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EARTH REMOVAL AND ENVIRONMENTAL PROTECTION

"Whoso diggeth a pit shall fall therein; and he that rolleth a stone, it will return upon him." Proverbs, XXVI, 27

By Alexandra D. Dawson, Esquire*

INTRODUCTION

Communities all over the United States are becoming increasingly disturbed by the effects of earth removal operations. One center of controversy is the increased mining of sand and gravel deposits for commercial purposes. The escalating price of sand and gravel is turning one family operations into ten-ton truck businesses.¹

Massachusetts has a long history of legal action relating to earth removal, dating back at least to 1846 when the owner of a private beach in Chelsea challenged a statute imposing fines for the removal of stones, sand or gravel from beaches in the town.² The highest court in Massachusetts found the regulation reasonable in view of a history of storm damage to local towns resulting from the removal of natural embankments.

Municipal regulation of earth removal, carried on for many years in Massachusetts under local zoning codes (so-called “Chapter 40A” regulation),³ was specifically declared a constitutional exercise of the police power almost twenty years ago in the leading case of Town of Burlington v. Dunn.⁴ In 1949, the state legislature further empowered municipalities to carry on such regulation by general (non-zoning) bylaws and ordinances (“Chapter 40” regulation⁵).

The state of the law under such dual state and municipal regulation may be of interest to environmentalists throughout the country for a number of reasons. The case law on the constitutional limits of regulation is of general application. Lessons may be learned from the liberal imputation of local regulatory power in a state which has tended to take a conservative view of the powers of town government. Finally, the scope to be allowed an existing non-conforming use is a delicate issue in every locality.

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In discussing these topics, this article will attempt to show how regulations traditionally intended to protect narrow economic values may be extended to satisfy environmental needs and to indicate how the courts are moving toward acceptance of such wider concerns.

I. ENVIRONMENTAL VALUES

Until recently, earth removal regulation was simply one of many forms of municipal regulation of industry. Massachusetts courts proved sympathetic to such control, since they considered the use "likely to produce conditions bordering upon a nuisance."6 From that viewpoint, the principal problem was to preserve property values in the neighborhood, without putting the gravelpit owner out of business: a typical compromise of strictly economic values. Rising fears and expectations for preservation of the natural environment, however, have added a new factor. Massachusetts citizens have not only begun to question the environmental devastation wrought by traditional large scale sand and gravel mining, but they have also come to see noise, vibrations, dust and increased runoff as forms of "pollution" against which they have a legal right to protection.7 In addition, citizens are being educated to appreciate the value of certain earth deposits in their native location (quite aside from the environmental trauma consequent upon mining). For example, it appears that high quality, low-lying sand and gravel deposits constitute the best groundwater sources for the development of local water supplies. A hydrology textbook explains that uncompacted sand and gravel constitute "nonindurated sediments" with permeabilities much higher than those found in most other materials.8 Another text states:

A rock formation or material which will yield significant quantities of water has been defined as an aquifer... Probably 90% of all developed aquifers consist of unconsolidated rocks, chiefly gravel and sand.9 This can be confirmed by studying the water basin maps prepared by the United States Geodetic Survey which show, for example, that virtually all of Cape Cod's water supply depends on such deposits. The United States Department of Agriculture Soil Conservation Service emphasizes in its runoff studies that such deposits serve as holding areas for rainfall, whereby, up to the point of saturation, ground water is conserved and flood dangers are lessened.10 In other words, the more familiar evil of erosion, visible in untended gravelpits, is indicative of another environmental loss: the unproductive
escape of water. These excellent percolation qualities are also useful in preventing erosion, runoff and escape of sewage in sand and gravel deposits which are too hilly to constitute aquifers. The developer who first removes the deposit for sale as part of his site preparation (which as will be seen is permitted without regulation by some local laws) may in fact be damaging the septic carrying capacity of the site.

II. EARTH REMOVAL IN NAVIGABLE WATERS

Because the government has historically recognized the special public interest in tidal areas and other navigable waters, excavation of any kind in rivers, tidewaters and beneath the sea is now regulated in Massachusetts by a variety of governmental agencies. In all tidal waters, a permit is required from the Department of Natural Resources Mineral Resources Division. In navigable waters generally, a license must be obtained from the federal government, as well as a permit from the state's Department of Public Works. These licensing requirements may, in turn, mean that the federal agency issuing the permit must file an environmental impact statement under the National Environmental Policy Act (NEPA) which requires that all federal agencies, before undertaking any activity significantly affecting the quality of the human environment, submit a detailed statement of its probable impact. State agencies may be similarly affected by the Massachusetts Environmental Policy Act (MEPA) which became effective in Massachusetts in July, 1973. Under regulations published at that time by the Secretary of Environmental Affairs, state agencies are required to file environmental impact statements for any licensing activities significantly affecting the natural environment. Such a report should presumably cover not only the impact of the activity on the area mined, but also the effects of transportation and industrial use, e.g., for fill.

The state and federal regulations set out above are in addition to permits required under local law. Local control does not stop at the shoreline: the municipal zoning power extends at least to low water mark, and perhaps as far as the municipal boundary, which appears to coincide with the marine boundary of the Commonwealth.

III. EARTH REMOVAL REGULATION ON DRY LAND

Unlike some other states Massachusetts has not chosen to extend state regulation to earth removal operations in inland, dry land locations. Therefore, these operations are regulated, if at all, by municipal ordinances or bylaws authorized but not required by
“Chapter 40A” (the Zoning Enabling Act) or by “Chapter 40” of the General Laws.20

If the earth removal takes place in a wetland area, some protection may be afforded by the state wetland protection laws. In a district protected by a state Wetlands Restriction, a permit is required from the Department of Natural Resources, Division of Conservation Services.21 If work is planned in a wetland not under such restriction, the “Hatch-Jones” dredge and fill law applies, and a hearing must be held before the local Conservation Commission.22 For work to be done in an area zoned by the municipality as a flood plain district, a local permit will be also required, usually from the Board of Appeals.23 It should be noted that since NEPA and MEPA do not apply to municipal licensing activity (with one minor exception), no environmental impact report is required of a municipality issuing a wetlands or earth removal permit regardless of the scope of the activity. The wetlands laws, then, are not of major importance in earth removal regulation.

Suppose a typical local situation: a large glacial esker in a “nice” suburb near enough to the metropolitan area to make commercial extraction profitable. The land is high and dry and is located in a modest residential district on the outskirts of town.24 A small amount of land has been excavated from scattered pits by a one-truck, family operation. Suddenly, a big sand and gravel operator buys up the whole hundred acre tract and proceeds to run one truck a minute in and out of the pit, down a residential street, starting at four a.m. every morning. Hypothesize, further, that the townspeople seek relief, for themselves and the environment, under the following circumstances: (a) the town has no permit system whatsoever for earth removal; (b) the town has a permit system, but the operator claims his expanded use is protected by the former owner’s permit; (c) the town has a permit system under a ch. 40 bylaw, but the operator claims his work is exempt under such bylaw, as a site preparation for a plan approved by the planning board; (d) the town rushes out and passes a very stiff permit system, but the operator claims exemption as a previously existing, non-conforming use; (e) the town passes a bylaw prohibiting sand and gravel removal in any district throughout the town, and the operator attacks the bylaw as an unconstitutional infringement upon private property rights. What are the limits of municipal regulation under these conditions?

IV. MUNICIPAL REGULATION UNDER MASSACHUSETTS LAW

As stated in the introduction, the power of a municipality to
regulate or prohibit sand and gravel extraction springs from two separate sources: the general zoning power of Massachusetts General Laws, ch. 40A and/or the "nuisance" regulatory police power of ch. 40, section 21(17). The community may, if it wishes, employ both.25

In the days before the ch. 40 enabling provision was passed, the need and purposes of the zoning regulation was set out in the leading case of Town of Burlington v. Dunn:

The stripping of the top soil from a tract of land is not only likely to produce disagreeable dust and noise during the process, which may be prolonged, but, more important, after it is completed it leaves a desert area in which for a long period of time little or nothing will grow except weeds and brush. It permanently destroys the soil for agricultural use and commonly leaves the land almost valueless for any purpose. The effect of such an unsightly waste in a residential community can hardly be otherwise than permanently to depress values of other lands in the neighborhood and to render them less desirable for homes. If this process should be repeated upon tract after tract of suburban land the cumulative effect might well become disastrous to certain localities . . . . All this concerns the public welfare in the constitutional sense . . . . Aesthetic considerations are in themselves entitled to some weight along with other considerations.26

It is clear from this opinion that the court was sensitive to environmental disturbance but only insofar as it affected property values. All non-economic values were treated as "aesthetic" and were subordinated to the economic problems.

After the passage of ch. 40, §21(17), the town of East Bridgewater adopted a local permit system which was upheld in an opinion which distinguished sand and gravel extraction from "some lawful, useful and generally harmless occupation" and described it as "use of land which, if not in itself a nuisance, has been shown by experience to be likely to produce conditions bordering upon a nuisance."27

There are advantages and drawbacks to each of the two methods of regulation. A town may adopt, amend, or repeal a zoning bylaw only by a two thirds vote after a planning board hearing, under Mass. G.L. ch. 40A, §6. Under such a bylaw, the permit power must be put into the hands of the zoning board of appeals or the board of selectmen (ch. 40A, §4). Chapter 40 bylaws are adopted, amended or repealed by a simple majority vote, and the permit power may be given to a special soil board, or presumably, to the local Conservation Commission or anybody properly qualified to consider the issues. Chapter 40 bylaws contain two inherent limitations not found in ch. 40A bylaws. First, land in public use is exempt under
In contrast, a municipality is generally subject to its zoning ordinances or bylaws. Second, ch. 40 exempts all earth removal occasioned by requirements of a subdivision plan approved by the local planning board. Although this exemption may be limited to site preparation work absolutely required by the final contours on an approved and properly recorded subdivision plan, many municipalities prefer the regulation under ch. 40A where it is clear that there need be no exemption for site preparation work.

However, most ch. 40A permit systems do in fact exempt site preparation work below a certain size, usually related to cellar hole plus driveway so as not to impose permit requirements for minor, routine construction jobs. From an environmental point of view, the ch. 40A regulation is preferable in this area. Planning boards in towns with ch. 40 regulations have found themselves confronted with what they suspected were “fake” subdivision plans: massive earth removal operations masquerading as “site preparation.” In spite of such suspicions, however, planning boards must generally approve any plan conforming to its regulations because of the narrow wording of the Subdivision Control Law.

To confuse the issue further, however, if a town chooses to rely entirely on its 40A zoning bylaws it will find that land shown on plans previously approved and recorded under the Subdivision Control Law is entirely exempt for three to seven years from any new zoning bylaw prohibiting earth removal. No such protection is given subdivisions against new bylaws adopted under ch. 40, §21(17). Consequently, many localities employ a combination of ch. 40 and ch.40A regulatory laws.

The most difficult distinction between ch. 40 and ch. 40A regulations is the protection afforded to pre-existing non-conforming uses. Chapter 40A, §5, provides that a zoning bylaw:

shall not apply . . . to the existing use . . . of land to the extent to which it is used at the time of the adoption of the . . . bylaw, but it shall apply to any change of use . . .

Section 5 further provides that a local bylaw “may regulate non-use of non-conforming buildings and structures so as not to unduly prolong the life of non-conforming uses.” Presumably in reliance upon this language, it has been held that a non-conforming use of land may be lost by abandonment or non-use. Between the extremes of radical expansion and complete abandonment, a whole body of law which will be discussed below has grown up regarding protection of non-conforming uses under the zoning laws.

The recent case of Kelleher v. Board of Selectmen of Pembroke
concerned the scope of a ch. 40 earth removal bylaw, the substance of which is discussed below. On the issue of prospective application of this nonzoning bylaw, the brief for the Town of Pembroke argued that the bylaw, being penal, was prospectively applicable even to pre-existing operations. The court did not deal with this argument but simply pointed out that reasonable regulation (as opposed to prohibition of use) under ch. 40A zoning bylaw has been applied to pre-existing uses. By analogy, the court applied the new permit system of Pembroke to the work in progress. The court did, however, exempt land excavated before the permit system went into effect from requirements of loaming or reseeding:

. . . to condition the grant of a permit upon the restoration of the area already cleared and stripped would be retroactively to penalize the plaintiff for acts which were lawful when done.

It appears, therefore, that general constitutional principles afford non-conforming uses the same protection under ch. 40 bylaws as is afforded by the statute governing zoning bylaws.

Under neither ch. 40 nor ch.40A has the police power been explicitly interpreted as including environmental values as such. The language of recent cases, however, shows a shift of emphasis from protection of individual property values to preservation of community values, and thence toward the view of man as part of his total environmental setting. In the leading wetlands protection case of Turnpike Realty Co. Inc. v. Town of Dedham the court specifically approved the following purposes of the Dedham flood plain bylaw: protection of persons and properties against flooding; "protection of the entire community from individual choices of land use which require subsequent public expenditures . . . "; and conservation of natural conditions, wildlife, and open spaces (as ancillary to other purposes). Wisconsin, in Just v. Marinette County, went even further to support the conclusion that alteration of a swamp need not be permitted where it could damage public rights. A gradual shift from public costs to environmental values is evident in the following passage from the court's opinion:

We start with the premise that lakes and rivers in their natural state are unpolluted and the pollution which now exists is man made. The state of Wisconsin under the trust doctrine has a duty to eradicate the present pollution and to prevent further pollution in its navigable waters. This is not, in a legal sense, a gain or a securing of a benefit by the maintaining of the natural status quo of the environment. What makes this case different from most condemnation or police power zoning cases is the interrelationship of the wetlands, the swamps and the natural
environment of shorelands to the purity of the water and to such natural resources as navigation, fishing, and scenic beauty. Swamps and wetlands were once considered wasteland, undesirable, and not picturesque. But as the people became more sophisticated, an appreciation was acquired that swamps and wetlands serve a vital role in nature, are part of the balance of nature and are essential to the purity of the water in our lakes and streams. Swamps and wetlands are a necessary part of the ecological creation and now, even to the uninitiated, possess their own beauty in nature. An owner of land has no absolute and unlimited right to change the essential natural character of his land so as to use it for a purpose for which it was unsuited in its natural state and which injures the rights of others.\textsuperscript{38}

V. \textsc{constitutional limits of regulation}

At least eight Massachusetts towns, not satisfied with merely regulating earth removal, have passed bylaws or zoning laws prohibiting any earth removal activities except those absolutely necessary for the preparation of a building site. For an owner of land containing a commercially valuable deposit of sand or gravel this approach raises the question of whether he is being deprived without compensation of valuable property rights in violation of the state and federal constitutions.

The Massachusetts court addressed itself to this issue in \textit{Town of Burlington v. Dunn}:

It seems unlikely that the defendants' property rights will be any more seriously restricted or damaged by enforcement of this by-law than are the property rights of thousands of landowners by zoning ordinances or by-laws which forbid the erection or use of buildings in residence districts for other than residence purposes. . . .

In our opinion the case of \textit{Pennsylvania Coal Co. v. Mahon}, 260 U.S. 393, cited by the defendants, decided upon peculiar facts by a divided court before the decisions of the same court in which the validity of zoning regulations was established, it is not decisive here. It has been recognized in a number of the later cases that the validity of zoning ordinances in their application to particular land where, if valid, they would have the effect of preventing the removal of some natural product from the land, is to be determined with reference to their reasonableness under the circumstances just as in cases where the limitation upon the owner's rights has to do with buildings and their uses.\textsuperscript{39}

In \textit{Town of Lexington v. Simeone}, it was stated "there is no constitutional right to convert wild land into waste land."\textsuperscript{40} The court noted that a zoning bylaw is presumed to be valid and will be sustained unless it bears no substantial relation to the statutory
objectives. In *Seekonk v. John J. McHale & Sons, Inc.*, the court stated bluntly:

There seems to us to be no difference in principle whether the restriction takes the form of preventing the owner from building a factory or from establishing a travel business.

The U.S. Supreme Court appears to share these views. In *Goldblatt v. Hempstead*, the Court upheld a local ordinance, regulating depth of excavation, which had the effect of preventing any further mining on the plaintiff’s land:

Concededly the ordinance completely prohibits a beneficial use to which the property has previously been devoted. However, such a characterization does not tell us whether or not the ordinance is unconstitutional.

The court found it insignificant that the use was of the soil itself, and not a use upon the soil. Evidence as to diminution of value was found insufficient. The Court also emphasized the general presumption of reasonableness which supports police power regulation. This presumption would tend to sustain Massachusetts ch. 40 by-laws, as well as zoning by-laws.

In *Consolidated Rock Products Company v. City of Los Angeles*, the California Supreme Court upheld a local zoning law forbidding rock and gravel mining in agricultural and residential districts, despite contentions that plaintiff’s property had no other economic use:

Too many cases have been decided upholding the constitutionality of comprehensive zoning ordinances prohibiting the removal of natural products in certain zones for us now to accept at full value the suggestion that there is such an inherent difference in natural products of the property.

Other state courts have, however, arrived at a variety of conclusions and will no doubt continue to do so, since all cases in the “taking” area are susceptible to being distinguished on their particular facts. Of particular interest are: *Troiano v. Zoning Board of Appeals of Town of North Branford*, following *Goldblatt*; the contrasting Illinois cases of *Midland Electric Co. Corp. v. Knox County*, and *Village of Spillerton v. Prewitt*; two equally contrasting cases from Ohio; *East Fairfield Coal Co. v. Booth*, and *Smith v. Juillerat*; and *Potomac Sand and Gravel Co. v. Governor of Maryland* where a state law prohibiting gravel extraction from tidal lands was held not to be a “taking” requiring compensation. The contrary position is summed up in *Lyon Sand & Gravel v. Township of Oakland*: 
Where needed natural resources are known to exist in usable quantity, their utilization should be permitted in a manner compatible with the present use of adjacent lands. The taking should not interfere with the reasonable use of neighboring properties but outright prohibition of the taking is in fact confiscation rather than conservation. 53

There is some force in the argument that mining is not a "portable" activity and that natural resources should not be locked away from reasonable use simply because neighboring land has been devoted to incompatible residential use. The dilemma illustrates the lack of relationship between our land use law and rational allocation of natural resources. Valuable farmland is zoned commercial and covered with asphalt; dangerous floodplains are made available for residential development; the potential of rivers for the production of either power or aesthetic pleasure is seldom reflected in local zoning. It may well be that if sound economic resource use is not now part of the constitutionality, or even the legality, of municipal zoning then it ought to be, particularly as planners become more sophisticated and resources more scarce. On the other hand, in that same sophisticated future the ecological value of local sand and gravel deposits, and the environmental disruption involved in their removal, should also be accorded increasing weight. In the interim, municipalities are surely justified in reserving their judgment—and their gravel.54

VI. ELEMENTS OF A VALID ORDINANCE OR BYLAW

In framing a Massachusetts earth removal bylaw or ordinance, it is important to relate it to the statutory purposes of ch. 40A and ch. 40. The traditional general health, safety and property value bases of the police power, set out in Town of Burlington v. Dunn, were somewhat expanded in Town of Stow v. Marinelli:

We have said that the purpose of this enabling statute (Ch. 40) 'was to regulate the stripping of topsoil so as to prevent the injurious effects brought about by the creation of waste areas.' Butler v. East Bridgewater, 330 Mass. 33, 36. Undoubtedly, there are other purposes which may properly be accomplished under this statute: for instance, the regulation of noise, dust or other effects which are peculiarly related to earth removal operations and detrimental to the public welfare. 55

Case history shows that the word "detrimental" originally referred to detriment to property values and, secondarily, to human health. However, the concept of detriment is undergoing expansion. Noise and dust 56 are now seen as types of "pollution" affecting more than
merely economic values. Similarly, if grading and reseeding requirements were once upheld because they protected neighborhood property values, they may now be enforced in order to prevent erosion which damages the earth itself. In light of *Turnpike Realty* the statutory purposes may one day be held to comprehend flood prevention and preservation of local water supply if these can be shown to be linked with earth removal.

In the case of *Kelleher v. Board of Selectmen of Pembroke*, discussed above, the Massachusetts Appeals Court approved a ch. 40 bylaw enabling the selectmen of Pembroke to impose a variety of conditions upon earth removal permits: applicants were required to produce a viable plan for reloaming and for control of temporary drainage; water courses and wet areas were to be delineated on plans; and a 200 foot buffer area could be imposed along public ways. The plaintiff’s activities had included damage to a local brook and in refusing the permit the selectmen complained, *inter alia*, of “lack of sufficient data to insure that Pudding Brook, its vegetation and wildlife, would not be adversely affected by silting and surface runoff.”

The attitude of the Appeals Court toward these requirements can be measured by its comment that aerial photographs of the site portrayed “a wasteland in the making.” The court found the requirements reasonable because without such controls the operation would “necessarily result in depreciation of neighboring properties and substantial interference with neighboring residents in the normal use and enjoyment of their properties.” A careful reading of this case will reveal that the inevitable invocation of property values should be balanced by considerations of water pollution, erosion, and damage to the land.

A model earth removal bylaw, proposed by the Middlesex County Conservation District in December, 1969, refers to “growing general public concern over the use of our natural resources and the maintenance of our human environment.” The proposal imposes the following health conditions:

1. No gravel shall be removed closer to spring high water table that would preclude its subsequent reuse according to existing public health standards.
2. No area shall be excavated so as to cause the accumulation of free standing water. Permanent drainage shall be provided as needed in accordance with good conservation practices.

Section (m) of the model bylaw adopts an environmentally oriented approach to the protection of water resources and requires that “no
excavation shall be allowed closer than 50 feet from a natural stream.” As more is learned of the part played by sand and gravel deposits in purifying water supply and aiding aquifer recharge, the regulatory power will support further protection of local water supplies.

In addition to the health, safety, property value and environmental considerations now approved for a permit system, “aesthetic” regulations are justifiable as auxiliary to the exercise of the police power. Environmentalists should study carefully all “aesthetic” regulations on land use, to distinguish those which are cosmetic from those which mirror growing perception of environmental values.

An interesting clarification was made in a recent case of the apparent limitation set forth in Town of Stow v. Marinelli that, under earth removal bylaws of any kind, no permit can be denied on the likelihood that truck traffic will create a local traffic hazard on public streets. The question, as the court in Stow saw it, was one of discrimination:

. . . there is nothing to indicate that trucks of equal size would not create the same traffic difficulties, regardless of whether they were laden with sand and gravel or with anything else. In effect, then, Stow is attempting to enforce a traffic regulation aimed solely at sand and gravel trucking but with no apparent grounds for distinguishing between that and other types of truck traffic.

From this, the court in Town of Kingston v. Hamilton, concluded that regulation of sand and gravel trucks under ch. 40, §21(17) would have to be limited to “the objectionable quality of such traffic peculiar to earth removal operations,” while objections relating merely to size, speed, weight and frequency of gravel trucks could only be regulated under ch. 40, §22, which specifically provides for municipal regulation of traffic.

A final interesting question arises as to whether a municipality may require a bond to insure the completion of restoration work on mining sites in the absence of statutory authority under either ch. 40 or ch. 40A. The Hamilton trial court approved such a bond, citing a Connecticut case and an A.L.R. Note. In a recent case, the Supreme Judicial Court of Massachusetts approved a nonstatutory bond, recommended by a local health board and incorporated in a planning board decision, for the completion of drainage work in a subdivision.
VII. LIMITING THE SCOPE OF PRE-EXISTING NON-CONFORMING USES

Control of non-conforming earth-removal operations has been the subject of numerous cases and articles. The remainder of this article will highlight two areas: the scope of use, as defined by a recent Massachusetts trial court, and the termination of a non-conforming use because of a lapsed permit.

The Memorandum of Decision, Finding, Rulings and Order for Decree issued February 26, 1973, by the trial court in the case of Town of Kingston v. Hamilton, discussed above, is a comprehensive study of the regulation of prior non-conforming uses under ch. 40 and ch. 40A. The Memorandum begins with the proposition that minimum tolerance is given to non-conforming uses, the burden of proof being on the landowner to justify continuing use or expansion. In reality, however, such a use may not only be continued but may increase in volume or fluctuate. The basic test for change of scope is found in Town of Bridgewater v. Chuckran:

(1) whether the use reflects the ‘nature and purpose of the use prevailing when the zoning by law took effect’ . . . .
(2) whether there is a difference in the quality or character as well as the degree of use . . .
(3) whether the current use is ‘different in kind and in its effect on the neighborhood.’

Because of the peculiar nature of mining activities, the usual doctrine that the physical area of a non-conforming use may not be extended could produce what the court in the second case of Wayland v. Lee called the “absurd result” that a landowner would be limited to the “excavation of pits or holes that have already been excavated and now contain nothing but air.”

To avoid this “absurd result,” some courts have adopted a “diminishing assets” theory and have held that all the land may be mined up to the boundaries, even though only a portion was touched before the effective date of the new local law restricting mining activity. Conversely, other courts have taken a very narrow view, limiting the owner to slight increases in depth and width of the area already excavated. After discussing the five Massachusetts cases involving extent of area, the Hamilton court settled on the doctrine of “appropriation to use,” holding that a non-conforming use may be extended to all areas “devoted to the use by actual occupation of the land in a manner physically appropriating it to the use . . . .” Appropriation may be accomplished by structures, test pits, roads laid out for truck access to all of the property, prepara-
tion of the ground, or even fencing. However rational this doctrine may be with reference to constitutional protection of private property rights, if adopted it will inevitably have adverse environmental effects. Any sensible sandpit owner, fearing adoption of municipal prohibitions on mining, would immediately proceed to devastate his entire acreage to assure establishment of appropriation.

With respect to the second issue, termination of a non-conforming use upon lapse of a permit, it is settled law in Massachusetts that a revocable permit, or one with a definite termination date, does not convey any property rights for which compensation must be paid upon termination. A leading case is *John Donnelly & Sons, Inc. v. Outdoor Advertising Board.* Posting of billboards in Massachusetts requires a permit, renewable annually, from the state’s Outdoor Advertising Board. After the town of Avon passed a bylaw requiring removal of a pre-existing sign, the Board refused to renew Donnelly’s annual permit, relying on its own regulation providing that billboards must be in conformity with local zoning laws. Donnelly argued that the billboard, as a pre-existing structure, was a non-conforming use protected under the Zoning Enabling Act. The court stated that Donnelly took and renewed its permit each year “with knowledge that the permit was for a term of one year and was revocable by the board for cause.” The court concluded that

> [where a billboard] is essentially temporary and where, in the absence of a required permit, the billboard would constitute a public nuisance, we hold that it has not gained the status of a vested right constituting a protected nonconforming use under Chapter 40A, §5 as amended.

The “nuisance” analogy is reminiscent of the language of *Butler v. Town of East Bridgewater*, quoted above. Similar results appeared in *Mile Road Corp. v. Boston*, where the court held that a private dump could be shut down by statute without compensation, despite hardship to the landowner, on the grounds that it had been operated by annual revocable permit which granted no vested property right immune to prospective governmental action. In *Ligget Drug Co., Inc. v. Lic. Commissioners of City of North Adams*, a mandamus petition failed to force renewal of restaurant licenses, deemed “mere permissions and in no sense property.”

In the light of this doctrine, all Massachusetts earth removal permits should be strictly conditioned to lapse at the end of a permit period reasonably related to the area being excavated. In this way possible status as pre-existing non-conforming uses (should local laws be changed) can be limited in advance.
The constitutionality of local earth removal regulations is firmly established in Massachusetts. Properly drafted local ordinances or bylaws, whether adopted under chapter 40A or chapter 40, may impose stringent permit conditions upon earth removal operations in any community. As to existing operations, such regulations will operate prospectively. They may restrict dust, noise, vibration, erosion, impingement upon waterways and wetlands, and may impose extensive restoration requirements. Regulatory purposes, if reasonably related to public health and safety and preservation of property values, may be extended to include protection of local land and water supply, and to ancillary aesthetic protection. Normally, a Massachusetts municipality may adopt an ordinance or bylaw forbidding commercial sand and gravel mining. Non-conforming operations will be shielded from the effect of the local enactment, but this exemption can be limited by a strict construction of appropriation to use and by employing local permits with a definite termination date. Finally, further scientific research into the environmental value of sand and gravel deposits in their native location will support more extensive regulation and prohibition of mining activity in areas important to water supply and water purity.

Footnotes

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1See, in this connection, Yoffe v. Special Board Chapter 387, ___NH___, 304 A.2d 876 (1973), upholding denial of a permit to an applicant from Newton, Mass., to dredge filter materials from Lake Umbagog in remote northern New Hampshire.


3MASS. GEN. LAWS. ch. 40A, §2 (1968) empowers municipalities to "regulate and restrict the erection, construction...or use of buildings and structures, or use of land, and...prohibit noxious trades within the municipality or any specified part thereof..." to promote the inhabitants' "health, safety, convenience, morals or welfare."


5As amended by Chapter 317 of Acts of 1973, MASS. GEN. LAWS ch. 40, §21(17) reads, in relevant part:
Towns may . . . make such orders and bylaws not repugnant to law . . .
for prohibiting or regulating the removal of soil, loam, sand or gravel
from land not in public use in the whole or in specified district of the
town, and for requiring erection of a fence or barrier around such areas
and the finished grading of the same . . . . Any order or bylaw prohibit­
ing such removal hereunder shall not apply to any soil, loam, sand or
gravel which is the subject of a permit or license issued under the au­
thority of the town or by the appropriate licensing board of such town
or by the board of appeal, or which is to be removed in compliance with
the requirements of a subdivision plan approved by the town planning
board.

The original statute was passed in response to the holding of Town
of North Reading v. Drinkwater, 309 Mass. 200, 34 N.E. 2d 631
(1941) that regulation of earth removal was beyond the power of
municipalities except as part of their zoning codes.

Butler v. Town of East Bridgewater, 330 Mass. 33, 37, 110 N.E.
2d 922, 925 (1953).

For example, it is probable that a local sand and gravel bylaw or
ordinance is the kind of law “the major purpose of which is to
prevent or minimize damage to the environment,” for violation of
which an action may be brought by any ten residents of the com­
monwealth under the “citizens right of action” law passed in 1971
[MASS. GEN. LAWS ch. 214, § 10A.] See, also, discussion infra, of
possible requirements for “environmental impact statements” for
earth removal activities conducted or licensed by federal or state
agencies.


S.C.S., NATIONAL ENGINEERING HANDBOOK, at 18; S.C.S.,
ENGINEERING FIELD MANUAL, at Ch. 2. For nontechnical explanation,
see, McHarg, I.L., Open Space from Natural Process,
METROPOLITAN OPEN SPACE AND NATURAL PROCESS (ed. D.A. Wal­
lace), (1972).

MASS. GEN. LAWS ch. 21, §54 (1968). Established in 1968, the
Division controls coastal waters extraction of all substances, includ­
ing highway materials.

The Army Corps of Engineers issues such permits, principally
under §10 of the River and Harbor Act of March 3, 1899 (33 U.S.C.
§403 (1970)). The Corps may consider environmental as well as
navigational interests. Zabel v. Tabb, 430 F.2d 199 (5th Cir. 1970)
cert. denied, 401 U.S. 910 (1971). The Corps will ordinarily issue a
permit only if concerned state agencies first accede: Permits for
Work and Structures in Navigable Waters, New England Div.,
Dept. of The Army, Corps of Engineers, at 1-2, (Preliminary Edition 1973). Construction of roadways, causeways and bridges in and over navigable United States waters under the Act was transferred by regulation to the U.S. Coast Guard, Department of Transportation, on April 1, 1967.


16Some results (predictable or otherwise) of filling by the Massachusetts Port Authority to expand Logan Airport in Boston include: increased demand on local sand and gravel areas; impact of mining; loss of filled wetlands in Boston Harbor; widespread complaint from East Boston residents regarding truck traffic; collapse of the Mystic-Tobin Bridge September 16, 1973, when a pier was hit by a heavily loaded gravel truck.


19See, for example, 38 Me. Rev. Stat. Ann. §481 (Supp. 1972-73) for state regulation of certain large scale mining operations.

20A summary list of municipal earth removal regulations in the Commonwealth, compiled by the Department of Natural Resources Division of Mineral Resources in April, 1972, outlines five major classifications of local control: 63 municipalities have no earth removal regulations; 144 have minimum permit regulations under which conditions may be imposed; 71 have systems under which conditions for restoration may be imposed; 64 have permit systems requiring conditions for site restoration (at least planting and seeding); 7 allow no commercial earth removal. Of the first category, 15 towns had no zoning bylaws at all, and three others had no town bylaws, period.


21 Ahearn, V.P., Jr., LAND USE PLANNING AND THE SAND AND GRAVEL PRODUCER, an undated booklet issued by the National Sand and Gravel Association (900 Spring Street, Silver Springs, Md.) plaintively protests the local habit of zoning without regard to the location of future residential and light commercial development is somewhat flexible . . . . Likewise, the arbitrary classification of areas containing valuable mineral deposits for residential, light commercial and other similar uses is inconsistent with effective planning.” (at 15). The author also deplores “the use of residential zoning for inaccessible areas, obviously unsuitable for residential development, as a tool for arbitrarily blocking the mining of mineral deposits” and designation of such uses in areas which in fact have no deposits. (at 16). Some courts agree, see n. 53, infra.


23 Town of Burlington v. Dunn, 318 Mass. 216, 221-2; 61 N.E.2d 243, 246 (1945).

24 Butler v. Town of East Bridgewater, 330 Mass. 33, 37, 110 N.E.2d 922, 925 (1953). The language of the first phrase quoted represents an effort to distinguish Town of Pittsfield v. Olesak, 313 Mass. 553, 555, 47 N.E.2d 930, 932 (1942) which dealt with erection of temporary buildings for the cutting of timber in zones where commercial and industrial buildings were precluded.


30 MASS. GEN. LAWS ch. 41, § 81M:

it is the intent of the subdivision control law that any subdivision plan filed with the planning board shall receive the approval of such board if said plan conforms to the recommendation of the board of health and to the reasonable rules and regulations of the planning board pertaining to subdivisions of land . . . .

For a narrow construction of planning power, see Daley Construction Co., Inc. v. Planning Board of Randolph, 340 Mass. 149, 163 N.E.2d 27 (1959).

31 MASS. GEN. LAWS ch. 40A; § 7A; see also, ch. 40A, § 5A.


35 Wis. 2d 7, 14, 201 N.W.2d 761, 768 (1972).


41 Id. at 596.


43 For a truly comprehensive study of this whole area, see, Bosselman, F., D. Callies, J. Banta, THE TALKING ISSUE, (Council on Environmental Quality, 1973).


45 Ill. 2d 200, 115 N.E.2d 275 (1953).

46 Ill. 2d 228, 171 N.E.2d 582 (1961).

47 Ohio St. 379, 143 N.E.2d 309 (1957).

48 Ohio St. 424, 119 N.E.2d 611 (1954).


51 On the other hand, it might well be found arbitrary and discriminatory to forbid (rather than regulate) mining in a highly industrialized area. It would also be difficult to justify constitutionally the imposition of residential zoning on land in an industrialized area to prevent mining. Another form of regulation not to be recom-
mended is to proscribe sale of mined material beyond municipal limits. Such regulation appears beyond the scope of the Zoning Enabling Act, which is designed to control the use of land and structures; whether the landowner sells, gives away, dumps, or uses for himself the material excavated is not in itself relevant to zoning. As a Chapter 40 bylaw, such control seems beyond the police power and possibly even in violation of the commerce clause.

36The state Department of Public Health has adopted air pollution regulations for implementing the federal Clean Air Act. 42 U.S.C. §1857 et seq. (1970). Reg. 2.5 controls particular emissions (including dust) from industrial sources by specific standards relating to location of the source, whether it is a new or pre-existing operation, and weight processed per hour. This regulation would apply to gravel processing plants but not to extraction operations, which are governed only by Reg. 9, forbidding dust emissions which cause "air pollution," which the Department interprets as forbidding nuisance operations.


All applications for permits are to be accompanied by exhibits, plans and other documentation which will portray or disclose the following items of information, among others; the proposed site of excavation: all property lines, vegetative cover, water courses and wet areas on the land involved, as well as existing topographic lines at five foot grade intervals carried one hundred feet beyond the limits of the proposed excavation: topographic lines at the same intervals after the proposed excavation is completed; estimated quantities of each substance to be removed, of the loam (and the depth thereof) presently located on the property, and of the amount of loam necessary to provide a four inch cover upon the termination of the removal work; explanation and assurances as to the availability of loam for that purpose; and an analysis and estimate of the amounts and types of grass, seed and plantings required to repair the site, and of the cost of performing such work (art. 12 B C). If an application relates to the continuation of an existing removal operation, the selectmen may require a plan which will show all areas where past removal operations have been conducted. All permits issued by the board shall state all the conditions to be imposed, which may include, among others, conditions as to finished level and sloping, the placement and seeding of loam and other plants, limits and duration of the removal operation, methods of removal and days and hours of operation, routes of transportation, of material, control of temporary and permanent drainage, nonremoval of vegetation as screening, and (in the case of an
application for continuance of an existing removal operation) corrective steps to be taken to restore areas of past removal operations (art. 12B D 15). No permit may be granted except after notice and public hearing, or for more than one year's duration (art. 12 B E).

"No permit . . . shall be issued if such removal will: (1) Endanger the general public health, safety, or convenience or constitute a nuisance; (2) result in detriment to or depreciation of neighboring properties or interfere with owners or occupants of neighboring properties in the normal use and enjoyment of their properties by reason of noise, dust, vibrations, traffic or drainage conditions. (3) Extend within three hundred (300) feet of a public way . . . nor if there is insufficient vegetative barrier to remain on the property after excavation as proposed to prevent view of the area from a way. This provision may be waived by the . . . [board] if said removal operation will result in said site being left at approximate level or grade of adjacent way” (art. 12B E).

59Id. at 190, 294 N.E.2d at 518.
59Id. at 195, 294 N.E.2d at 519.

60Note that the plaintiff, supposedly as a part of the site preparation, had removed over 350,000 cubic yards of gravel, and intended to remove a like amount more under a plan for industrial development of the site. Fortunately for the town this was not a subdivision plan, but the case demonstrates the dangers of relying solely on Chapter 40 regulation.

61Undated Newsletter entitled “Gravel Pits” published by Middlesex County Conservation District of the U.S. Department of Agriculture Soil Conservation Service, 403 Massachusetts Avenue, S. Acton, Mass. 01771.


63Town of Kingston v. Hamilton, Plymouth County Superior Court Eq. #E4205, decided 2/26/73.

63Id., at 742, 227 N.E.2d at 712.

66MASS. GEN. LAWS ch. 40, §22, reads in part:

Except as otherwise provided [in ch. 90, §18, ch. 85, §2, and ch. 89, §8 and 9 a city or town may make ordinances or bylaws, or the board of aldermen or the selectmen may make rules and orders, for the regulatim of carriages and vehicles used therein. . . .

Neither the Stow nor Kingston courts discussed MASS. GEN. LAWS, Ch. 90, § 18, which also permits limited local regulation of vehicular speed and use of ways.

67Town of Kingston v. Hamilton, Plymouth Co. Sup. Ct. # E4205, Memorandum of Decision, Findings, Rulings and Order for Decree,


87For example, 10 ALR 3d 1226 (1965).


80Id., at 1065, 282 N.E.2d at 667.

81Id., at 1066, 282 N.E.2d at 668.

82330 Mass. 33, 37, 110 N.E.2d 922, 925 (1953).

83345 Mass. 379, 187 N.E.2d 826 (1963). Note that a dump is by no means “portable” a use as a billboard.

84296 Mass. 41, 52, 4 N.E. 2d 628, 635 (1936), citing Burgess v. Mayor and Alderman of City of Brockton, 235 Mass. 95, 126 N.E. 456 (1920).