlife habitat.

In addition, the Commission finds that the area in which work is proposed is significant to the following interests as identified by the Massachusetts Wetlands Protection Act: private water supply, groundwater supply, flood control, storm damage prevention, prevention of pollution, and protection of wildlife habitat.

No evidence was presented by the applicant, or other persons, that the wetlands on site are not significant to these interests of the Act or the values of the Bylaw.

### **2. Probable Impacts of Proposed Work**

The proposed work is an example of an applicant wedging two big houses into a small piece of marginally developable land.

The property is located in a significant wetland resource area. The two new lots occupy 5.1 acres of the 7.3-acre property and an estimated 60% (or 3 acres) of the new lots are wetland. The proposed work would alter about 1.2 acres of upland and wetland habitat. The Commission estimates that at least 50% of the upland area will be altered, of which about 80%, or 1 acre, is in the buffer zone of the BVW.

The proposed work will increase the amount of impervious surface on site adjacent to the wetland resource areas and in the Buffer Zone. Pollutants including deicing chemicals, road sand and salt, oil and grease from automobile usage, pesticides and fertilizers from lawn maintenance, and increased sediment will run off from the driveway, garage and lawn onto the buffer zone and the wetlands. The basins would control some runoff from the driveways, but they would not control runoff from lawns. The future homeowner would add grass clippings and other debris into the buffer zone or the wetland itself.

Although the applicant does not need to provide calculations of stormwater on site, it has done so anyway in response to concerns of abutters that the fire pond and culvert were inadequately sized to control flooding associated with increased development. According to the runoff calculations performed by Mr. Donohoe, the work proposed will have a "positive" impact on the pond, meaning that it may increase its water level due to increases in water usage and impervious surfaces. The calculations estimate about a 1-inch increase in a 25-year storm - considered a small, but measurable increase in water level in the pond.

The applicant proposes to clear cut, or remove 60 to 100 trees in the upland area. This will alter habitat significantly, reducing the cooling effect of the trees and forest and increasing runoff, and reducing the leaf litter, source of food for the MVA and other small animals.

Based on an email from Dr. Smith, the MVA is sensitive to pollution from road runoff and loss of shade. He further states that the amphipods are usually found in areas where flow and wetland vegetation is maintained and unaltered by development.

The increased exposure to sunlight and heat would reduce the cooling effect of trees needed by turtles to survive hot summers during aestivation. The Spotted Turtle needs upland habitat areas for aestivation. Turtles migrate well beyond ponds. Therefore, the Angell property's wetland and upland systems are important habitat for the Spotted Turtle's migration and aestivation. In addition, the 2,000 square foot compensatory replication area proposed at the northern corner of the property near Spring Hill Road would reduce potential upland aestivation habitat for the Spotted Turtle.

The proximity of the environmental hedges to the proposed houses would result in degradation of the habitat value of the hedge.

The replication area will probably assist in mitigating storage volume for water, but would not be able to replicate habitat in a forested wetland, and moreover, would remove aestivation habitat for the Spotted Turtle.

In addition, the proposed structures (driveway, bridge, houses) will alter or impair wildlife habitat by destroying habitat in the Buffer Zone and upland area, by creating a barrier to movement of wildlife species, especially reptiles and amphibians, and by reducing the connectivity of adjacent wetlands and upland habitats including those associated with the Town of Acton Spring Hill Conservation Area. Deer, fox and coyotes will lose some habitat cover and may be further crowded into remaining protected areas, increasing contact with rare species such as the Spotted Turtle.

Treated sewage effluent, carrying elevated levels of nutrients, may also affect a wetland already apparently stressed by an upstream nutrient source.

The applicant has provided information in the form of calculations, design and construction practices that may minimize the effects of the residential development on the interests of the Act. These design elements may minimize the effects of the development on flow, and will help recharge the wetland, protecting those interests and values of the Act and the Bylaw. However, the applicant did not provide information on how water quality may change and whether the MVA would be sensitive to increased sedimentation or pollutants. Charles Caron (Wetland Scientist for the applicant) stated that he felt the water quality would not impact the amphipod, but did so admittedly without any knowledge of its sensitivity to pollutants.

In summary, the applicant did not provide sufficient proof that the wildlife habitat would not be adversely effected by the development. The Commission concludes that the proposed work could not be effectively conditioned to avoid all harm.

### **3. Performance Standards**

The Commission relies heavily on the setbacks in the Bylaw and the Act as key Performance Standards in evaluating impacts of projects to the wetlands. When these performance standards are not met, wetland habitat is degraded. And, in some cases, even if they are met, the wetlands can be degraded (providing evidence that these setbacks are the minimum, and can be increased if necessary). The proposed work does not allow for an adequate setback distance (at least 25 to 50 feet of undisturbed vegetation) between the structures proposed (specifically the driveway and bridge) and the edge of the wetland to mitigate the impacts of increased runoff of pollutants and affects on wildlife habitat. A recent (September 1999) visit

to two projects in Acton (Concord Place and Stacey's Way) with permitted wetland crossings (Limited Projects) indicated degraded conditions at wetland crossings. The following observations were made and entered into the hearing record: loss of trees, increased exposure, increased debris such as timbers and un-removed haybales, probable increase in runoff, loss of wetland stream bank habitat at the wetland crossings, and increased abundance of weedy species such as Japanese Knotweed. The Stacey's Way site is an egregious example of an altered landscape. These are the types of effects that the performance standards are trying to prevent.

#### **4. Zero-Foot Setback**

Section F8.3 allows 0-foot setbacks only if reasonable alternative access is unavailable. The Commission finds that the driveway and bridge do not meet the requirements for a 0-foot setback because reasonable alternative access is available to the existing house on the lot in the upland area and the applicant is seeking access to two additional lots. Therefore, it is the position of the Commission that a waiver (under Section F4.6) to the 25-foot and 40-foot setback requirements is required.

#### **5. Hardship**

The Commission does not believe that an economic hardship exists on the site because a residence has already been constructed on the lot. In addition, when the property was bought, a conservation restriction was in effect limiting development of parcels to single family residences. A fair interpretation of hardship in Section F10 of the Bylaw relates more to siting constraints rather than economic consequences. The Commission believes that the applicant is creating his own hardship by proposing work in an unbuildable location.

The applicant already has the benefit of one residential dwelling on the property. Takings law (e.g. *Lucas vs. South Carolina Coastal Council*, Supreme Court decision in 1992) does not guarantee that a property owner may maximize any and all development opportunities.

The Commission has granted permission to applicants to subdivide lots and build homes on land adjacent to wetlands. An example is 53 Central Street. The difference between 53 Central Street and this project is that 53 Central Street was able to meet the setback requirements.

### **C) REASONS FOR DENIAL**

The Commission finds that the site is significant to many of the interests and values of the Act and the Bylaw. The proposed work is in a sensitive forested wetland with high wildlife habitat and habitat for two State-listed "Species of Special Concern". The applicant has submitted this project as a Limited Project in order to gain access to an upland area. However, the Commission contends that the proposed work is an inappropriate development within a marginal upland portion of the applicant's property that is surrounded by significant wetland resource areas. The following discussion provides the reasons for denial as required by the Act at CMR 10.05 (6) and by Section F10 of the Bylaw:

1. The project does not meet the thresholds for a Limited Project. Under the Act at 310 CMR 10.53 and in the Bylaw at Section F4.5, the Commission may, at its discretion, issue Orders of Condition for certain "Limited Projects", including those for "construction of a driveway where reasonable alternative means of access from a public way to an upland are

of the same owner is unavailable.” Based on guidance and regulations from the DEP, the Commission cannot permit this project because:

- \* Developable upland area is small compared to the extent of wetlands on site;
- \* The site is habitat to two State-Listed Species of "Special Concern" and the activities proposed may have short and long term effects on their habitats; and
- \* The site has other special attributes, especially for wildlife habitat, because of its history of protection and connection to adjacent Conservation land.

Past Commission practice in issuing permits for Limited Projects are consistent with DEP policy WWW 88-2.

2. The Commission rejects the argument that the proposed driveway qualifies for a 0-foot setback under the Bylaw because access to upland already exists on the lot. Under Section F10, the Commission evaluated the applicant's request for hardship in its denial. Because a house already exists on the lot, there is no economic hardship. In addition, a conservation restriction was in place when the applicant bought the property.
3. The project cannot be conditioned to meet the performance standards to protect the interests of the Act and the Bylaw. The wetland resource areas and the Buffer Zone will be impaired because the location of the driveway is within 40 feet of the wetland violating the key performance standards (25-foot “no cut” and 40-foot “no structure” setback requirements) consistently enforced by the Commission. Much of the project is within the 100 foot Buffer Zone of a significant wetland resource area. Although the applicant has provided some mitigation, there may still be effects including increased runoff of nutrients from lawns, lawn clippings, loss of buffer for habitat, increased erosion, etc.

In summary, the work in the buffer zone and wetland will irrevocably impact the wetland. The work in the buffer zone will irrevocably impact the buffer zone and the functions and values of the wetland resource area, especially its wildlife habitat, a key interest protected by the Bylaw and the Act. The applicant has not proven that the activities will not have a significant adverse impact on the functions and values of the wetlands.

## **Attachment A (Plans, letters, documents and testimony submitted to the Commission)**

### Hearings and Plans

February 3, 1999: NOI application dated January 8, 1999 submitted with plans dated January 14, 1999  
March 3, 1999: revised plans submitted dated March 3, 1999  
May 5, 1999: meeting continued until June 2  
June 2, 1999: revised plans submitted dated May 27 and June 2, 1999  
July 7, 1999: requested continuance to receive updated letter from NHESP  
September 8, 1999: revised plans submitted dated September 3, 1999  
September 22, 1999: no revisions submitted

### Supporting information submitted from applicant (including Acton Survey and Engineering, Graham and Harsip, PC)

March 2, 1999: revision of plans, discussion of intermittent streams and protection of interests of the act  
May 3, 1999: requested continuance of May 5 to June 2 meeting  
June 2, 1999: revision of plan, calculation of runoff, and wetland crossing narrative describing mitigation activities to protect amphipod habitat (species of concern)  
September 3, 1999: revision of plan to show new wetland crossing to avoid amphipod habitat  
September 22, 1999: discussion of spotted turtle habitat (species of concern)

### From Massachusetts Natural Heritage and Endangered Species Program to Commission

April 26, 1999  
July 26, 1999

### From Oxbow Associates to Commission

April 30, 1999  
June 1, 1999  
September 7, 1999

### From Fasanella Johnson and Wood, P.C. to Commission

June 1, 1999  
September 8, 1999

### Others

May 19, 1999: William Sawyer to Commission  
September 9, 1999: Cynthia Harvey to Commission  
June 23, 1999: Rare Animal Observation Form for spotted turtle submitted by Oxbow Associates to NHESP

### Other written testimony or submittals

June 1, 1999: Memorandum to Acton Conservation Commission from Peter Shanahan.  
Technical Review of Buffer Zones and Pavement Runoff.  
Email from Dr. Douglas Smith to Matthew Liebman, Conservation Commissioner  
Pictures from DeAnne Angell regarding intermittency of wetland streams on property

## **Attachment B (References)**

Castelle, A.J., A.W. Johnson, and C.Connolly. 1994. Wetland and stream buffer size requirements - A Review. *Journal of Environmental Quality* 23:878-882.

Chase, V.P., L.S. Deming, and F. Latawiec. 1995. *Buffers for Wetlands and Surface Waters: A Guidebook for New Hampshire Municipalities*. Audubon Society of New Hampshire.

Woodard, S.E. and C.A. Rock. 1995. Control of residential stormwater by natural buffer strips. *Lake and Reservoir Management* 11(1):37-45.