



City of Santa Barbara California

PLANNING COMMISSION STAFF REPORT

REPORT DATE: December 28, 2006
AGENDA DATE: January 4, 2007
PROJECT: Solar Energy System Ordinance Amendments
 City-Wide
TO: Planning Commission
FROM: Planning Division, (805) 564-5470
 Jan Hubbell, AICP, Senior Planner
 Heather Baker, Project Planner

I. BACKGROUND

The City is a partner in the Million Solar Roofs Partnership, which has a goal of one million solar energy systems to be installed in the US by 2010, including 750 solar energy systems to be installed in Santa Barbara County by 2010. The City of Santa Barbara supports the use of solar energy as an environmentally superior alternative to the use of fossil fuels. On December 5th, Council adopted Solar Energy System Design Guidelines¹. Council also directed staff to amend the Zoning Ordinance regarding solar energy systems with Planning Commission and Ordinance Committee comment and review. This report contains two proposals for Zoning Ordinance Amendments to encourage solar energy system use and to clarify rare potential circumstances in which Design Review might be required for a project consisting solely of a solar energy system installation.

Currently, solar energy system information must be included in site plans when those systems are proposed as part of more extensive projects such as additions and new buildings. If the larger project is subject to Design Review, then the solar energy system would not be exempt from Design Review. This report discusses potential options for when Design Review might potentially be required for solar energy systems which are not part of a larger project subject to Design Review. Even if the City reviews a solar energy system, consistent with State law, the City must use its best efforts to ensure that any aesthetic conditions selected are the most affordable as possible. Also, any aesthetic conditions must not have the effect of increasing cost by more than 20% or decreasing efficiency by more than 20%.

¹Santa Barbara Solar Energy System Guidelines are available at 630 Garden Street and http://www.santabarbaraca.gov/Resident/Home/Forms/design_guidelines.htm

The term “public health and safety” is not usually directly linked to aesthetics, rather it is usually considered within a concept of “public welfare” (Exhibit C). However, potential links between aesthetics and public health and safety may be as follows. Concepts below are very preliminary in nature; further research could be conducted on this topic.

- **Tourism.** Santa Barbara’s tourism industry is strongly tied to its outstanding attention to the built environment. If a number of poorly integrated solar energy system projects were to destroy Santa Barbara’s reputation for beautiful architecture and cause a decline in tourism in the City, there could be a substantial adverse effect on the local economy. A less economically successful community may present a greater challenge in providing appropriate health care for residents. More details on this topic are provided in Exhibit D.
- **Walking.** Studies (Exhibit E) show that people are more likely to walk in aesthetically pleasant areas. The Centers for Disease Control recommends creating walkable communities as an important way to stem national obesity trends and to reduce health damaging pollution from motor vehicle use.
- **General Mental Health.** Other studies (Exhibit F) link overall mental health, including depression or elderly mental decline to environmental factors, including public built environment aesthetics.

Government Code section 65850.5 defines “specific, adverse impact as “a significant, quantifiable, direct, and unavoidable impact, based on objective, **identified, and written public health or safety standards**, policies, or conditions as they existed on the date the application was deemed complete.”

Staff is currently reviewing whether it is possible to articulate the necessary impacts to justify design review of solar energy systems. Staff will present an ordinance to the Ordinance Committee that defines the adverse impact situations in which Design Review might be required for a solar energy system. Individual factors for a case if aesthetics are considered might include; system compatibility with surrounding structures and environment, siting, public visibility level, and construction techniques.

Some potential project types for consideration might be:

1. **Historic resources: District, Landmark and Structures of Merit.** The public visibility, design, placement and compatibility with surrounding structures and environment of systems proposed on sites with District, Landmark or Structure of Merit historic resources are proposed to be evaluated to determine if the system might pose significant historical impacts. Historic Districts include the Riviera Campus Historic District. Potentially historically significant structures would not be evaluated.
2. **Special Design Districts: El Pueblo Viejo I & II, Brinkerhoff and the Lower Riviera Special Design District.** The public visibility, design, placement and compatibility with surrounding structures and environment of systems proposed in El Pueblo Viejo I or II,

II. FIRST PROPOSAL: ALLOW SOLAR ENERGY SYSTEMS WITHIN SETBACKS

The City of Santa Barbara Municipal Code currently requires that a Zoning Modification be approved before a solar energy system may encroach within a required yard setback. The only exception is currently Municipal Code Section 28.87.062 (bold added for this report):

Yard Encroachments. Where yards are required in this title, they shall be not less in depth or width than the minimum dimensions specified for any part, and they shall be at every point unobstructed by structures from the ground upward, except as follows:

1. Uncovered balconies, cornices, canopies, chimneys, **eaves or other similar architectural features** not providing additional floor space within the building **may extend into a required yard not to exceed two feet (2')**...

Staff interprets the two foot yard encroachment to include solar energy systems no more than 8" higher than the roof as "architectural features similar to eaves". However, this two foot encroachment ability does not provide as much flexibility as is needed for solar energy system installations. The Zoning Ordinance needs to become more flexible so that solar energy systems could be installed on any roof surface of a legal structure. Such a provision would provide more opportunities to install systems in the least visible, highest performing locations on a site. Also, allowing panels to cover entire roof areas can result in a more aesthetically attractive design than when put on various spots across the roof.

Staff and the City Council recommend a Zoning Ordinance amendment to allow solar panels to be placed on existing legal non-conforming structures within required setbacks. A modification application would not be required for such systems if the systems are installed to be 8" or less above the existing roof structure and the system is generally compatible with the City's Solar Energy System Design Guidelines.

III. SECOND PROPOSAL: CLARIFY RARE CIRCUMSTANCES WHEN DESIGN REVIEW REQUIRED

In 2004, State law regarding Design Review for solar energy systems changed (California Government Code § 65850.5 and Legislative Counsel's Digest, Exhibits A and B), causing most solar energy systems to be exempt from the City's Design Review process. In part, the code states (bold added for emphasis in this report):

"...The requirements of local law shall be limited to those standards and regulations necessary to ensure that the solar energy system will not have a specific, adverse impact upon the public health or safety. However, if the building official of the city or county has a good faith belief that the solar energy system could have a **specific, adverse impact upon the public health and safety**, the city or county may require the applicant to apply for a use permit."

Brinkerhoff or the Lower Riviera Design Districts are recommended to be evaluated to determine if the system might pose significant impacts to historic resources. Projects within the Hillside and Mission Area Special Design Districts would not be evaluated.

3. **Larger systems.** Systems that are greater than 1,000 square feet can present an adverse visual impact. Under the new legislation, aesthetic concerns alone cannot serve as a basis for requiring design review. Staff intends to research the impacts of large solar energy systems on public health and safety. If significant, quantifiable, and direct impacts are identified, Staff will recommend large solar energy systems for design review.
4. **Pole mounted systems.** Pole mounted systems are considered more impactful than systems which are mounted on more substantial structures. Again, aesthetic concerns alone cannot serve as a basis for a design review. Staff intends to research the impacts of pole mounted solar energy systems on public health and safety. If significant, quantifiable, and direct impacts are identified, Staff will recommend pole mounted solar energy systems for design review.

Projects requiring design review will be reviewed using the Solar Energy System Design Guidelines and other applicable City Guidelines. Staff expects **very few** projects to require design review. Only those categories of projects that are found to present significant, quantifiable, direct, and unavoidable impacts, based on objective, identified, and written public health or safety standards, policies, or conditions will be subject to design review.

Exhibit G shows solar energy systems installed in other jurisdictions. Some of the solar energy systems shown in Exhibit are examples of systems that could potentially cause significant impacts, supporting a design review requirement..

IV. ADDITIONAL POTENTIAL FUTURE AMENDMENTS

On September 26, 2006, the Mayor was part of a panel at large on a community-sponsored lecture and discussion, "The 2030 Challenge – How Building Design Can Turn Down the Global Thermostat," by Edward Mazria. Following that lecture, a new group, known as the Architecture 2030 Committee was formed in Santa Barbara. The Committee is made up of members from the local American Institute of Architects chapter, The Sustainability Project, the Community Environmental Council and the Santa Barbara Contractors Association. The Committee plans to review the Ed Mazria lecture with City Council in January. The Committee is also expected to suggest consideration of changing codes and requirements for new development as they relate to energy efficiency. City staff looks forward to upcoming opportunities to collaborate with the Architecture 2030 group. Working with the Architecture 2030 group, staff will likely return to Council with a comprehensive strategy for reducing energy use in the City of Santa Barbara. Part of the proposals may include solar energy system recommendations. At this time, only the two Municipal Code amendments described in this Staff report are recommended.

Government Code 65850.5

- (a) The implementation of consistent statewide standards to achieve the timely and cost-effective installation of solar energy systems is not a municipal affair, as that term is used in Section 5 of Article XI of the California Constitution, but is instead a matter of statewide concern. It is the intent of the Legislature that local agencies not adopt ordinances that create unreasonable barriers to the installation of solar energy systems, including, but not limited to, design review for aesthetic purposes, and not unreasonably restrict the ability of homeowners and agricultural and business concerns to install solar energy systems. It is the policy of the state to promote and encourage the use of solar energy systems and to limit obstacles to their use. It is the intent of the Legislature that local agencies comply not only with the language of this section, but also the legislative intent to encourage the installation of solar energy systems by removing obstacles to, and minimizing costs of, permitting for such systems.
- (b) A city or county shall administratively approve applications to install solar energy systems through the issuance of a building permit or similar nondiscretionary permit. Review of the application to install a solar energy system shall be limited to the building official's review of whether it meets all health and safety requirements of local, state, and federal law. The requirements of local law shall be limited to those standards and regulations necessary to ensure that the solar energy system will not have a specific, adverse impact upon the public health or safety. However, if the building official of the city or county has a good faith belief that the solar energy system could have a specific, adverse impact upon the public health and safety, the city or county may require the applicant to apply for a use permit.
- (c) A city or county may not deny an application for a use permit to install a solar energy system unless it makes written findings based upon substantial evidence in the record that the proposed installation would have a specific, adverse impact upon the public health or safety, and there is no feasible method to satisfactorily mitigate or avoid the specific, adverse impact. The findings shall include the basis for the rejection of potential feasible alternatives of preventing the adverse impact.
- (d) The decision of the building official pursuant to subdivisions (b) and (c) may be appealed to the planning commission of the city or county.(e) Any conditions imposed on an application to install a solar energy system shall be designed to

any solar energy system, provided that such ordinance contains all of the following:

- (1) Specifies the standards for determining the exact dimensions and locations of such easements.
- (2) Specifies any restrictions on vegetation, buildings and other objects which would obstruct the passage of sunlight through the easement.
- (3) Specifies the terms or conditions, if any, under which an easement may be revised or terminated.
- (4) Specifies that in establishing such easements consideration shall be given to feasibility, contour, configuration of the parcel to be divided, and cost, and that such easements shall not result in reducing allowable densities or the percentage of a lot which may be occupied by a building or a structure under applicable planning and zoning in force at the time such tentative map is filed.
- (5) Specifies that the ordinance is not applicable to condominium projects which consist of the subdivision of airspace in an existing building where no new structures are added. For the purposes of this section, "solar energy systems" shall be defined as set forth in Section 801.5 of the Civil Code.

For purposes of this section, "feasibility" shall have the same meaning as set forth in Section 66473.1 for the term "feasible".

CHAPTER 789
FILED WITH SECRETARY OF STATE SEPTEMBER 25, 2004
APPROVED BY GOVERNOR SEPTEMBER 24, 2004
PASSED THE ASSEMBLY AUGUST 16, 2004
PASSED THE SENATE AUGUST 10, 2004
AMENDED IN SENATE JULY 19, 2004
AMENDED IN SENATE JUNE 28, 2004
AMENDED IN ASSEMBLY MAY 10, 2004
AMENDED IN ASSEMBLY APRIL 12, 2004

INTRODUCED BY Assembly Member Wolk

FEBRUARY 19, 2004

An act to amend Section 714 of the Civil Code, to repeal and add Section 65850.5 of the Government Code, and to repeal and add Section 17959.1 of the Health and Safety Code, relating to solar energy.

LEGISLATIVE COUNSEL'S DIGEST

AB 2473, Wolk. Energy systems: local regulations.

(1) Existing law provides that any covenant, restriction, or condition contained in any deed, contract, security instrument, or other instrument affecting property, as specified, that prohibits or restricts the installation or use of a solar energy system is void and unenforceable. Existing law permits reasonable restrictions on a solar energy system that do not "significantly," as defined, increase the cost of the system or decrease its efficiency or specified performance.

This bill would redefine the term "significantly" with regard to the restrictions imposed on solar domestic water heating systems or swimming pool heating systems and photovoltaic systems, as specified.

(2) Existing law prohibits the legislative body of any city or county from enacting an ordinance that prohibits or unreasonably restricts the use of solar energy systems other than for the preservation or protection of the public health and safety.

This bill would revise and recast those provisions to require every city, county, or city and county to approve the installation of a solar energy system, as defined, through the issuance of specified permits. The bill would declare that the implementation of consistent statewide standards to achieve the timely and cost-effective installation of solar energy systems is a matter of statewide concern.

The bill would require solar energy systems to meet specified standards. The bill would also require the issuance of a use permit by a city or county to install a solar energy system unless it makes specified written findings based upon substantial evidence in the record that the proposed installation would have a specific, adverse impact upon the public health or safety. The bill would provide for appeal of that decision to the planning commission, as specified. The bill would further make specified findings and declarations in that regard.

Because the bill would impose additional duties on local employees, the bill would create a state-mandated local program.

(3) The California Constitution requires the state to reimburse local agencies and school districts for certain costs mandated by the state. Statutory provisions establish procedures for making that

reimbursement.

This bill would provide that no reimbursement is required by this act for a specified reason.

THE PEOPLE OF THE STATE OF CALIFORNIA DO ENACT AS FOLLOWS:

SECTION 1. (a) The Legislature finds and declares all of the following:

(1) According to the State Energy Resources Conservation and Development Commission, California could face a shortage of reliable electricity and natural gas supplies within the next few years.

(2) The State of California has a longstanding policy of encouraging the construction of clean, renewable, and distributed energy systems, as evidenced by its investment of \$135 million in renewable electrical generation resources through the Reliable Electric Service Investments Act (Article 15 (commencing with Section 399) of Chapter 2.3 of Part 1 of Division 1 of the Public Utilities Code), and enactment into law of Section 25619 of the Public Resources Code, which authorized funds for a solar water heating grant program in the 1999-2000 Regular Session. The state has set a statewide goal of increasing renewable generation sources so that 17 percent of total electricity generation originates from renewable energy (Section 383.5 of the Public Utilities Code).

(3) The 2003 Energy Action Plan jointly prepared and adopted by the State Energy Resources Conservation and Development Commission and the California Public Utilities Commission strongly promotes customer owned electricity generation and renewable resources. Solar thermal energy technologies that reduce the consumption of natural gas or electricity will play an increasingly prominent role in California's energy portfolio future.

(4) The Legislature, the State Energy Resources Conservation and Development Commission, and the California Public Utilities Commission recognize solar energy technologies as abundant, renewable, and nonpolluting energy resources that reduce California's dependence on nonrenewable energy while reducing air and water pollution resulting from fossil fuel-based sources. Solar energy systems enhance the reliability and power quality of the electrical grid, reduce peak power demands, increase in-state electricity generation, liberate natural gas supplies for electricity generation purposes, diversify the state's energy supply portfolio, and make the electricity supply market more competitive by promoting consumer choice.

(5) The installation and operation of solar energy systems do not create adverse impacts on health, safety, or noise in areas where those systems are installed. In some jurisdictions, however, overly onerous and burdensome rules, regulations, or ordinances make the approval and installation of solar energy systems uneconomic because of time-consuming processes that frequently result in the denial of project approval due solely to aesthetic concerns.

(6) In light of existing state policies that promote the utilization of renewable energy resources in order to prevent future electricity and natural gas shortages, which have been enacted in order to protect the environment by encouraging the increased use of nonpolluting energy resources, it is the intent of the Legislature that local agencies do not adopt ordinances that create unreasonable barriers to the installation of solar energy systems, including, but not limited to, design review for aesthetic purposes, and do not unreasonably restrict the ability of homeowners, agricultural concerns, and business concerns to install solar energy systems. It is the policy of the state to promote and encourage the use of solar energy systems and to limit obstacles to their use.

(b) The implementation of consistent statewide standards to achieve the timely and cost effective installation of solar energy systems is not a municipal affair, as that term is used in Section 5 of Article XI of the California Constitution, but is instead a matter of statewide concern. It is the intent of the Legislature that local governments comply not only with the language of this act, but also the legislative intent to encourage the installation of solar energy systems by removing obstacles to, and minimizing costs of, permitting for such systems.

SEC. 2. Section 714 of the Civil Code is amended to read:

714. (a) Any covenant, restriction, or condition contained in any deed, contract, security instrument, or other instrument affecting the transfer or sale of, or any interest in, real property that effectively prohibits or restricts the installation or use of a solar energy system is void and unenforceable.

(b) This section does not apply to provisions that impose reasonable restrictions on solar energy systems. However, it is the policy of the state to promote and encourage the use of solar energy systems and to remove obstacles thereto. Accordingly, reasonable restrictions on a solar energy system are those restrictions that do not significantly increase the cost of the system or significantly decrease its efficiency or specified performance, or that allow for an alternative system of comparable cost, efficiency, and energy conservation benefits.

(c) (1) A solar energy system shall meet applicable health and safety standards and requirements imposed by state and local permitting authorities.

(2) A solar energy system for heating water shall be certified by the Solar Rating Certification Corporation (SRCC) or other nationally recognized certification agencies. SRCC is a nonprofit third party supported by the United States Department of Energy. The certification shall be for the entire solar energy system and installation.

(3) A solar energy system for producing electricity shall also meet all applicable safety and performance standards established by the National Electrical Code, the Institute of Electrical and Electronics Engineers, and accredited testing laboratories such as Underwriters Laboratories and, where applicable, rules of the Public Utilities Commission regarding safety and reliability.

(d) For the purposes of this section:

(1) (A) For solar domestic water heating systems or solar swimming pool heating systems that comply with state and federal law, "significantly" means an amount exceeding 20 percent of the cost of the system or decreasing the efficiency of the solar energy system by an amount exceeding 20 percent, as originally specified and proposed.

(B) For photovoltaic systems that comply with state and federal law, "significantly" means an amount not to exceed two thousand dollars (\$2,000) over the system cost as originally specified and proposed, or a decrease in system efficiency of an amount exceeding 20 percent as originally specified and proposed.

(2) "Solar energy system" has the same meaning as defined in paragraphs (1) and (2) of subdivision (a) of Section 801.5.

(e) Whenever approval is required for the installation or use of a solar energy system, the application for approval shall be processed and approved by the appropriate approving entity in the same manner as an application for approval of an architectural modification to the property, and shall not be willfully avoided or delayed.

(f) Any entity, other than a public entity, that willfully violates this section shall be liable to the applicant or other party for actual damages occasioned thereby, and shall pay a civil penalty to the applicant or other party in an amount not to exceed one thousand dollars (\$1,000).

(g) In any action to enforce compliance with this section, the prevailing party shall be awarded reasonable attorney's fees.

(h) (1) A public entity that fails to comply with this section may not receive funds from a state-sponsored grant or loan program for solar energy. A public entity shall certify its compliance with the requirements of this section when applying for funds from a state-sponsored grant or loan program.

(2) A local public entity may not exempt residents in its jurisdiction from the requirements of this section.

SEC. 3. Section 65850.5 of the Government Code is repealed.

SEC. 4. Section 65850.5 is added to the Government Code, to read:

65850.5. (a) The implementation of consistent statewide standards to achieve the timely and cost-effective installation of solar energy systems is not a municipal affair, as that term is used in Section 5 of Article XI of the California Constitution, but is instead a matter of statewide concern. It is the intent of the Legislature that local agencies not adopt ordinances that create unreasonable barriers to the installation of solar energy systems, including, but not limited to, design review for aesthetic purposes, and not unreasonably restrict the ability of homeowners and agricultural and business concerns to install solar energy systems. It is the policy of the state to promote and encourage the use of solar energy systems and to limit obstacles to their use. It is the intent of the Legislature that local agencies comply not only with the language of this section, but also the legislative intent to encourage the installation of solar energy systems by removing obstacles to, and minimizing costs of, permitting for such systems.

(b) A city or county shall administratively approve applications to install solar energy systems through the issuance of a building permit or similar nondiscretionary permit. Review of the application to install a solar energy system shall be limited to the building official's review of whether it meets all health and safety requirements of local, state, and federal law. The requirements of local law shall be limited to those standards and regulations necessary to ensure that the solar energy system will not have a specific, adverse impact upon the public health or safety. However, if the building official of the city or county has a good faith belief that the solar energy system could have a specific, adverse impact upon the public health and safety, the city or county may require the applicant to apply for a use permit.

(c) A city or county may not deny an application for a use permit to install a solar energy system unless it makes written findings based upon substantial evidence in the record that the proposed installation would have a specific, adverse impact upon the public health or safety, and there is no feasible method to satisfactorily mitigate or avoid the specific, adverse impact. The findings shall include the basis for the rejection of potential feasible alternatives of preventing the adverse impact.

(d) The decision of the building official pursuant to subdivisions (b) and (c) may be appealed to the planning commission of the city or county.

(e) Any conditions imposed on an application to install a solar energy system shall be designed to mitigate the specific, adverse impact upon the public health and safety at the lowest cost possible.

(f) (1) A solar energy system shall meet applicable health and safety standards and requirements imposed by state and local permitting authorities.

(2) A solar energy system for heating water shall be certified by the Solar Rating Certification Corporation (SRCC) or other nationally recognized certification agency. SRCC is a nonprofit third party supported by the United States Department of Energy. The

certification shall be for the entire solar energy system and installation.

(3) A solar energy system for producing electricity shall meet all applicable safety and performance standards established by the National Electrical Code, the Institute of Electrical and Electronics Engineers, and accredited testing laboratories such as Underwriters Laboratories and, where applicable, rules of the Public Utilities Commission regarding safety and reliability.

(g) The following definitions apply to this section:

(1) "A feasible method to satisfactorily mitigate or avoid the specific, adverse impact" includes, but is not limited to, any cost-effective method, condition, or mitigation imposed by a city or county on another similarly situated application in a prior successful application for a permit. A city or county shall use its best efforts to ensure that the selected method, condition, or mitigation meets the conditions of subparagraphs (A) and (B) of paragraph (1) of subdivision (d) of Section 714 of the Civil Code.

(2) "Solar energy system" has the same meaning set forth in paragraphs (1) and (2) of subdivision (a) of Section 801.5 of the Civil Code.

(3) A "specific, adverse impact" means a significant, quantifiable, direct, and unavoidable impact, based on objective, identified, and written public health or safety standards, policies, or conditions as they existed on the date the application was deemed complete.

SEC. 5. Section 17959.1 of the Health and Safety Code is repealed.

SEC. 6. Section 17959.1 is added to the Health and Safety Code, to read:

17959.1. (a) A city or county shall administratively approve applications to install solar energy systems through the issuance of a building permit or similar nondiscretionary permit. However, if the building official of the city or county has a good faith belief that the solar energy system could have a specific, adverse impact upon the public health and safety, the city or county may require the applicant to apply for a use permit.

(b) A city or county may not deny an application for a use permit to install a solar energy system unless it makes written findings based upon substantial evidence in the record that the proposed installation would have a specific, adverse impact upon the public health or safety, and there is no feasible method to satisfactorily mitigate or avoid the specific, adverse impact. This finding shall include the basis for the rejection of potential feasible alternatives of preventing the adverse impact.

(c) Any conditions imposed on an application to install a solar energy system must be designed to mitigate the specific, adverse impact upon the public health and safety at the lowest cost possible.

(d) (1) A solar energy system shall meet applicable health and safety standards and requirements imposed by state and local permitting authorities.

(2) A solar energy system for heating water shall be certified by the Solar Rating Certification Corporation (SRCC) or other nationally recognized certification agency. SRCC is a nonprofit third party supported by the United States Department of Energy. The certification shall be for the entire solar energy system and installation.

(3) A solar energy system for producing electricity shall meet all applicable safety and performance standards established by the National Electrical Code, the Institute of Electrical and Electronics Engineers, and accredited testing laboratories such as Underwriters Laboratories and, where applicable, rules of the Public Utilities Commission regarding safety and reliability.

(e) The following definitions apply to this section:

(1) "A feasible method to satisfactorily mitigate or avoid the specific, adverse impact" includes, but is not limited to, any cost effective method, condition, or mitigation imposed by a city or county on another similarly situated application in a prior successful application for a permit. A city or county shall use its best efforts to ensure that the selected method, condition, or mitigation meets the conditions of subparagraphs (A) and (B) of paragraph (1) of subdivision (d) of Section 714 of the Civil Code.

(2) "Solar energy system" has the meaning set forth in paragraphs (1) and (2) of subdivision (a) of Section 801.5 of the Civil Code.

(3) A "specific, adverse impact" means a significant, quantifiable, direct, and unavoidable impact, based on objective, identified, and written public health or safety standards, policies, or conditions as they existed on the date the application was deemed complete.

SEC. 7. No reimbursement is required by this act pursuant to Section 6 of Article XIII B of the California Constitution because a local agency or school district has the authority to levy service charges, fees, or assessments sufficient to pay for the program or level of service mandated by this act, within the meaning of Section 17556 of the Government Code.

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Programs

Municipal Regulation of Aesthetics

Patrick Morrell, Spring, 1997

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I. Introduction

Unlike the control of private property uses and building height and area requirements, aesthetic regulation is a more recent phenomenon. It was not until 1963 that the New York Court of Appeals recognized that local governments could regulate land use solely on the basis of aesthetics.^[1] Today, however, the use of aesthetic regulation is widespread throughout New York State.

This paper will examine aesthetic regulation, focusing on the relevant case law. First, it will examine the constitutionality and limitations of aesthetic regulation in New York State. Second, it will discuss the statutory authority for municipal aesthetic control. Third, it will provide examples of the various tools and techniques utilized by New York municipalities to regulate their respective localities.

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II. Regulating Land Use on Aesthetic Grounds

A. Constitutionality

Prior to 1954 most courts held that regulations enacted specifically for aesthetic purposes were an improper exercise of the police power. For example, in *Passaic v. Paterson Bill Posting, Adv. & Sign Painting Co.*, the New Jersey Supreme Court held invalid a local law regulating billboards stating that "aesthetic considerations are a matter of luxury and indulgence rather than of necessity, and it is necessity alone which justifies the exercise of police power to take private property without compensation."^[2] Then, in the 1954 case *Berman v. Parker*, Justice Douglas of the United States Supreme Court stated that aesthetic considerations were within the police power as pursuant to the public welfare and were subject to regulation.^[3] "The concept of the public welfare is broad and inclusive. The value

it represents are spiritual as well as physical, aesthetic as well as monetary. It is within the power of the legislature to determine that the community should be beautiful as well as healthy."^[4] Although the U.S. Supreme Court has accepted aesthetics as an aspect of the public welfare, many states still do not permit zoning based solely on aesthetics.^[5]

In New York State, the constitutionality of aesthetic regulation was upheld in *People v. Stover* ^[6] There, the New York Court of Appeals sustained a City of Rye ordinance that prohibited the erection of clotheslines in a front yard or side yard abutting a street. Unlike earlier state court decisions which held that aesthetic controls were only a means to achieving other public purposes such as property value stabilization, the *Stover* court held that preserving resident appearances was a valid exercise of the police power even if based solely on aesthetic objectives.^[7] The court stated "[i]t is settled that conduct which is . . . offensive to the sense of hearing and smell may be a valid subject of regulation under the police power . . . and we perceive no basis for a different result merely because the sense of sight is involved."^[8]

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B. Limitations

Subsequent cases have clarified the limitations of the *Stover* holding. In *Cromwell v. Ferrier*, the Court of Appeals upheld billboard restrictions which were based on aesthetics.^[9] In so doing, they set out the test of validity for aesthetic regulation: "it does not mean that any esthetic consideration suffices to justify prohibition. . . . Rather, what is involved are those esthetic considerations which bear substantially on the economic, social, and cultural pattern of a community or district."^[10] Thus, while the attainment of certain aesthetic ideals is a valid purpose for regulation under the police power, the thing being regulated must be substantial enough to be capable of having a material effect on the community. In *People v. Goodman*, ^[11] the court further refined this test by stating that the "setting of the regulated community" would be examined to determine the reasonableness of the regulation.^[12] This refinement means that an ordinance that is a reasonable exercise of the police power in one community may be unreasonable in another.

Aesthetic regulation faces a further limitation in that the Court of Appeals has included language in its decisions indicating that aesthetics are considered to be of lesser importance than other police powers. For example, in *Modjeska Sign Studios, Inc. v. Berle* the Court of Appeals considered applying a valid billboard regulation to existing structures. ^[13] The Court found this to be unreasonable because "[i]n contrast to a safety motivated exercise of the police power, a regulation enacted to enhance the aesthetics of a community generally does not provide a compelling reason for immediate implementation with respect to existing structures or uses."^[14] While there has not been a definite prioritization of the police powers, it is clear that aesthetic considerations would not occupy a position of great importance. As stated in *Rochester Telephone Corp. v. Fairport*, "although they rate well down in the hierarchy of public purposes, reasonable zoning restrictions may be imposed on private property for aesthetic reasons alone."^[15]

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III. Statutory Authority

There are many ways in which local governments regulate community appearance. Municipalities may choose to establish an architectural review board that oversees the visual impact of new development and reconstruction. They may also adopt sign and billboard regulations, tree ordinances, landscaping requirements or other ordinances and provisions in the zoning code to control the local visual environment. This section discusses the statutory authority for such regulations.

Generally, municipalities may enact aesthetic regulations pursuant to the Municipal Home Rule Law sec. 10(1)(ii)(a)(11) which states that municipalities may adopt local laws for the "protection and enhancement of its physical and visual environment."^[16] This broad grant of power provides municipalities with the flexibility to establish a variety of measures to control private property appearance. Municipalities may also enact such measures under section 96-a of the General Municipal Law. This provision authorizes local governments to adopt local laws regulating districts, sites and buildings having any "aesthetic interest or value" which "may include appropriate and reasonable control of the use or appearance of neighboring private property within public view or both."^[17]

More specifically, aesthetic control is authorized by a number of other state enabling statutes. Under General Municipal Law section 96-b, aesthetic considerations may play a role in the

adoption of local tree ordinances. The site plan review enabling statute, Town Law section 274-a, authorizes town boards to require certain elements in site plans, including "screening signs, landscaping, architectural features . . . as well as any additional elements . . ."[18] The State Environmental Quality Review Act (SEQRA) sanctions aesthetics as a proper area of concern in its review process by stating that the "maintenance of a quality environment . . . that at all times is healthful and pleasing to the senses" is a matter of State-wide concern.[19] Generally, as an aspect of the public welfare under the police power,[20] aesthetics are proper considerations for subdivision approval, use and area variances, and special use permits.

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IV Methods of Local Aesthetic Control

A. Design Review Ordinances and Architectural Review Boards

One method of controlling community appearance is the adoption of a local design or architectural review ordinance which may be established pursuant to General Municipal Law section 96-a. Also, Town Law section 262 contains a general grant of power to "regulate and restrict the erection, construction, reconstruction, alteration or use of buildings, structures, or land." [21] In conjunction with the purpose of creating architectural compatibility with the community, design review ordinances also seek to stabilize property values.[22] They are the broadest method for controlling the appearance of buildings and other structures in the municipality regardless of age or community significance.[23]

It is important to note that architectural control may also be enacted under the zoning enabling statutes for cities, towns and villages.[24] Although its source of authority is different, architectural control under a zoning ordinance is similar in effect to that authorized under section 96-a of the General Municipal Law. Under a design review ordinance, an architectural review board (or design review board) may be created with the authority to approve, conditionally approve or disapprove, upon aesthetic considerations, proposed new construction and building improvements before the building inspector is authorized to issue a building permit. Such a board not only reviews structures deemed significant, such as historic homes, but reviews all projects for their impact on the community as a whole.[25] In this respect, boards often focus their attention on the potential economic effect a proposed project's appearance will have on properties surrounding the site.[26] Thus, a project that is likely to lower surrounding property values because its appearance is out of character with that of surrounding structures may be required to alter its design or may be denied a building permit altogether.

Generally, two standards of review are utilized by architectural review boards when examining a proposed project. First, projects may be reviewed for excessive dissimilarity. This standard attempts to avoid a lack of visual harmony and foster the "compatibility of new additions to a area with an established pattern of design." [27] For example, an art deco building could be excessively dissimilar in a neighborhood where all other buildings were of neo-classical design. Second, projects may be reviewed for excessive similarity. In areas of new development, such as the construction of townhouses, architectural review boards will seek to prevent repetitive design so as to eliminate a monotonous visual impact. Other standards of review may also be employed where they are stated in the design review ordinance. For example, the Village of Scarsdale Architectural Review Board not only utilizes the excessive similarity/dissimilarity standards, but also reviews projects for visual offensiveness.[28] It should be noted that some municipalities have architectural review boards that act in an advisory capacity only. Boards with advisory powers review proposed projects and then make recommendations to local municipal agencies such as the planning board or town board. They may not deny a building permit as boards with approval authority may do. This advisory process is discussed below in the context of the Town of Yorktown's Advisory Board on Architectural and Community Appearance.

The constitutionality of design review ordinances has not been squarely before the U.S. Supreme Court or the New York Court of Appeals. However, the U.S. Supreme Court denied certiorari to a Wisconsin state court decision which upheld a local design review ordinance that prohibited the issuance of a building permit if the building was so at variance with existing structures in the neighborhood as to cause substantial depreciation in property values.[29] In *Old Farm Road v. New Castle*, the Court of Appeals reviewed a facial challenge to the town's design review law.[30] There, the plaintiff claimed that the ordinance provided no standards to guide the architectural review board's determination, exceeded the bounds of the police power, was unconstitutionally vague, and that it was confiscatory. The Court of Appeals affirmed the lower court's decision that the action was premature and confined the plaintiff to its administrative remedy, noting that a decision rendered prior to a denial of a building permit would be reached in a vacuum.[31]

In *Matter of Torsoe Brothers Construction Corp. v. Architecture and Community Appearance Board of Review for the Town of Orangetown*, the Appellate Division of the Supreme Court, Second Department, was confronted with a timely challenge to a local design review ordinance.^[32] Petitioner challenged the ordinance creating the board as an unconstitutional delegation of authority due to a lack of meaningful standards to guide the board in the exercise of its discretion. The challenged ordinance^[33] used a similarity/dissimilarity standard.^[34] The court noted the strong presumption of constitutionality to which local laws pertaining to zoning matters are entitled and stated that the standards provided by the ordinance, "though stated in general terms, 'are capable of reasonable application and are sufficient to limit and define the board's discretionary powers.'"^[35]

The Town of Yorktown enacted its Architecture and Community Appearance provision in 1964, as part of its zoning code.^[36] Yorktown established an architectural review board, called the Advisory Board on Architecture and Community Appearance (ABACA) to reduce the impact of inappropriateness and poor quality of design in the exterior of buildings and land developments.^[37] ABACA has review authority over every application for a building permit for the construction, reconstruction or alteration of any structure in excess of 1,000 cubic feet, as well as for the development or subdivision of land.^[38] The parts of the provision which set the standards to be applied by the ABACA are exactly the same as those of Orangetown which were upheld in *Torsoe Brothers*.^[39] In reaching its determination ABACA must examine whether the structure or land development is so detrimental to the desirability, property values or development of the surrounding area that it may cause a variety of harmful effects,^[40] such as a property value reduction or deterioration of conditions affecting the health and safety of the public.^[41] These adverse effects may be caused by either repeated and adjacent use of design,^[42] or the inappropriateness of a structure or land development in relation to other similarly situated existing or proposed structures or land developments.^[43]

The determinations made by ABACA are advisory only.^[44] After review of a proposed project, the Board's recommendations are provided to the town board or agency which initially referred the project.^[45] Ultimate approval authority rests with the referring board or agency. The City of Rye Architectural Review Ordinance^[46] serves as another example of design review. Enacted in 1987, it is more refined than the ordinances of Orangetown and Yorktown which were enacted twenty years earlier. This separate ordinance has as its stated purpose the reduction of the adverse impact of excessive uniformity and dissimilarity of building exteriors, and the impairments caused by such problems, namely impairments to the occupancy or use of surrounding properties, and reductions in their property value.^[47] To achieve the ordinance's objectives, the city created a five member Architectural Review Board with the authority to approve, conditionally approve or disapprove any building permit for aesthetic reasons.^[48]

Every application for a building permit, whether for new construction or reconstruction of an existing structure which affects a structure's exterior must come before the Board.^[49] This authority also includes the power to review building permit applications for swimming pools, Jacuzzis, hot tubs, tennis courts and other recreational facilities,^[50] as well as, signs, awnings, canopies,^[51] and even satellite dish antennas.^[52] Criteria considered when deciding whether to grant approval are many and include that the proposed plans not be visually offensive or inappropriate due to poor quality of design; not be similarly monotonous in relation to the surrounding area; and not impair the use, desirability or value of surrounding properties.^[53] With these and other criteria in mind, the board may disapprove a proposed structure on the grounds of excessive similarity or dissimilarity to existing structures in the area.^[54]

Those aggrieved by the Board's decision to disapprove a proposed project may seek reconsideration of the Board's determination.^[55] Upon disapproval, the applicant may request that the Board make formal findings of fact within 30 days after the request is filed.^[56] The applicant then has the opportunity to answer the findings by the submission of formal proof.^[57] After receiving the applicant's answers, the board must reconsider the application.^[58] If disapproved a second time, the applicant may appeal to the Zoning Board of Appeals where the standard of review is whether the Architectural Review Board's decision was arbitrary, capricious, or unsupported by substantial evidence on the record.^[59]

There are not a great number of cases which interpret ordinances such as these, but an architectural review board determination, which denied a building permit application, was challenged in *R. Salerno Construction, Inc. v. The Zoning Board of Appeals and Board of Architectural Review of the Village of Dobbs Ferry*.^[60] The Dobbs Ferry ordinance^[61] is substantially similar to the Orangetown ordinance discussed above.^[62] There is a notable difference in that the Dobbs Ferry ordinance requires a showing of "clear and convincing evidence" that the excessive inappropriateness of the proposed structure is likely to result in one of the deleterious effects named in the ordinance,^[63] whereas the Orangetown ordinance requires a showing of evidence "beyond a reasonable doubt."^[64]

The court applied the following three-part test which is applicable to ordinances of this type, with an excessive similarity/dissimilarity standard:

[1] Existing buildings must be examined and their character determined. . . . [2] Next the proposed structure must be evaluated in relation to the architectural character of the neighborhood. [3] Finally, the effect of the new construction on the old in terms of architectural similarity or dissimilarity must be calculated.[65]

The court found that the Board's findings were insufficient to satisfy the first and third requirements and that the clear and convincing evidence standard was not met. The Board's findings in support of its denial of a building permit consisted of a statement that the existing houses in the neighborhood had "agreeable design features" and a list of design features of the proposed building that the board found fault with.[66] These findings were held to be insufficient to support the board's determination as they did not address the likelihood of harmful effects resulting from the proposed building. The court noted that a "proposed building could be so ugly and inappropriate that the dissimilarity itself would provide clear and convincing proof of the harmful effects sought to be avoided." [67] As the existing homes in the neighborhood were "modest single-family houses of an eclectic style," the dissimilarity of the proposed building did not rise to such a degree.[68] The board's determination was annulled and the Building Inspector was directed to issue the requested building permit.[69]

It is not clear whether the board's findings would be sufficient to support a denial of a building permit under the Dobb's Ferry ordinance as it now appears, requiring only a showing that harmful effects are likely by a preponderance of evidence.[70] What is clear is that architectural review boards should adhere to the three-part test set out in *R. Salerno Construction*, including findings of the likelihood that harmful effects will result from the proposed structure. This evidence may consist of reports from real estate professionals, design professionals, tax assessors, etc., depending on the types of harmful effects sought to be avoided as listed in the ordinance. For ordinances that require a higher standard of proof such as Orangetown which requires the likelihood of harmful effects to be beyond a reasonable doubt,[71] more evidence may be necessary to support a determination.

A similar challenge was brought in *Adams v. The Architectural Review Board of the Town of Carmel*. [72] The Carmel design review ordinance[73] is substantially similar to those discussed above, with the requirement that a denial of a building permit must be supported by a finding that the inappropriateness or dissimilarity "is of such a nature as to be reasonably expected to provoke" the harmful effects listed.[74]

The proposed project was a renovation of an existing building that was within 500 feet of the Reed Library, which is a registered landmark.[75] The findings of the Architectural Review Board (ARB) indicate that the board was primarily concerned with the effect that the project would have in relation to the Reed Library.[76] The court stated that design control ordinances designed to control a discrete area and related to a particular purpose, such as controlling the area around an historic building, are "precisely the kind of design control which the legislature envisioned when they enacted GML Section 96-a." [77] However, the ordinance which the ARB was acting under imposed design control over the entire town.[78] The court stated that by considering the proposed project in relation to the Reed Library only, the ARB imposed an impermissibly narrow standard which was not supported by the ordinance.[79] In addition, the court held that the findings of the ARB did not present evidence to support its determination that the proposed project was likely to cause economic or cultural harm.[80] The court then examined the neighborhood within 500' of the existing building, as required by the ordinance and determined that there was no dominant architectural theme that the proposed project would be excessively dissimilar to.[81] The determination of the ARB was annulled and the issuance of the building permit was ordered.[82]

The *Adams* case points up the importance of clearly defining goals before a municipality adopts a design control ordinance. If the Town of Carmel wished to control the design of buildings in the immediate area of the Reed Library, it could have adopted an ordinance better suited to do so. One method would have been to define an overlay zone[83] or historic district [84] and set out definite standards that must be adhered to for proposed projects to obtain building permits. Definite standards, relating to a particular building or style of architecture, would be easier to apply and interpret than the general standards required in an ordinance which applies to an entire town. They would also be more likely to achieve the desired effect.

Design review can be an important tool for controlling community appearance. However, its effectiveness will depend on whether the ordinance adopted is well suited to the community to be controlled and how well it is exercised.[85]

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B. Sign and Billboard Ordinances

In addition to regulating buildings, many municipalities have adopted ordinances to control the

visual impact of signs and billboards on private property. Authority for such regulation may be found in the Municipal Home Rule Law section 10(1)(ii)(a)(11), which, as noted above, allows municipalities to adopt local laws for the "protection and enhancement of its physical and visual environment" (emphasis added).[86] Signs may also be controlled under the zoning code. Generally, signs are regulated for protection of public safety, for compatibility with historic districts and landmarks, as well as for aesthetic purposes.[87]

Although the content of signs is protected by the First Amendment, sign ordinances may regulate the "time, place and manner of speech." [88] Thus, municipalities have a variety of ways in which they can control signs. The Town of Greenburgh has established a Sign and Illumination Law which regulates signs by type of construction, by use, and by placement in zoning districts.[89]

First, Greenburgh's Sign and Illumination Law controls the illumination of signs so as to reduce potential nuisances while providing for private property and public security. It stipulates that the area of brilliance, character, color, degree, intensity, location and type of illumination must be such that it is the minimum required to provide for the security of property and the safety and welfare of the public.[90] It also requires that any light cast from sources of illumination be kept to the property where the illumination source is located,[91] that the light be steady, not flashing or changing in brilliance, color or intensity,[92] and that illumination duration be only as long as that required for providing security of property and the safety and welfare of the public.[93]

Second, the ordinance specifies the types of signs that may be erected within the town by construction type and by use.[94] The ordinance allows seven types of signs by construction type (canopy, projecting, wall, yard, window, marquee, and motor vehicle sign) and regulates their placement.[95] For example, wall signs, defined as signs painted on, recessed into or affixed to walls of a structure: (a) must not project above the parapet, eaves or roof lines, whichever is the lowest part of the structure on which it is erected; (b) cannot project more than 12 inches from the structure upon which it is placed; and (c) a wall sign's bottom edge must not hang less than 10 feet above grade at such sign.[96] Signs allowed by use include business, construction, directional, name, professional, public convenience, real estate, traffic and attraction panel (changeable movie theater) signs.[97]

Third, the Sign and Illumination Law sets various requirements and restrictions for all signs in all districts.[98] For example, signs erected must "relate solely to the business or profession conducted on the premises" and advertise only the owner or lessee's name, the establishment's name, the types of goods manufactured and sold, and services rendered.[99] Another example of a sign restriction is that only directional or traffic signs are permitted on public street or right-of-way.[100]

Fourth, the ordinance regulates the placement of signs by zoning district. The town itself is divided into 15 different types of use districts, from one-family residence districts to urban renewal districts.[101] Within each of these districts only certain types of signs are allowed. For example, in a one-family residence district, only a single, non-illuminated wall or yard construction or real estate sign is permitted which must not be larger than 3 by 4 feet in size and not placed any closer than 15 feet to a lot line.[102] In contrast, within a designed shopping district, a variety of signs may be erected. These include: illuminated canopy signs not to exceed 2 feet in height or extend more than half the length of the structure to which they are attached; illuminated yard business signs no larger than 20 feet square if the lot is less than 100,000 square feet; marquee signs for theaters, movie houses, or place of public assembly for viewing performing arts; and several other sign types.[103]

In addition to setting regulations for the type, size and placement of signs, the Sign and Illumination Law also regulates several other aspects of signs. It contains an amortization provision which stipulates that every sign which, after the adoption of the law, becomes nonconforming, must be discontinued, removed, or altered to become conforming, within two years from the law's effective date.[104] The law also discusses the issuance of variances, [105] controls the use of grand opening and sidewalk sale signs,[106] and establishes an appeal procedure for any person aggrieved under provisions of the law.[107]

As noted above, another method of controlling signs is to adopt regulations under a municipality's zoning code. The Town of Yorktown, in several of its established districts, has adopted zoning provisions that regulate the size and placement of signs. For example, in a Planned Light Industry District, there are to be "no advertising signs other than one facing each public street, announcing the name and/or insignia of the company or companies on that site." [108] This provision also stipulates that signs are not to exceed 50 square feet in area and cannot be extended above the roof or coping of any building.[109] Yorktown's zoning code also has established general requirements for a variety of signs by use.[110] Real Estate signs, for example, may not exceed six square feet in area nor be affixed to a building.[111] As for advertising billboard signs, they are only permitted in General Commercial

Business Districts and Planned Industry Districts.[112]

The power to enact aesthetic regulations, such as signs and billboard ordinances, is generally derived from the police power of the state. New York has authorized municipalities to exercise this police power through the enabling statutes in section III. As with every exercise of the police power, aesthetic regulation must satisfy the constitutional requirements of substantive due process. That is, the regulation must be reasonable in that the public benefits gained must outweigh the loss suffered by those property owners adversely affected.[113]

There are numerous cases in New York where sign or billboard controls have been challenged on substantive due process grounds.[114] As discussed in section II(B), aesthetic considerations are not regarded as being of great importance in relation to the other police powers. When the New York Thruway State Authority required all existing billboards to be removed from along the Thruway for safety reasons, the regulation was found to be reasonable.[115] However, when the regulation seeks to achieve aesthetic goals and billboards are required to be removed, "the immediate benefit gained does not outweigh the loss suffered by those individuals adversely affected" by immediate implementation.[116]

The use of a reasonable amortization period may overcome this limitation. Factors to be considered in determining the proper length of time of the amortization period include the initial investment, depreciation value, and harm to the public caused by the nonconforming structure or use.[117] However, mathematical precision on the amount of time required to recoup the initial investment is not necessary. The ultimate question is whether the amortization period is reasonable and this is a question of fact which must be made on a case by case basis.[118]

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C. Tree Preservation Ordinances

Another means of regulating community appearance is the adoption of tree preservation ordinances. Tree preservation ordinances allow municipalities to control and manage trees found on private property in the hope of preserving their environmental and aesthetic importance as well as maintaining stable private property values. The State Legislature, under General Municipal Law section 96-b, has specifically empowered municipalities to enact local laws and regulations to preserve trees within municipal boundaries.[119] Pursuant to this section, county, city, town and village governments are authorized to require that certain conditions be met prior to the removal or destruction of trees and may also mandate that any trees removed be replaced by the planting of the same or alternate tree species.[120] This authority is in addition to any grant of power to enact zoning regulations (including subdivision requirements), and local laws which mandate tree preservation.[121] Tree preservation ordinances have been upheld as a valid exercise of the general police power. In *Seaboard Contracting & Material, Inc. v. Town of Smithtown*, the Appellate Division stated that the Smithtown municipal tree preservation law was enacted as a "proper exercise of the town's legislative function for legitimate objectives in furtherance of the town's health and general welfare." [122]

The use of tree preservation ordinances has increased dramatically over the last 15 years. [123] In the mid-1980's, surveys revealed that few communities nationwide had enacted such local laws.[124] However, by the late 1980's, more and more communities had adopted tree preservation ordinances that regulated trees on private property. By 1992, 19 of the 43 municipalities in Westchester County had adopted substantial regulations concerning tree protection on private property.[125] The Town of Greenburgh is one such community. The Town of Greenburgh enacted its local tree law in 1974 and amended the same in 1991. With its passage, Greenburgh sought to reduce tree destruction and indiscriminate felling of trees which gives rise to barren and unsightly conditions, impairs the stability of real property values, and adversely affects the character of the community.[126] The local law establishes several procedures for tree preservation.

First, it generally prohibits any person from purposely, carelessly or negligently cutting down trees that measure at least 6 inches in diameter at a height of 4 feet above the ground, or committing any act that will eventually lead to the destruction of such trees.[127]

Second, the law establishes a tree removal permitting system for trees of the described size [128] Any property owner applying for subdivision, site plan, special permit, variances or other development approval requiring tree removal, must apply for a tree removal permit.[129] Applications for a permit must be accompanied by plans showing existing and proposed contours at 2-foot intervals, the placement of any tree to be removed, specifying the type and size, and the application must set forth the reasons for removal.[130] The plans must also provide for new trees to be planted and specify their location and type.[131] Permits for tree

removal are granted by the Forestry Officer under only three conditions: (a) the presence of tree would cause hardship or endanger the public, the owner or the property itself; (b) the tree is located within 10 feet of the perimeter of a building or structure and Forestry Officer determines that the tree species and conditions permit such removal; or (c) the trees substantially interfere with a property's permitted use and the trees will be removed in a selective manner.[132]

Third, if a tree removal permit is granted, there are further requirements that the applicant must fulfill. Persons removing trees must fill and grade all holes, and must also replace any other tree damaged during the removal process.[133] Similarly, all stumps must be removed as well as any debris in the disturbed area.[134] Moreover, any work to be done under the permit must be substantially completed within 1 year from the date of the permit's issuance.[135] Lastly, any newly planted tree which fails to survive after planting, and upon written notice by the Forestry Officer, must be replaced within 60 days at the permit holder's cost.[136] In addition to the Forestry Officer's authority to grant removal permits, he or she also has the authority to delay the issuance of final certificates of occupancy to be issued by the Building Inspector. If the Forestry Officer determines that tree planting, tree dressing or associated restoration work is unsatisfactory, the Building Inspector cannot issue a certificate of occupancy.[137] Between October 31 and April 1, however, a permit holder may obtain a temporary certificate of occupancy with all planting and restoration work to be completed to the satisfaction of the Forestry Officer on or before the first day of the following May.[138] Not only does Greenburgh's local tree law prohibit tree removal on private property, it also regulates tree removal on public property. Town employees, or any firm or individual retained by the town, who propose to cut down trees on public property must submit a statement to the Town Board and await its approval.[139] For trees to be removed along a Town right-of-way, approval must be sought from the Highway Superintendent.[140]

Lastly, the law provides both criminal and civil penalties for failure to abide by the law's provisions. Any person found violating the law by the Forestry Officer shall be fined not more than \$500 and/or imprisoned not more than 15 days, with each day of violation constituting a separate offense.[141] Civilly, a person found in violation of the law may be fined \$200 per tree per day.[142] Violators are also required to replace, at their own expense, each tree removed, killed or destroyed in violation of the law.[143]

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D. Site Plan and Subdivision Approval, Special Use Permits, Variances and SEQRA

As discussed in section III, the authority to control aesthetics through site plan approval and SEQRA is derived from a specific statutory grant of authority. The authority to control aesthetic impacts under subdivision approval, use and area variances, and special use permits emanates generally from the police power. Aesthetic standards can be included in subdivision regulations and special permit approval standards. In issuing ordinances, the aesthetic impact of the development on surrounding properties may be considered. Whether aesthetic considerations are found in specific statutory authorization or implied from general language does not have a great deal of practical effect and similar problems are confronted the exercise of each type of land-use control.

Judging from the number of cases in this area, there is some confusion regarding the role of aesthetic considerations. Simply stated, aesthetic considerations are subject to the same requirements as other police power considerations. That is, denial of an application must be based on substantial evidence[144] and conditions imposed on approval must be reasonable designed to mitigate demonstrable effects.[145]

In *Matter of WEOK Broadcasting Corp. v. Planning Board of the Town of Lloyd*, the Court of Appeals annulled the planning board's denial of site plan approval, pursuant to SEQRA, which was based on aesthetic considerations.[146] This determination was not annulled because it was based on aesthetic considerations,[147] it was annulled because it was not supported by substantial evidence.[148] Substantial evidence has been defined in non-aesthetics cases as "such relevant proof as a reasonable mind may accept as adequate to support a conclusion or ultimate fact"[149] or "the kind of evidence on which responsible persons are accustomed to rely in serious affairs." [150]

Here, the applicant submitted to the board a detailed Visual Impact Analysis, prepared by landscape architects, which concluded that there would be no negative visual impact from the project.[151] When the Board denied approval on the grounds that there might be negative visual impact, the only support for this finding were comments and statements made at the public hearing which were not supported by any factual data.[152] Generalized community concerns, unsupported by factual data, do not constitute substantial evidence sufficient to support a denial of a site plan application.[153] The court stated that "[a]lthough a particular

kind or quantum of 'expert' evidence is not necessary in every case to support an agency's SEQRA determination, here, the record contains no factual evidence, expert or otherwise, to counter the extensive factual evidence submitted by petitioner."^[154]

In *Macchio v. Planning Board of the Town of East Hampton*, the planning board imposed conditions on subdivision approval pursuant to SEQRA.^[155] The court upheld the condition that the houses to be built "shall be sheathed only with natural wood shingle siding, and may be painted or stained only with muted natural colors, such as gray, brown, tan or black."^[156] The court noted that these conditions were imposed to further aesthetic considerations and found them to be reasonable.^[157] Although the Planning Board did not rely on expert evidence to support its determination, except for comments submitted by the Suffolk County Planning Commission, the court found the board's findings to be supported by substantial evidence. The court noted that the Environmental Assessment Forms were very thoroughly prepared and that the members of the planning board were familiar with the area. Although the applicant submitted expert evidence on the economic effect that the conditions would have on the property, no evidence was submitted to controvert the board's findings on aesthetics.^[158]

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V. Conclusion

As is evident from the above discussion, municipalities have the ability to control community beauty in a myriad of ways, from the creation of architectural review boards to imposing conditions on site plan approval. The State Legislature has provided ample authority for such regulation and courts have continuously upheld private property regulation for aesthetic considerations. While there is some confusion which stems from the relative importance of aesthetics in relation to other police powers, the standards imposed on municipal regulation aesthetics are the same as those imposed on the exercise of the other police powers. However, before a municipality enacts an ordinance or amends its zoning code to enhance the community's visual environment, it should examine their particular needs and location to determine which methods^[159] are best suited to that community.

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^[1]People v. Stover, 12 N.Y.2d 462, 191 N.E.2d 272, 240 N.Y.S.2d 734 (1963).

^[2]72 N.J.2d 285 (1905).

^[3]348 U.S. 26, 75 S.Ct. 98 (1954).

^[4]*Id.* at 33, 75 S.Ct. at 102.

^[5]Kenneth Regan, *You Can't Build That Here: The Constitutionality of Aesthetic Zoning and Architectural Review*, 58 Fordham L. Rev. 1013 (1990). Currently, 12 states do not allow zoning based upon aesthetics alone: Arkansas, Connecticut, Illinois, Maryland, Michigan, Minnesota, Mississippi, Nebraska, Oklahoma, Pennsylvania, Texas, and Virginia. *Id.* at 1014 n.12. Additionally, another 14 states have stated in dicta that zoning based upon aesthetic considerations alone may be improper: Colorado, Idaho, Indiana, Iowa, Louisiana, Maine, Nevada, New Hampshire, North Dakota, Ohio, Rhode Island, Vermont, Washington, and West Virginia. *Id.*

^[6]12 N.Y.2d 462, 191 N.E.2d 272, 240 N.Y.S.2d 734 (1963). New York is not alone in its recognition of aesthetically based ordinances. Other states recognizing aesthetics as a proper basis for regulation include: California, Delaware, Florida, Kentucky, Massachusetts, Montana, New Jersey, Oregon, Utah, and North Carolina. Courts in another 8 states have articulated in dicta that regulation based purely upon aesthetics is proper: Arizona, Georgia, Hawaii, Kansas, Missouri, New Mexico, Tennessee, and Wisconsin. Regan, *supra* note 5, at 1015 n.13.

^[7]NICHOLAS A. ROBINSON, NEW YORK ENVIRONMENTAL LAW HANDBOOK 50 (1988)

^[8]Stover, 12 N.Y.2d at 468, 191 N.E.2d at 276, 240 N.Y.S.2d at 739.

^[9]19 N.Y.2d 263, 225 N.E.2d 749, 279 N.Y.S.2d 22 (1967).

^[10]*Id.* at 272, 225 N.E.2d at 755, 279 N.Y.S.2d at 29-30.

^[11]31 N.Y.2d 262, 290 N.E.2d 139, 338 N.Y.S.2d 97 (1972).

^[12]*Id.* at 266, 290 N.E.2d at 142, 338 N.Y.S.2d at 101.

^[13]43 N.Y.2d 468, 373 N.E.2d 255, 402 N.Y.S.2d 359 (1977).

^[14]*Id.* at 478, 373 N.E.2d at 261, 402 N.Y.S.2d 366.

^[15]84 A.D.2d 455, 458, 446 N.Y.S.2d 823, 826 (4th Dept., 1982).

^[16]N.Y. Mun. Home Rule Law sec. 10(1)(ii)(a)(11) (Consol. 1989).

^[17]N.Y. Gen. Mun. Law sec. 96-a (McKinney 1986).

^[18]N.Y. Town Law sec. 274-a(2)(a) (McKinney 1986).

[19]N.Y. Env'tl. Conserv. Law sec. 8-0103(1) (McKinney 1986).

[20]See *supra* notes 3-8 and accompanying text.

[21]N.Y. Town Law sec. 262; see also N.Y. Village Law sec. 7-702.

[22]Robinson, *supra* note 7, at 51.

[23]*Id.*

[24]Aesthetic reasons alone are recognized as proper motives for the enactment of zoning ordinances. *People v. Berlin*, 62 Misc.2d 272, 307 N.Y.S.2d 96 (1970).

[25]WESTCHESTER MUNICIPAL PLANNING FEDERATION, MUNICIPAL PLANNING PRIMER: THE ARCHITECTURAL BOARD OF REVIEW 10 (January 1982).

[26]*Id.*

[27]*Id.*

[28]Village of Scarsdale Code, Chapter 12, Article 18 (1965).

[29]State *ex rel. Saveland Park Holding Co. v. Weiland*, 269 Wis. 262, 69 N.W.2d 217 (1955 *cert. den.* 350 U.S. 841, 100 L.Ed. 750, 76 S.Ct. 81).

[30]26 N.Y.2d 462, 259 N.E.2d 920, 311 N.Y.S.2d 500 (1970).

[31]*Id.* at 465, 259 N.E.2d at 921, 311 N.Y.S.2d at 502.

[32]120 A.D.2d 738, 502 N.Y.S.2d 787 (2nd Dept., 1986).

[33]Town of Orangetown Local Laws, No.2 (1965). The standards of the ordinance which were examined by the court appear below:

Section I The Town Board hereby finds that inappropriateness or poor quality of design in the exterior appearance of buildings or land developments adversely affects the desirability of the immediate area and neighboring areas and by so doing impairs the stability and value of both improved and unimproved real property in such areas, retards the most appropriate development of such areas, produces degeneration of property in such areas with attendant deterioration of conditions affecting health, safety, morals and general welfare of the inhabitants thereof, and creates an improper relationship between the taxable value [sic] of real property in such areas and the cost of municipal services provided therefor. It is the purpose of this law to prevent these and other harmful effects of such exterior appearance of buildings and land developments and thus to promote and protect the health, safety, morals and general welfare of the community.

Section V The Board shall base its recommendations on the following criteria: No building or structure or land development shall be so detrimental to the desirability, property values, or development of the surrounding area as to provoke one or more of the harmful effects set forth in Section I, by reason of: (a) The repeated and adjacent use of identical or near-identical facades or structures arranged without respect to natural features of terrain or other existing structures. (b) Inappropriateness of a structure or land development in relation to any other structure or land development existing or for which a permit has been issued or to any other structure or land development included in the same application in respect to one or more of the following features: (1) cubical contents (2) gross floor area (3) height of building height of roof (4) other significant design features such as material or quality of architectural design, roof structures, chimneys, exposed mechanical equipment and service, service and storage enclosures, signs, landscaping, retaining walls, parking areas, service and loading docks, dividing walls, fences and lighting posts and standards provided that a finding of inappropriateness exists but further, that it is of such a nature as to be expected to provoke beyond reasonable doubt one or more of the harmful [sic] effects set forth in Section I.

[34]See *supra* note 26 and accompanying text.

[35]120 A.D.2d at 739, 502 N.Y.S.2d at 788 (quoting *Matter of Aloe v. Dasler*, 278 App.Div. 975, 106 N.Y.S.2d 24 (2nd Dept., 1951), *aff'd* 303 N.Y. 878, 105 N.E.2d 104). The court also held that Municipal Home Rule sec.10 enables a town board to enact local laws related to zoning which will supersede the N.Y. Town Law. *Id.* Thus, site plan approval powers which Town Law sec. 274-a authorized the town board to vest in the planning board may be vested by local law in an architectural review board. *Id.*

[36]Town of Yorktown Code sec. 90-11 (1964).

[37]*Id.* at sec. 90-11(A).

[38]*Id.* at sec. 90-11(C). Review authority over the development or subdivision of land does not include the authority to review such projects as it affects single- or two-family residences and residential accessory structures on individual properties.

[39]See *supra* notes 31-34 and accompanying text. Compare Town of Orangetown *supra* note 32 with Town of Yorktown Code secs. 90-11(A), (C).

[40]Town of Yorktown Code sec. 90-11(C).

[41]*Id.* at sec. 90-11(A).

[42]*Id.* at sec. 90-11(C)(1).

[43]*Id.* at sec. 90-11(C)(2).

[44]*Id.* at sec. 90-11(B).

[45]*Id.*

[46]City of Rye Code sec. 53 (1987).

[47]*Id.* at sec. 53-1(A) (as amended 1995).

[48]*Id.* at sec. 53-5(A).

[49]*Id.* at sec. 53-4(A).

[50]*Id.* at sec. 53-5(D). In conjunction with its approval authority over recreational facilities (i.e. swimming pools, tennis courts, etc.), the Board may also stipulate landscape screening strip

Generally, such strips will consist of a 10-foot wide landscape strip planted and maintained with at least a double row of evergreens, which must have a height of at least six feet when installed.

[51] City of Rye Code sec. 53-6.

[52] *Id.* at sec. 53-7.

[53] *Id.* at sec. 53-5(B)(1).

[54] *Id.* at sec. 53-5(C)(1) and (2).

[55] *Id.* at sec. 53-10.

[56] City of Rye Code sec. 53-10.

[57] *Id.*

[58] *Id.*

[59] *Id.*

[60] N.Y. L.J. Sept. 8, 1988, at 21 (Sup. Ct., Westchester County).

[61] Dobbs Ferry Code sec. 8 (1966).

[62] See *supra* note 32.

[63] Dobbs Ferry Code sec. 8-11 and 8-12. These provisions have since been amended by Local Law No. 1-1990 to require only a preponderance of evidence.

[64] Town of Orangetown, *supra* note 32, at sec. V.

[65] *Supra* note 59 (quoting 1 ROBERT M. ANDERSON, NEW YORK ZONING LAW AND PRACTICE sec. 9.57 (3rd Ed., 1986)).

[66] *Id.* The board's findings were as follows:

The design is inappropriate in the following respects; . . . Excessively dissimilar from other structures in vicinity - Boxy Form - Building proposed does not present house like appearance from street (garage doors and no apparent entry) - Bulk in relation to site and neighborhood Unrelieved facade - Hidden entry - Two story rear deck has apartment-house quality - Excessive exposed foundation on front and side elevations - Institutional east elevation - Neighborhood houses have agreeable designs features lacking in proposed building - Shutters shown only on north elevation (as opposed to either the most visible elevation and main entrance elevation) . . . Boxy design does not respect natural terrain and natural features of site. *Id.*

[67] *Id.*

[68] *Id.*

[69] *Id.*

[70] Dobbs Ferry Code secs. 8-11 and 8-12 (as amended 1990).

[71] Town of Orangetown, *supra* note 32, at sec. V.

[72] N.Y. L.J. Dec. 9, 1988, at 14 (Sup. Ct., Putnam County).

[73] Town of Carmel Code sec. 156-62 et seq. (as amended 1983).

[74] *Id.* at sec. 156-66.

[75] N.Y. L.J. *supra* note 71.

[76] *Id.* The ARB found that the proposed renovations were:

excessively dissimilar in relation to other structures with in [sic] 500' with respect to: Material Building lines; contemporary/shopping center design features of the proposed design; Roof lines; Excessive uniformity of windows; the proposed building is not sensitive to the historic nature of Reed Library . . . The negative impact of the applicant's proposed design would produce a harmful effect which would not conserve the value of the hamlet (and in particular would not conserve the value, both economic and historic, of Reed Library) . . . The introduction of a rehabilitated building with a 'contemporary design' which is so excessively dissimilar from the rural/small town character/design features of the surrounding area, and especially of Reed Library, would not conserve the value of the community. *Id.*

[77] *Id.*

[78] Town of Carmel Code sec. 156-66.

[79] N.Y. L.J. *supra* note 71.

[80] *Id.*

[81] *Id.*

[82] *Id.*

[83] This topic is examined in a separate paper.

[84] This topic is examined in a separate paper.

[85] For a comprehensive discussion of design review ordinances, architectural review board and their role in Westchester County specifically, see, WESTCHESTER MUNICIPAL PLANNING FEDERATION, MUNICIPAL PLANNING PRIMER: DESIGN REVIEW BOARDS AND HISTORIC PRESERVATION COMMISSIONS (1989).

[86] N.Y. Mun. Home Rule Law sec. 10(1)(ii)(a)(11) (Consol. 1989).

[87] ROBINSON, *supra* note 7, at 170. As noted above, the New York Court of Appeals has upheld as constitutional local sign ordinances based upon aesthetic considerations. See *Suffolk Outdoor Advertising Co. v. Hulse*, 43 N.Y.2d 483, 489, 373 N.E.2d 263, 402 N.Y.S.2 368 (1977) ("[T]he regulation of outdoor advertising for aesthetic purposes alone constitutes valid exercise of the police power.").

[88] *Cantwell v. Connecticut*, 310 U.S. 296. The impact of the First Amendment on land use controls is discussed in a separate paper.

[89] Town of Greenburgh Code sec. 43A-1 to -14 (as amended 1995).

[90] *Id.* at sec.43a-2(A).

- [91] *Id.* at sec. 43A-2(B).
 [92] *Id.* at sec. 43A-2(C).
 [93] *Id.* at sec. 43A-2(D).
 [94] Town of Greenburgh Code sec. 43A-3.
 [95] *Id.* at sec. 43A-3(A).
 [96] *Id.* at sec. 43A-3(A)(3).
 [97] *Id.* at sec. 43A-3(B).
 [98] *Id.* at sec. 43A-(C).
 [99] Town of Greenburgh Code sec. 43A-3(C)(2).
 [100] *Id.* at sec. 43A-3(C)(12).
 [101] *Id.* at sec. 43A-3(D).
 [102] *Id.* at sec. 43A-3(D)(1)(a).
 [103] *Id.* at 43A-3(D).
 [104] Town of Greenburgh Code sec. 43A-5.
 [105] *Id.* at sec. 43A-6.
 [106] *Id.* at sec. 43A-7.
 [107] *Id.* at sec. 43A-9.
 [108] Town of Yorktown Code sec. 90-87 (as amended 1995).
 [109] *Id.*
 [110] *Id.* at secs. 90-145 to -150.
 [111] *Id.* at sec. 90-148.
 [112] *Id.* at sec. 90-150.
 [113] See *Lawton v. Steele*, 152 U.S. 133 (1894). This issue is more thoroughly discussed in separate paper.
 [114] See, e.g., *Cromwell v. Ferrier*, 19 N.Y.2d 263, 225 N.E.2d 749, 279 N.Y.S.2d 22 (1967); *People v. Goodman*, 31 N.Y.2d 262, 290 N.E.2d 139, 338 N.Y.S.2d 97 (1972); *Modjeska Sign Studios, Inc. v. Berle*, 43 N.Y.2d 468, 373 N.E.2d 255, 402 N.Y.S.2d 359 (1977); *Suffolk Outdoor Adv. Co. v. Hulse*, 43 N.Y.2d 483, 373 N.E.2d 263, 402 N.Y.S.2d 368 (1977). This analysis is not limited to sign and billboard cases. See *Village of Hempstead v. SRA Realty Corp.*, 160 Misc.2d 819, 611 N.Y.S.2d 441 (Nassau County, Sup. Ct., 1994) (ordinance prohibiting non-transparent security gates for aesthetic reasons, with no amortization period declared unconstitutional as applied to existing gates) *aff'd* 208 A.D.2d 713, 617 N.Y.S.2d 7 (2nd Dept., 1994)
 [115] *New York State Thruway Auth. v. Ashley Motor Ct.*, 10 N.Y.2d 151, 176 N.E.2d 566, 21 N.Y.S.2d 640 (1961).
 [116] *Modjeska Sign Studios, Inc. v. Berle*, 43 N.Y.2d at 478, 373 N.E.2d at 261, 402 N.Y.S.2d at 366.
 [117] *Id.* at 480, 373 N.E.2d at 262, 402 N.Y.S.2d at 367.
 [118] *Id.*
 [119] N.Y. Gen. Mun. Law sec. 96-b(2) (McKinney 1986).
 [120] *Id.*
 [121] *Id.* In addition to a municipality enacting a separate tree preservation ordinance, local governments may also regulate trees through site plan and subdivision approval processes, as well as through landscaping and buffer requirements. See WILLIAM BRADY, MUNICIPAL TREE REGULATIONS AND PROGRAMS, WESTCHESTER COUNTY PLANNING DEPARTMENT PLANNING INFORMATION REPORT at 3 (October 1992).
 [122] 147 A.D.2d 4, 8, 541 N.Y.S.2d 216 (2nd Dept., 1989).
 [123] CHRISTOPHER J. DUERKSEN WITH SUZANNE RICHMAN, TREE CONSERVATION ORDINANCES: LAND-USE REGULATIONS GO GREEN, PLANNING ADVISORY SERVICE REPORT NO.446, AMERICAN PLANNING ASSOCIATION at 3 (1993).
 [124] *Id.*
 [125] Brady, *supra* note 3, at 2.
 [126] Town of Greenburgh Code sec. 260-1.
 [127] *Id.* at sec. 260-2(A).
 [128] *Id.* Lots of 1 acre or less, substantially developed with improvements or a structure upon it, are exempt from the law.
 [129] *Id.* at sec. 260-2(B).
 [130] *Id.* at sec. 260-4(D)(2).
 [131] Town of Greenburgh Code sec. 260-4(D)(2).
 [132] *Id.* at sec. 260-4.
 [133] *Id.* at sec. 260-5(A).
 [134] *Id.* at sec. 260-5(B).
 [135] *Id.* at sec. 260-5(C).
 [136] Town of Greenburgh Code sec. 260-(D).
 [137] *Id.* at sec. 260-6.
 [138] *Id.*
 [139] *Id.* at sec. 260-7(A).
 [140] *Id.*
 [141] Town of Greenburgh Code sec. 260-8(B).
 [142] *Id.* at sec. 260-8(C).
 [143] *Id.* at sec. 260-8(D). For a comprehensive treatment of tree preservation ordinances see

CHRISTOPHER J. DUEKSEN WITH SUZANNE RICHMAN, TREE CONSERVATION ORDINANCES: LAND-USE REGULATIONS GO GREEN, PLANNING ADVISORY SERVICE REPORT NO. 446, AMERICAN PLANNING ASSOCIATION (1993). See also WILLIAM BRADY, MUNICIPAL TREE REGULATIONS AND PROGRAMS, WESTCHESTER DEPARTMENT OF PLANNING, PLANNING INFORMATION REPORT (October 1992). [144] See N.Y. CIV. PRAC. L. & R. 7803(4) (MCKINNEY, 1994).

[145] See *Town of Henrietta v. D.E.C.*, 76 A.D.2d 215, 430 N.Y.S.2d 440 (4th Dept., 1980).

[146] 79 N.Y.2d 373, 592 N.E.2d 778, 538 N.Y.S.2d 170 (1992).

[147] *Id.* at 385, 538 N.Y.S.2d at 176. "We reject petitioner's contention that negative aesthetic impact factors may not constitute a sufficient basis upon which SEQRA determinations may be made. *Id.*

[148] *Id.* at 383, 583 N.Y.S.2d at 175.

[149] 300 Gramatan Ave. Assocs. v. State Div. of Human Rights, 45 N.Y.2d 176, 180, 379 N.E.2d 1183, 408 N.Y.S.2d 54 (1978).

[150] *People ex rel. Vega v. Smith*, 66 N.Y.2d 130, 139, 495 N.Y.S.2d 332 (1985).

[151] 79 N.Y.2d at 377, 583 N.Y.S.2d at 171.

[152] *Id.*

[153] *Id.* See also *Reed v. Planning Board of the Town of Chester*, 120 A.D.2d 510, 501 N.Y.S.2d 710 (2nd dept., 1986) (denial of subdivision approval annulled); *Sackson v. Zimmerman*, 103 A.D.2d 843, 478 N.Y.S.2d 354 (2nd Dept., 1984) (subdivision); *Matter of Exxon Corp. v. Gallelli*, 192 A.D.2d 706, 597 N.Y.S.2d 139 (2nd Dept., 1993) (site plan approval); *Twin County Recycling Corp. v. Yevoli*, ___ A.D.2d ___, 639 N.Y.S.2d 392 (2nd Dept., 1996) (special use permit)

[154] 79 N.Y.2d at 384, 583 N.Y.S.2d at 175-76.

[155] 152 Misc.2d 622, 578 N.Y.S.2d 355 (Suffolk County, Sup.Ct., 1991).

[156] *Id.*

[157] *Id.*

[158] *Id.*

[159] Methods not discussed in this paper include viewshed protection, buffer requirements, landscaping requirements, and regulation of unoccupied trailers and recreational vehicles.

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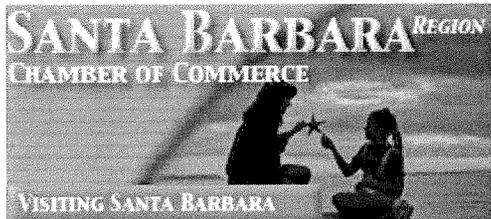
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Santa Barbara's Tourism Industry is Strongly Tied to Aesthetics. The tourism industry in Santa Barbara comprises a large percentage of Santa Barbara's economic base and jobs, according to Kathy Janega-Dykes, President/CEO of the Santa Barbara Conference & Visitors Bureau. The Chamber of Commerce website "Visit Santa Barbara" first describes Santa Barbara as "beautiful" and features a roof-top view of the City's waterfront area. The Chamber's "Santa Barbara Attractions" website begins by stating "Santa Barbara is a captivating blend of colorful history, **distinctive architecture**, and legendary Southern California lifestyle." (Bold added for emphasis in this report.) The site also references Santa Barbara as being "known" for its historic architecture. If Santa Barbara were to be inundated with solar energy systems poorly integrated with their surroundings in sensitive tourist areas such as State Street, the Waterfront or near the Mission, Santa Barbara could become a less desirable vacation destination. The public health and safety could be affected if Santa Barbara were to have a significant change in its economic resources.



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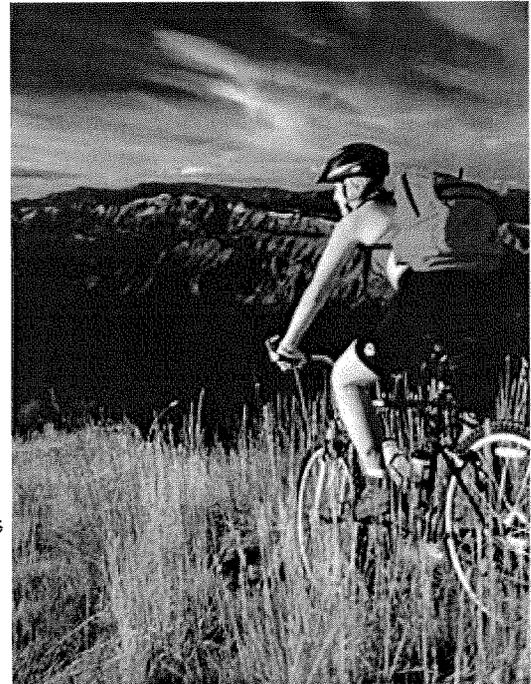
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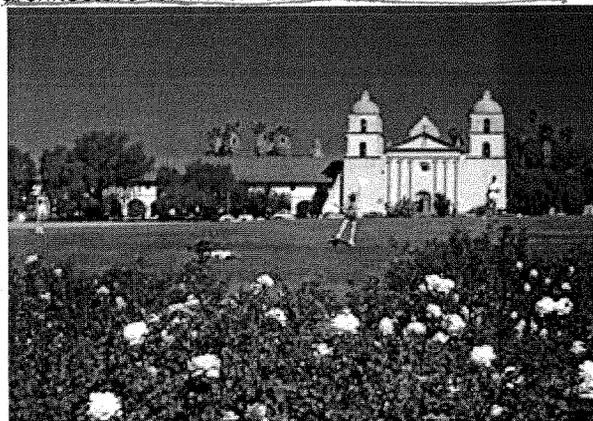
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Santa Barbara is a captivating blend of colorful history, distinctive architecture, and legendary Southern California lifestyle. Known all over the world for its exceptional beauty and magnificent weather, Santa Barbara County boasts crystal-clear air, stunning scenery, glistening, palm-lined beaches and an average of 300 days of sunshine per year.

Basking in a lush, year-round Mediterranean climate with 100 miles of prime Pacific coastline, a thriving arts community, historic architecture and scenic wine country, Santa Barbara instills all the components of a world-class destination - without the masses.



The Mission Santa Barbara, also known as the Queen of Missions, showcases historical architecture for which Santa Barbara is known.



Back along the Pacific Coast lie the drenched cities of Carpinteria, Summerland, Montecito and Goleta. Remaining relatively undiscovered, small town of Carpinteria, 12 miles of Santa Barbara, boasts Carpinteria State Beach Park with 4,000 feet of beautiful ocean, overnight camping, the best surf fishing and tidepooling region. Also in this the picturesque **Barbara Polo Club**.

Sheltered at the base of Santa Ynez mountains in the northern tip of Santa Barbara, Goleta is a sportsman's paradise with a host of family recreational activities, including biking, bird watching on the famous Goleta Slough, fishing from the pier or volleyball at Goleta Beach. Goleta is also home to the **University of California Santa Barbara** (UCSB) and a well-heeled crop of local surfers.

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Creating A Healthy Environment:

The Impact of the Built Environment on Public Health

"In its broadest sense, environmental health comprises those aspects of human health, disease, and injury that are determined or influenced by factors in the environment. This includes not only the study of the direct pathological effects of various chemical, physical, and biological agents, but also the effects on health of the broad physical and social environment, which includes housing, urban development, land-use and transportation, industry, and agriculture."

*—Healthy People 2010,
U.S. Department of Health and Human Services¹*



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Centers for Disease Control and Prevention

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About Sprawl Watch Clearinghouse

The Sprawl Watch Clearinghouse mission is to make the tools, techniques, and strategies developed to manage growth, accessible to citizens, grassroots organizations, environmentalists, public officials, planners, architects, the media and business leaders. At the Clearinghouse we identify, collect, compile, and disseminate information on the best land use practices, for those listed above.

Sprawl Watch Clearinghouse is a nonprofit organization based in Washington, DC
Allison Smiley, Executive Director

This report and many other sources of information on sprawl and smart growth are available on the World Wide Web at www.sprawlwatch.org

Preface

Here at the start of the 21st century our understanding of which factors promote health and which damage health has grown considerably. The diseases of the 21st century will be “chronic” diseases, those that steal vitality and productivity, and consume time and money. These diseases—heart disease, diabetes, obesity, asthma, and depression—are diseases that can be moderated by how we design and build our human environment. It is now accepted that, in addition to direct hazards from infectious diseases and environmental toxins, human behaviors play a critical role in determining human health. As we begin to include consideration of these factors into our health-related decision-making, we must additionally guard against using too narrow a definition of the environment. Every person has a stake in environmental public health, and as environments deteriorate, so does the physical and mental health of the people who live in them. There is a connection, for example, between the fact that the urban sprawl we live with daily makes no room for sidewalks or bike paths and the fact that we are an overweight, heart disease-ridden society.

Obesity can increase the risk of (adult-onset) type 2 diabetes by as much as 34 fold, and diabetes is a major risk factor for amputations, blindness, kidney failure, and heart disease. The most effective weight loss strategies are those that include an increase in overall physical activity. In a recent type 2 diabetes trial, weight loss and physical activity were more effective in controlling the disease than medication. In addition, for treatment of relatively mild cases of anxiety and depression, physical activity is as effective as the most commonly prescribed medications. It is dishonest to tell our citizens to walk, jog, or bicycle when there is no safe or welcoming place to pursue these “life-saving” activities.

Respiratory disease, especially asthma, is increasing yearly in the U.S. population. Bad air makes lung diseases, especially asthma, worse. The more hours in automobiles, driving over impervious highways that generate massive tree-removal, clearly degrade air quality. When the Atlanta Olympic Games in 1996 brought about a reduction in auto use by 22.5%, asthma admissions to ERs and hospitals also decreased by 41.6%. Less driving, better public transport, well designed landscape and residential density will improve air quality more than will additional roadways.

In order to address these critical health problems we must seize opportunities to form coalitions between doctors, nurses, and public health professionals and others such as architects, builders, planners and transportation officials, so that we are all “at the table” when environmental decisions are made. Such decisions include whether to install sidewalks in the next subdivision. It means thinking about what constitutes safe and affordable housing, safe neighborhoods, providing green space for people to enjoy where they live and work, and rethinking how we travel from one place to another.

Land-use decisions are just as much public health decisions as are decisions about food preparation. What, for example, are the implications for children with asthma of building yet another expressway? We must also question whether a fatality involving a pedestrian isn’t actually the result of poor urban planning, thoughtless land use, or inferior urban design rather than “simply” a motor vehicle crash. We must be alert to the health benefits, including less stress, lower blood pressure, and overall improved physical and mental health, that can result when people live and work in accessible, safe, well-designed, thoughtful structures and landscapes. We must measure the impact of environmental decisions on real people, and we must begin, in earnest, to frame those decisions in light of the well being of children, not only in this country but across the globe.

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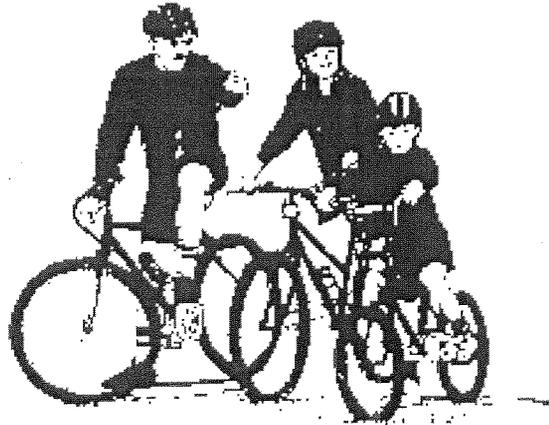
The Built Environment and Physical Activity

People who participate in regular physical activity reap substantial health benefits.

According to the Surgeon General the most significant are as follows:

- ✱ Lower mortality rates for both older and younger adults. Even moderate increases in activity are helpful;
- ✱ Lower risk for heart disease and stroke;
- ✱ Prevention or delay of the onset of high blood pressure and actual lowering of blood pressure among people with hypertension;
- ✱ Decreased risk for colon cancer;
- ✱ Lowered risk for noninsulin-dependent diabetes;
- ✱ Weight loss and redistribution of body fat; increase in muscle mass;
- ✱ Relief of the symptoms of depression and anxiety and improvement of mood; and
- ✱ Apparent improvement in health-related quality of life by enhancing psychological well-being and by improving physical functioning among people with poor health.¹⁹

★ The built environment presents both opportunities for and barriers to participation in physical activity, thereby influencing whether or not we exercise. According to a recent survey about research studies,²⁰ one of the more important determinants of physical activity is a person's immediate environment (one's neighborhood). One study examined environmental variables, such as the presence or absence of sidewalks, heavy traffic, hills, street lights, unattended dogs, enjoyable scenery, frequent observations of others exercising, and high levels of crime. Positive environmental determinants of physical activity included enjoyable scenery (presence associated with more activity), whereas the greatest perceived barrier was the lack of a safe place to exercise.²⁰ Research by CDC and others^{21, 22} has also indicated that two of the main reasons given as reasons for not exercising are lack of structures or facilities (such as sidewalks



and parks) and fears about safety. Overall, CDC reports that higher levels of perceived neighborhood safety are associated with higher levels of physical activity, with the differences being greatest among racial or ethnic minorities and people older than 65 years of age.²¹ Thus, people are more likely to use parks, paths, and bikeways when they are easy to get to and are safe and well maintained.

Conversely, people tend to get less exercise as outlying suburbs are further developed and the distances between malls, schools, and places of employment and residence increases. Many theories have attempted to explain the radical changes in the health status of American society, but one of the strongest theories is the significant decline in activity levels among Americans today compared with levels from 50 or 100 years ago.²³ According to the U.S. Surgeon General's *Report on Physical Activity in America*,¹⁹ changes in our lifestyles and communities have played the greatest role in the decline of activity levels among Americans. Millions of Americans drive to and from work and use a car to run almost every errand. In 1977, children aged 5 to 15 years walked or biked for 15.8 percent of all their trips; by 1995, children made only 9.9 percent of their trips by foot or bicycle — a 37 percent decline.²⁴ Results of a study in South Carolina showed that students are four times more likely to walk to schools built before 1983 than to those built

References

1. Department of Health and Human Services (US). Healthy people 2010. Volume I. Washington: DHHS; November 2000. p.8-3.
2. *Village of Euclid v. Ambler Realty Co.*, 272 U.S. 365 (1926) (USSC+).
3. World Health Organization. (No date). Definition of health [Online]. Available: <http://www.who.int/aboutwho/en/definition.html> [2001, August 6].
4. Institute of Medicine (US). The future of public health. Washington: National Academy of Sciences; 1988. p. 7.
5. Department of Transportation (US), Bureau of Transportation Statistics. (No date) Journey-to-work trends in the United States and its major metropolitan areas, 1960-1990. [Online]. Available: <http://ntl.bts.gov/DOCS/473.html> [2001, August 6].
6. Department of Transportation (US), Bureau of Transportation Statistics. (1999) The national transportation statistics report 1999. [Online]. Available: <http://www.bts.gov/ntda/nts/NTS99/data/Chapter4/4-11.html> [2001, August 6].
7. Pope, C. Solving sprawl. (1999) The Sierra Club rates the states [Online]. Available: <http://www.sierraclub.org/sprawl/report99/index.asp> [2001, August 6].
8. Texas Transportation Institute (1999). Urban roadway congestion annual report 1998. Table 1-54 [Online] Available: <http://199.79.179.77/ntda/nts/NTS99/data/Chapter1/1-54.html> [2001, August 6].
9. Environmental Protection Agency (US). Emission facts. Washington: U.S. EPA, Air and Radiation Office, Office of Mobile Sources; EPA420-F-99-040. [1999, November].
10. National Council for Science and the Environment. (1999) Congressional Research Service Report for Congress. Air quality and motor vehicles: An analysis of current and proposed emission standards [Online]. Available: <http://www.cnie.org/nle/air-36.html> [2001, August 6].
11. Environmental Protection Agency (US). National air quality and trends report; Washington: US EPA, Office of Air and Radiation; EPA 454/R-98-016 [1997, December]
12. World Health Organization, European Region. (1999) Third ministerial conference on environment and health, London [Online]. Available: <http://www.who.dk/london99/transporte.htm> [2001; August 6].
13. The President's Task Force on Environmental Health Risks and Safety Risks to Children. Asthma and the environment: A strategy to protect children (2000) [Online]. Available: <http://www.epa.gov/children/whatwe/fin.pdf> [2001, August 6].
14. Clean Air Network and U.S. Public Interest Research Group Education Fund. (2000) Danger in the air: Smog days in 1999 [Online]. <http://www.pirg.org/reports/enviro/smog/index.html> [2001, August 6].
15. Friedman, MS, et al. Impact of changes in transportation and commuting behaviors during the 1996 summer Olympic games in Atlanta on air quality and childhood asthma. JAMA 2001;285:897-905.
16. ABT Associates. Adverse health effects associated with ozone in the eastern United States. Washington: (1999).
17. Centers for Disease Control and Prevention. Surveillance for asthma—United States, 1960–1995. Mor Mortal Wkly Rep CDC Surveill Summ 1998;47(No. SS-1):1-28.
18. Massey JT, Moore TF, Parsons VL, Tadros W. Design and estimation for the National Health Interview Survey, 1985-1994. Hyattsville: Department of Health and Human Services (US), National Center for Health Statistics; 1989. (PHS)89-1384. (Vital and health statistics; series 2; no. 110).
19. Department of Health and Human Services (US). Physical activity and health: A report of the surgeon general. Washington: (1996).
20. King AC, et al. Personal and environmental factors associated with physical inactivity among different racial-ethnic groups of U.S. middle-aged and older-aged women; Health Psych 2000;19(4):354-64.
21. Centers for Disease Control and Prevention. Neighborhood safety and the prevalence of physical inactivity –selected states, 1996. Mor Mortal Wkly Rep 1999;48(7):143-6.
22. Pate RR, et al. Physical Activity and Public Health: A Recommendation From the Centers for Disease Control and Prevention and the American College of Sports Medicine. JAMA 1995;273(5):402-7.
23. Nestle M, Jacobson MF. Halting the obesity epidemic: A public health policy approach. Public Health Rep 2000;115(1):12-24.

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-- Robert Preidt

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FRIDAY, Nov. 3 (HealthDay News) -- The availability of pleasant, shopping-friendly locales is more likely to influence whether or not people walk regularly than factors such as traffic or crime, a new study finds.

Researchers at the University of Victoria in British Columbia, Canada, analyzed questionnaires filled out by 351 people. They were asked about their attitudes toward walking; how much they walked; whether there were paths, trails, parks or recreational facilities near their homes; and their thoughts about local neighborhoods and walking areas.

The team found that neighborhood aesthetics and the mix of retail stores were more important than local crime levels or traffic in terms of motivating people to walk.

The most surprising finding was the strong link between a person's intention to walk and actually doing it, if they had a good place to walk. In other words, if a person wanted to walk, having a good place to walk made it more likely to happen. However, a good place to walk had no impact if the person had no intention to walk in the first place.

The study is published in the November/December issue of the *American Journal of Health Promotion*.

"These findings are not going to translate into getting people to walk more," John Librett, an adjunct professor at Utah College of Health in Salt Lake City, said in a prepared statement. He was not involved in the study.

However, he said the findings should prompt community planners to consider how the design of neighborhoods and urban areas affects people's walking behavior. Redesigning old neighborhoods and creating new ones that promote walking is good for public health, Librett noted.

More information

The U.S. National Institute of Diabetes and Digestive and Kidney Diseases has more about the benefits of walking.

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Mental health and the built environment: cross-sectional survey of individual and contextual risk factors for depression

SCOTT WEICH, MARTIN BLANCHARD, MARTIN PRINCE,
ELIZABETH BURTON, BOB ERENS and KERRY SPROSTON

Background Little is known about the effects of the physical environment on individual health.

Aims The present study tested the hypothesis that the prevalence of depression is associated with independently rated measures of the built environment, after adjusting for individuals' socio-economic status and the internal characteristics of their dwellings.

Method Cross-sectional survey of 1887 individuals aged 16 years and over in two electoral wards in north London. Depression was ascertained using the Center for Epidemiologic Studies Depression scale (CES-D). The built environment was rated independently, using a validated measure.

Results After adjusting for socio-economic status, floor of residence and structural housing problems, statistically significant associations were found between the prevalence of depression and living in housing areas characterised by properties with predominantly deck access (odds ratio=1.28, 95% CI 1.03-1.58; $P=0.02$) and of recent (post-1969) construction (odds ratio=1.43, 95% CI 1.06-1.91; $P=0.02$).

Conclusions The prevalence of depression was associated with independently rated features of the built environment, independent of individuals' socio-economic status and internal characteristics of dwellings.

Declaration of interest None. The study was funded by the Wellcome Trust.

Most previous research on the geographies of health has been based on aggregated ('compositional') characteristics of people living in particular areas, rather than 'contextual' characteristics of places. The built environment cannot be equated with the socio-economic and demographic characteristics of individual residents, and includes housing form, roads and footpaths, parks and other public amenities. The effects of the built environment on social interaction (including crime) may be the most salient for health (Freeman, 1984; Birtchnell *et al*, 1988; Perkins *et al*, 1993; Halpern, 1995; Cohen *et al*, 2000). Many previous studies have relied on residents' perceptions of their environment (Halpern, 1995; Dalgard & Tambs, 1997; Kearns *et al*, 2000). Our aim was to test the hypothesis that, in an urban setting, higher rates of depression would be found where 'social incivilities' (particularly crime) were most likely to occur, after adjusting for individuals' socio-economic status and the characteristics of their dwellings. We hypothesised that depression would be most prevalent in areas characterised by derelict buildings and abundant graffiti, open public spaces and few 'buffers' between public and private spaces.

METHOD

A cross-sectional survey was carried out as part of an evaluation of an urban regeneration programme in an electoral ward in north London. A survey of adult residents and an architectural survey of the built environment were undertaken in two electoral wards (the intervention ward and a control). The urban regeneration programme began after completion of these surveys. The control ward was chosen because of its similarity to the intervention ward in socio-demographic composition and housing characteristics (Wallace & Denham, 1996; Glover *et al*, 1998), and

because there was no similar regeneration programme in prospect at the time. Estimated populations of the intervention and control wards in 1999 were 6260 and 9549, respectively.

Individual respondents were selected in two stages using random probability sampling methods. The Postcode Address File (PAF) was used as the sampling frame for selecting about 1300 addresses within each ward. All addresses that were residential and occupied were eligible, and up to two adults (aged 16 years and over) were sampled at random within each household, without substitution, using a Kish grid technique (Kish, 1965).

Prevalence of depression

The prevalence of depression was assessed using the Center for Epidemiologic Studies Depression scale (CES-D; Radloff, 1977; Roberts & Vernon, 1983; Beekman *et al*, 1997), which is a validated 20-item self-report measure. Each item includes four response categories, scored from 0 to 3. Those scoring 16 or more were classified as 'cases' (Frerichs *et al*, 1981; Harlow *et al*, 1999). Sensitivity analyses were conducted using the CES-D score as a continuous variable.

Socio-economic status and housing characteristics

Respondents were asked about their age, marital status, education, ethnicity and employment status. Household-level risk factors for depression included access to a car or van and the following characteristics of the dwelling: tenure, level (floor on which entrance located) and the presence of four 'structural' problems (damp, leaking roof, rot in woodwork and infestation). Respondents were asked how long they had lived in their current dwelling.

Built environment site survey

Prior to the household survey, both wards were subdivided into discrete 'housing areas' by one of the authors (E.B.), who is a trained architect/urban designer. A housing area was defined as a geographically bounded area in which the majority of the housing was homogeneous in form and character. Eighty-six housing areas were enumerated across the two wards.

The Built Environment Site Survey Checklist (BESSC)

The Built Environment Site Survey Checklist (BESSC) is a standardised, validated inventory for rating housing areas, developed for this study (Weich *et al.*, 2001a). Items include the predominant form, height and age of housing, number of dwellings and type of access, provision of gardens, use of public space, amount of derelict land, security and distances to local shops and amenities. The original version of the BESSC (available from authors upon request) comprised 31 items, of which 25 had fixed categorical responses. The remaining items required the researcher to rank features of the built environment according to the proportion of space used in particular ways, and to estimate the distance from the centre of the housing area to a range of amenities. A postgraduate student in urban design carried out ratings, independently of interviews with residents. Interrater reliability for BESSC items was good, with $\kappa \geq 0.5$ for 15 categorical items. The present study was restricted to these items, as shown in Table 2.

Statistical analysis

Analyses were undertaken using survey commands within Stata (Stata Corporation, 1999), which adjusts standard errors and χ^2 statistics for clustering (autocorrelation) within housing areas and households (Huber, 1981). Data were weighted by household size, to adjust point estimates for the probability of selection. The outcome measure for our main analyses was caseness on the CES-D (score ≥ 16), as described above. Unadjusted and adjusted odds ratios with 95% confidence intervals and likelihood ratio tests (LRTs) to assess confounding were calculated using logistic regression. Sensitivity analyses were carried out using linear (least-squares) regression for the CES-D score as a continuous measure. These analyses were undertaken to evaluate associations between the CES-D score and characteristics of the built environment without the imposition of an arbitrary case threshold.

RESULTS

The household response rate was 61.3% and the individual response rate within participating households was 87.7%. In all, 1887 individuals took part, of whom 57.3% ($n=1081$) were women.

Seventy-six housing areas were represented. The number of respondents per housing area ranged from 1 to 214, with a median of 66 and a mean of 78.7 (s.d.=60.5). The overall prevalence of depression using the CES-D was 38.9% (95% CI 36.7–41.1), a rate that did not vary to a statistically significant degree between intervention and control wards ($\chi^2=0.5$, d.f.=1, $P=0.47$). The majority of participants (75.1%) were living in rented accommodation, of whom 73.3% were renting from the local authority. Overall, 56.9% of respondents had lived at their current address for over 5 years and 13.5% for 1 year or less.

Characteristics of the study sample are shown in Table 1. The prevalence of depression was higher to a statistically significant extent among women, those not married, individuals of non-White ethnicity, those without educational qualifications and those not in employment. Statistically significant associations with depression also were found for three out of four household-level risk factors, namely lack of access to a car or van, living in rented accommodation and living in a dwelling with 'structural' problems (Table 1). No statistically significant associations were found between the duration that respondents had occupied their present dwelling and either the prevalence of depression or CES-D score.

Associations between the built environment and individual and household-level risk factors

Statistically significant associations were found between characteristics of the built environment and individuals' socio-economic status. Those living in rented accommodation were significantly more likely to live in housing areas with newer properties ($\chi^2=18.8$, $P<0.0001$), dwellings with deck access ($\chi^2=7.7$, $P=0.007$), few private gardens ($\chi^2=15.5$, $P=0.002$) and shared recreational space ($\chi^2=23.9$, $P<0.0001$), although not more abundant graffiti ($\chi^2=1.8$, $P=0.18$). Similar patterns of associations with the built environment were found for unemployment, lack of educational qualifications, non-White ethnicity and lack of regular access to a car or van.

Statistically significant associations also were found between characteristics of housing areas and those of respondents' dwellings. Individuals who reported

structural problems were likely to be living in housing areas characterised by older (pre-1940) properties ($\chi^2=3.4$, $P=0.02$). Those living in dwellings situated above the ground floor were significantly more likely to be living in areas with properties of more recent (1940 onwards) construction ($\chi^2=2.6$, $P<0.05$), with few private gardens ($\chi^2=38.7$, $P<0.0001$) and more shared recreational spaces ($\chi^2=8.5$, $P=0.0006$). Individuals in areas with the oldest (i.e. pre-1940) dwellings were the least likely to live in areas with predominantly 'deck access' dwellings ($\chi^2=4.49$, $P=0.04$).

Respondents living in areas characterised by deck access homes ($\chi^2=3.91$, $P=0.03$), graffiti ($\chi^2=3.93$, $P=0.03$) and without shared recreational spaces ($\chi^2=5.41$, $P=0.01$) reported living in their present dwelling for longer than those in areas without these features.

Depression and the built environment

The prevalence of depression was higher to a statistically significant degree in housing areas characterised by dwellings with deck access, abundant graffiti, newer (1940 onwards) properties, public space(s) and few private gardens (Table 2). After further adjusting for individual and household-level risk factors for depression (including floor of residence and structural housing problems), statistically significant associations remained between the prevalence of depression and living in housing areas characterised by dwellings with predominantly deck access and those of most recent (post-1969) construction (Table 3). The association with the predominant age of properties in the housing area remained statistically significant after adjusting for predominant type of access to dwellings.

Associations with depressive symptoms, using CES-D score as a continuous measure, differed from those found for 'cases' of depression (CES-D score ≥ 16) for three BESSC items (Tables 2 and 3). In contrast to findings for cases of depression, no statistically significant associations were found between CES-D score and living in housing areas with predominantly deck access dwellings or those in which fewer than one-quarter of dwellings had private gardens (Table 2). By contrast, a statistically significant association was found for living in a housing area with at least one disused (derelict) building, although this

Table 1 Socio-demographic characteristics of the study sample, showing proportion of study sample exposed (% participants), prevalence of depression (% depression) and unadjusted odds ratios (ORs; 95% CI) for association with the prevalence of depression

	% Participants (n)	% Depression (n)	OR (95% CI)	P
Female	57.3 (1087)	41.5 (443)	1.35 (1.08 to 1.69)	0.008
Age (years)				
16–34	34.1 (647)	37.3 (239)	1.00	
35–64	45.7 (867)	41.7 (356)	1.05 (0.83 to 1.34)	0.67
65+	20.2 (382)	35.3 (131)	0.88 (0.65 to 1.19)	0.40
Marital status				
Married	42.3 (793)	33.0 (257)	1.00	
Single	33.3 (624)	41.3 (253)	1.35 (1.05 to 1.74)	0.02
Separated, divorced or widowed	24.5 (459)	46.4 (211)	1.72 (1.32 to 2.26)	<0.001
Non-White ethnicity	23.5 (444)	47.7 (207)	1.57 (1.22 to 2.02)	<0.001
No educational qualifications	34.2 (646)	45.2 (284)	1.46 (1.16 to 1.84)	0.001
Employment				
Employed	43.2 (817)	25.0 (202)	1.00	
Unemployed	10.8 (205)	60.7 (122)	4.19 (2.86 to 6.14)	<0.001
Economically inactive	46.0 (870)	47.0 (401)	2.42 (1.90 to 3.08)	<0.001
No access to car or van	59.7 (1121)	45.4 (498)	1.84 (1.45 to 2.33)	<0.001
Rented accommodation	75.1 (1417)	45.2 (630)	3.28 (2.45 to 4.40)	<0.001
Floor level of property				
Ground or lower	38.5 (713)	35.6 (249)	1.00	
First	23.3 (431)	42.9 (183)	1.34 (1.01 to 1.79)	0.05
Second or third	23.2 (430)	42.2 (179)	1.26 (0.93 to 1.70)	0.14
Fourth or above	15.1 (279)	41.3 (112)	1.10 (0.75 to 1.61)	0.62
Structural housing problems				
None	56.3 (1067)	33.8 (355)	1.00	
One	27.3 (517)	43.2 (219)	1.66 (1.27 to 2.16)	<0.001
Two or more	16.4 (311)	49.0 (151)	1.97 (1.44 to 2.70)	<0.001

failed to reach statistical significance after adjusting for individual socio-economic status (Table 3).

DISCUSSION

Main findings

This was among the first studies to document an association between depression and characteristics of the built environment, using reliable, independently rated measures. In two inner-city electoral wards, individuals living in housing areas characterised by properties of recent (post-1969) construction and with predominantly deck access experienced significantly higher rates of depression. In contrast to similar findings from a study of married women on a London housing estate (Birchnell *et al*, 1988), we demonstrated that these associations remained statistically significant after adjusting for individuals' socio-economic status and the internal characteristics of their dwellings. Although associations with areas characterised by public open spaces, abundant graffiti and few private gardens failed to reach statistical significance after these adjustments, these findings are consistent with our main hypothesis.

Table 2 Proportion of respondents living in housing areas with specific Built Environment Site Survey Checklist (BESSC) characteristics, with unadjusted odds ratios (ORs; 95% CI) for depression and linear regression coefficients (B; 95% CI) for the Center for Epidemiologic Studies Depression scale (CES-D) score (among individuals), for BESSC items with $\kappa \geq 0.50$

BESSC item	% Respondents	OR (95% CI)	P	B (95% CI)	P
Non-traditional housing form (v. traditional)	86.4	1.24 (0.73 to 2.10)	0.41	-0.41 (-3.49 to 2.66)	0.79
Most buildings > 3 storeys (v. ≤ 3 storeys)	33.3	1.22 (0.72 to 2.05)	0.45	1.40 (-0.95 to 3.75)	0.24
Deck access (v. other types of access)	35.6	1.58 (1.05 to 2.35)	0.03	1.79 (-0.64 to 4.22)	0.15
> 5 dwellings per entrance (v. ≤ 5)	55.7	0.84 (0.52 to 1.36)	0.48	-1.58 (-4.23 to 1.07)	0.24
< 50 dwellings in housing area (v. ≥ 50)	82.7	0.89 (0.61 to 1.28)	0.51	-0.92 (-3.16 to 1.31)	0.41
Properties built 1940–1969 (v. pre-1940)	28.4	1.86 (1.16 to 2.99)	0.01	2.63 (0.04 to 5.23)	0.05
Properties built 1970 or later (v. pre-1940)	38.8	2.36 (1.49 to 3.60)	<0.001	4.95 (2.62 to 7.27)	<0.001
< 5 trees in public domain (v. ≥ 5)	18.2	1.20 (0.78 to 1.84)	0.40	0.91 (-1.59 to 3.41)	0.47
Non-private space outside properties (v. private)	89.6	1.15 (0.63 to 2.12)	0.64	-1.12 (-4.67 to 2.43)	0.53
< 1/4 dwellings with private gardens (v. $\geq 1/4$)	62.5	1.75 (1.07 to 2.85)	0.03	2.31 (-0.69 to 5.30)	0.13
< 1/4 dwellings with private balconies (v. $\geq 1/4$)	71.8	0.80 (0.52 to 1.24)	0.32	-0.87 (-3.31 to 1.57)	0.48
No shared recreational space (v. any)	33.9	0.52 (0.32 to 0.84)	0.008	-3.40 (-6.06 to -0.75)	0.01
3–9 pedestrian entrances to housing area (v. ≤ 2)	54.0	0.80 (0.51 to 1.27)	0.34	-1.59 (-4.18 to 1.01)	0.23
≥ 10 pedestrian entrances to housing area (v. ≤ 2)	25.6	0.98 (0.71 to 1.36)	0.90	-0.28 (-2.50 to 1.94)	0.80
Building entrances visible from roads (v. none)	53.2	0.74 (0.49 to 1.12)	0.15	-1.72 (-0.17 to 0.03)	0.15
Disused buildings (v. none)	7.7	1.13 (0.83 to 1.55)	0.42	1.81 (0.04 to 3.58)	0.05
Some patches of graffiti (v. none)	83.6	1.25 (0.77 to 2.04)	0.36	2.17 (-0.30 to 4.64)	0.08
Many patches of graffiti (v. none)	7.4	1.98 (1.18 to 3.34)	0.01	5.08 (2.62 to 7.55)	<0.001

Table 3 Odds ratios (ORs; 95% CI) for depression and linear regression coefficients (B, 95% CI) for Center for Epidemiologic Studies Depression scale (CES-D) score, by contextual measures of the built environment, adjusted for (1) age and gender, (2) age, gender and individual- and household-level risk factors for depression and (3) all of the preceding plus structural housing problems and floor of residence

BESSC item	(1) Adjusted OR (95% CI)	P	(2) Adjusted OR (95% CI)	P	(3) Adjusted OR (95% CI)	P
Deck access (v. other types of access)	1.58 (1.06 to 2.36)	0.03	1.33 (1.05 to 1.67)	0.02	1.28 (1.03 to 1.58)	0.02
Properties built 1940–1969 (v. pre-1940)	1.89 (1.18 to 3.03)	0.009	1.17 (0.85 to 1.63)	0.31	1.10 (0.82 to 1.47)	0.52
Properties built 1970 or later (v. pre-1940)	2.35 (1.50 to 3.66)	<0.001	1.40 (1.02 to 1.91)	0.04	1.43 (1.06 to 1.91)	0.02
< 1/4 dwellings with private gardens (v. ≥ 1/4)	1.78 (1.09 to 2.89)	0.02	1.25 (0.97 to 1.61)	0.08	1.29 (1.00 to 1.65)	0.05
No shared recreational space (v. any)	0.51 (0.32 to 0.84)	0.008	0.76 (0.58 to 1.00)	0.05	0.80 (0.60 to 1.07)	0.13
Many patches of graffiti (v. none)	1.92 (1.13 to 3.29)	0.02	1.32 (0.75 to 1.56)	0.23	1.26 (0.74 to 2.13)	0.39
Disused buildings (v. none)	1.13 (0.84 to 1.52)	0.41	0.87 (0.62 to 1.21)	0.40	0.91 (0.65 to 1.26)	0.56

	(1) Adjusted B (95% CI)	P	(2) Adjusted B (95% CI)	P	(3) Adjusted B (95% CI)	P
Deck access (v. other types of access)	1.78 (–0.65 to 4.22)	0.15	0.45 (–0.84 to 1.75)	0.49	0.26 (–1.05 to 1.58)	0.69
Properties built 1940–1969 (v. pre-1940)	2.70 (0.13 to 5.27)	0.04	–0.26 (–1.94 to 1.41)	0.75	–0.53 (–2.00 to 0.93)	0.47
Properties built 1970 or later (v. pre-1940)	5.00 (2.67 to 7.33)	<0.001	1.51 (–0.05 to 3.06)	0.06	1.74 (0.27 to 3.22)	0.02
< 1/4 dwellings with private gardens (v. ≥ 1/4)	2.36 (–0.60 to 5.33)	0.12	–0.12 (–1.49 to 1.24)	0.86	–0.07 (–1.44 to 1.29)	0.91
No shared recreational space (v. any)	–3.43 (–6.08 to –0.76)	0.01	–0.80 (–2.16 to 0.56)	0.25	–0.67 (–2.10 to 0.76)	0.35
Many patches of graffiti (v. none)	4.86 (2.36 to 7.36)	<0.001	2.17 (0.26 to 4.09)	0.03	1.87 (–0.35 to 4.10)	0.10
Disused buildings (v. none)	1.78 (0.17 to 3.40)	0.03	0.13 (–1.58 to 1.83)	0.88	0.59 (–0.97 to 2.14)	0.45

I. Marital status, employment status, educational qualifications, housing tenure, car or van access and ethnicity.

Rating the built environment

An important strength of this study was the rating of the built environment independently of the subjective judgements of local residents. Although architects’ judgements, particularly in terms of aesthetics, differ from those of the general population (Devlin & Nasar, 1989; Halpern, 1995) our aim was to evaluate associations between ‘objective’ measures of the built environment and the prevalence of depression. Our built environment measure had the advantage of being relatively simple and quick to administer, which was likely to have enhanced its interrater reliability.

We were interested primarily in measuring the physical rather than the social environment. Although the latter may mediate the effects of the former, these should be measured independently. Although no operational definitions of ‘incivilities’ exist, these are believed to comprise physical incivilities (derelict buildings, graffiti, litter, vandalism and excessive traffic, urine and faeces) (Coleman, 1985) and social incivilities (particularly teenage gangs and crime) (Halpern, 1995). The only direct ‘objective’ measure of incivilities in this paper concerned graffiti. Our original built environment site survey measure (the BESSC) required raters to assess vandalism,

but this item was dropped because of low interrater reliability (Weich *et al*, 2001a). Traffic, crime, teenage gangs and litter (and probably dog faeces) are more variable and harder to quantify reliably at this geographical level. Although crime may be an important risk factor for depression, the interrater reliability of observed criminal activity would probably be very low and would require longer periods of observation than were allowed for in this study. We therefore hypothesised that higher rates of depression would be found in areas where ‘social incivilities’ (particularly crime) were most likely to occur, and that such areas would be characterised by derelict buildings and abundant graffiti, open public spaces and few ‘buffers’ between public and private spaces.

Residents’ definitions of the boundaries of their neighbourhood vary (Cohen *et al*, 2000) and there is no evidence concerning the area over which the effects of the built environment are likely to operate. By identifying areas of homogeneous housing type and form, the enumeration of ‘housing areas’ was likely to have resulted in ratings of the built environment that were more reliable and valid than studies considering much larger geographical areas (Taylor *et al*, 1985). One important consequence of this approach was that the population size of housing areas varied considerably.

Although this may have limited the power of some of the analyses (as a result of small cell sizes), we do not believe that this affected our main findings because all standard errors were adjusted for the clustering of respondents within housing areas.

Depressive symptoms and depressive episodes

The study was limited by use of the CES-D rather than a standardised clinical interview. Although the inner-city setting was likely to have contributed to the high prevalence of depression, prevalence estimates are generally larger in studies using self-report case-finding instruments (Blazer *et al*, 1994; Meltzer *et al*, 1995). Because the CES-D enquires about experiences in the past week, ‘false positive’ cases might have included individuals with mild or transient psychological disturbance. Nevertheless, even these less severe forms of depression are of considerable public health importance. Depressive symptoms are distributed continuously in the general population (Meltzer *et al*, 1995) and are associated in a linear fashion with social impairment, physical morbidity and increased consultation rates in primary care.

Overall, the patterns of associations with the built environment were similar,

irrespective of whether the outcome was treated as a continuous or dichotomous variable. However, for two BESSC items (deck access and proportion of homes with private gardens), statistically significant associations were found for 'cases' of depression but not with (continuous) CES-D score. Some features of the built environment, therefore, may be associated with moderate, rather than severe, depression. Finally, although use of the CES-D may have overestimated the prevalence of cases of depression, this could not have accounted for our main finding, namely that the associations between depression and measures of the built environment were little affected by adjusting for individual socio-economic status.

Other limitations of this study

Although this was a cross-sectional study, our findings could not have been due to recall bias on the part of respondents, because ratings of the built environment were made independently of the ascertainment of depression. Although reverse causality would seem improbable, social selection cannot be ruled out. Individuals with a predisposition to depression may have been placed selectively by the local authority in certain areas or in certain types of property, although this was unlikely to have accounted for our findings. Although those living in the least advantageous housing circumstances also have the lowest socio-economic status, associations between the built environment and depression were not explained by individual risk factors such as unemployment. Nor can these findings be explained by sampling artefact. Although there were a number of statistically significant differences between the socio-economic and demographic characteristics of the residents of the two wards, no such difference was found in the prevalence of depression or in the characteristics of housing areas in which respondents lived. Furthermore, all of the reported associations were adjusted for the clustering of respondents within housing areas. Finally, duration of residence was not associated with the prevalence of depression to a statistically significant degree. Those living in the least advantageous areas (characterised, for example, by graffiti and deck access dwellings) reported living in their homes for longer than those living in 'better' housing areas. Greater residential stability in less

desirable areas probably reflects a difficulty in moving, because most individuals live in dwellings owned by the local authority and housing transfers are rare. Although these considerations do not undermine the validity of our findings, they can only truly be overcome by means of longitudinal studies, of which there have been few (Halpern, 1995; Dalgard & Tambs, 1997). The present findings represent the baseline phase of just such a study.

Another important consideration is selection bias arising from non-response. The household response rate was 61%, and 88% of eligible individuals in participating households were interviewed. These rates are similar to those found in other surveys in urban areas in the UK. However, selection bias may have affected the estimated prevalence of depression and estimates of exposure to the risk factors under study. For this to have significantly altered our estimates of associations between depression and characteristics of the built environment, non-participation would have to have been associated with both the prevalence of depression and the area of residence. For example, we would only have overestimated the associations of interest if non-respondents were more likely than respondents to have been depressed and living in housing areas characterised by homes of older (pre-1940) construction, with non-deck access, no graffiti and/or no shared recreational spaces.

The study was conducted in two electoral wards within one north London borough. Failure to find more statistically significant associations between the built environment and depression may have been due to the homogeneity of the built environment across the housing areas. These findings may not be generalisable elsewhere and require replication.

Depression and the built environment

The built environment cannot be equated with the socio-economic and demographic characteristics of individual residents. Our findings are consistent with the view that certain features of the built environment are associated with worse mental health. These findings also are in keeping with two prospective urban regeneration studies, which found associations between improvements in the built environment and lower levels of anxiety and depression (Halpern, 1995; Dalgard & Tambs, 1997).

Although our findings must be viewed as preliminary, they support the view that social and physical incivilities, such as graffiti, vandalism and crime, may be associated with worse mental health among residents (Taylor *et al*, 1985; Perkins *et al*, 1993; Cohen *et al*, 2000). It should be noted also that there were negative findings, including the failure to find statistically significant associations with disused buildings or with areas in which properties mainly opened directly onto public space.

Understanding the effects of place on health

The mechanisms underlying our positive findings have yet to be elucidated, and it remains unclear at what spatial level these and any other contextual effects might occur (Wilkinson, 2000; Weich *et al*, 2001*b*). At a neighbourhood or small area level, the built environment is likely to affect traffic, pollution, crime and residents' perceptions about their own safety (Taylor *et al*, 1985; Perkins *et al*, 1993). There may also be effects on perceptions of community spirit and other forms of 'social capital' (Birtchnell *et al*, 1988; Perkins *et al*, 1993; Sampson *et al*, 1997; Cohen *et al*, 2000). It has also been suggested that the built environment modifies the effects of housing on health by affecting residents' perceptions of their own dwellings (Kearns *et al*, 2000).

It is perhaps easier to interpret associations between higher rates of depression and residence in areas characterised by graffiti, open spaces, dwellings with deck access and few private gardens than with areas characterised by properties of more recent construction. Many of the individual, household-level and area-level risk factors were correlated and (for example) those living in areas with post-1940s dwellings were more likely to be renting, to be living above the ground floor and to be in areas characterised by 'deck access' dwellings. However, although 'properties built after 1969' might be viewed as a proxy for higher proportions of residents in rented and/or high-rise accommodation, the association with depression was not confounded to a statistically significant degree by individual socio-economic status or floor of residence. Moreover, this association remained statistically significant after adjusting for type of access to dwellings in the housing area.

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REFERENCES

Beekman, A. T. F., Deeg, D. J. H., van Limbeek, J., et al (1997) Criterion validity of the Center for Epidemiologic Studies Depression scale: results from a community-based sample of older subjects in the Netherlands. *Psychological Medicine*, **27**, 231–235.

Birtchnell, J., Masters, N. & Deahl, M. (1988) Depression and the physical environment. A study of young married women on a London housing estate. *British Journal of Psychiatry*, **153**, 56–64.

Blazer, D. G., Kessler, R. C., McGonagle, K. A., et al (1994) The prevalence and distribution of major depression in a national community sample: the National Comorbidity Survey. *American Journal of Psychiatry*, **151**, 979–986.

Cohen, D., Spear, S., Scribner, R., et al (2000) 'Broken windows' and the risk of gonorrhoea. *American Journal of Public Health*, **90**, 230–236.

Coleman, A. (1985) *Utopia on Trial: Vision and Reality in Planned Housing*. London: Hillary Shipman.

Dalgard, O. S. & Tambs, K. (1997) Urban environment and mental health. A longitudinal study. *British Journal of Psychiatry*, **171**, 530–536.

Devlin, K. & Nasar, G. (1989) The beauty and the beast: some preliminary comparisons of 'high' versus 'popular' residential architecture and some public versus architect judgements of the same. *Journal of Environmental Psychology*, **9**, 333–344.

Freeman, H. L. (1984) Scientific background. In *Mental Health and the Environment* (ed. H. Freeman), pp. 23–69. London: Churchill Livingstone.

Frerichs, R. R., Aneshensel, C. S. & Clark, V. A. (1981) Prevalence of depression in Los Angeles County. *American Journal of Epidemiology*, **113**, 691–699.

Glover, G. R., Robin, E., Emami, J., et al (1998) A needs index for mental health care. *Social Psychiatry and Psychiatric Epidemiology*, **33**, 89–96.

Halpern, D. (1995) *Mental Health and the Built Environment*. London: Taylor & Francis.

Harlow, B. L., Cohen, L. S., Otto, M. W., et al (1999) Prevalence and predictors of depressive symptoms in older premenopausal women: the Harvard Study of Moods and Cycles. *Archives of General Psychiatry*, **56**, 418–424.

Huber, P. J. (1981) *Robust Statistics*. New York: John Wiley & Sons.

Kearns, A., Hiscock, R., Ellaway, A., et al (2000) 'Beyond four walls'. The psycho-social benefits of home: evidence from West Central Scotland. *Housing Studies*, **15**, 387–410.

Kish, L. (1965) *Survey Sampling*. London: John Wiley & Sons.

CLINICAL IMPLICATIONS

- 'Objective', independently rated features of the built environment were associated with depression, independently of individuals' socio-economic status and the characteristics of their dwellings.
- Depression was associated with living in areas characterised by dwellings with deck access and those of more recent (post-1969) construction.
- Efforts to reduce the prevalence of depression should extend beyond the amelioration of risk factors operating at the individual or household level, to the contexts in which people live.

LIMITATIONS

- This was a cross-sectional study.
- The study employed a self-report measure of depression.
- The measure of the built environment included few direct measures of 'incivilities', particularly those that reflect social interactions or crime.

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Meltzer, H., Gill, B. & Petticrew, M. (1995) *OPCS Surveys of Psychiatric Morbidity in Great Britain. The Prevalence of Psychiatric Morbidity among Adults Aged 16–64 Living in Private Households in Great Britain*. London: HMSO.

Perkins, D. P., Wandersman, A., Rich, R. C., et al (1993) The physical environment of street crime: defensible space, territoriality and incivilities. *Journal of Environmental Psychology*, **13**, 29–49.

Radloff, L. S. (1977) The CES–D scale: a self-report depression scale for research in the general population. *Applied Psychological Measurement*, **1**, 385–401.

Roberts, R. E. & Vernon, S.W. (1983) The Center for Epidemiologic Studies Depression scale: its use in a community sample. *American Journal of Psychiatry*, **140**, 41–46.

Sampson, R. J., Raudenbush, S.W. & Earls, F. (1997) Neighborhoods and violent crime: a multilevel study of collective efficacy. *Science*, **277**, 918–924.

Stata Corporation (1999) *Stata Statistical Software: Release 6.0*. College Station, TX: Stata Corporation.

Taylor, R. B., Shumaker, S. A. & Gottfredson, S. D. (1985) Neighborhood-level links between physical features and local sentiments. *Journal of Architectural and Planning Research*, **2**, 261–275.

Wallace, M. & Denham, C. (1996) *ONS Classification of Local and Health Authorities in Great Britain*. London: Office for National Statistics.

Weich, S., Burton, E., Blanchard, M., et al (2001a) Measuring the built environment: validity of a site survey instrument for use in urban settings. *Health and Place*, **7**, 283–292.

_____, **Lewis, G. & Jenkins, S. P. (2001b)** Income inequality and the prevalence of common mental disorders in Britain. *British Journal of Psychiatry*, **178**, 222–227.

Wilkinson, R. G. (2000) Inequality and the social environment: a reply to Lynch *et al*. *Journal of Epidemiology and Community Health*, **54**, 411–413.

BIBLIOGRAPHY OF DESIGN RESEARCH: ACCESSIBILITY AND HEALTH

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AIA Academy of Architecture for Health. 1994. Healing Environments. Washington DC: AIA

American Institute of Architects Foundation. 1986. Design for Aging: An Architect's Guide. Washington DC: AIA Press.

Baum, Andrew and Jerome Singer, ed. 1982. Advances in Environmental Psychology, vol. 4, Environment and Health. Hillsdale, NJ: Lawrence Earlbaum Assoc.

Day, Christopher. 1995. Places of the Soul: Architecture and Environmental Design As a Healing Art. London: Thorsons (\$20.00 ISBN=1855383055)

Evans, G.W. and S. Cohen, 1987. Environmental Stress, in Handbook of Environmental Psychology, ed. D. Stokols and I. Altman. New York: John Wiley, pp. 571-610.

Freeman, A. 1987. Evaluation: therapeutic environment. Architecture, January pp. 52-57.

Gallager, Winifred. 1993. The Power of Place. New York: Harper Collins.

Gallup, John Whaley. 1999. Wellness Centers. New York: John Wiley and Sons, Inc.

Halpern, David S. 1995. Mental Health and the Built Environment: More Than Bricks and Mortar? Bristol, Penn.: Taylor & Francis (Call No. 1996 C-367)

Kaplan, Stephen, and Rachel Kaplan. 1983. Cognition and Environment. Ann Arbor, MI: Ulrich's Bookstore.

Maslow, A. and N. Mintz. 1956. Effects of esthetic surroundings: Initial short-term effects of 3 esthetic conditions upon perceiving energy and well being in faces. Journal of Psychology 41: 247-54.

Porter, R. and P.Watson. 1985 Environment: The healing difference. Nursing Management 16(6): 19-24.

- Saegert, S. 1970. Stress-inducing and reducing qualities of environments. In *Environmental Psychology: People and their Physical Settings*, ed. W.H. Proshansky, W.H. Ittleson, and L.G. Rivlin, ed. 2. New York: Holt, Rinehart & Winston, pp. 218-23.
- Ulrich, Roger. 1984. View through a window may influence recovery from surgery. *Science* 224: 420-421.
- U.S. Bureau of the Census. 1994. 1990 Census of Population and Housing. Subject summary tape file (SSTF) 4 [computer file]: Characteristics of Adults with Work Disabilities, Mobility Limitations, or Self-Care Limitations. Washington, DC: Govt. Printing Office. (Call No. in Electronic Reference C 3.286:CD 90 SSTF 04 C)
- U.S. Dept. of Health and Human Services. 1997 *A Profile of Older Americans: 1997*. Washington DC: Government Printing Office.
- Valins, Martin. 1996. *Futurecare: New Directions in Planning Health and Care Environments*. Cambridge, Mass.: Oxford (Call No. 1996 G-516)
- Wadson, Harriet. 1987. *The Dynamics of Art Psychotherapy*. New York: John Wiley and Sons.
- Wilkoff, William L. and Abed, Laura W. 1994 *Practicing Universal Design*. New York, New York: Van Nostrand Reinhold.
- Williams, M. 1988. The physical environment and patient care. *Annual Review of Nursing Research* 6:61-84.
- Winter, Steven. *Accessible Housing by Design: Universal Design Principles in Practice*. 1997. New York: McGraw-Hill.
- Wylde, Margaret A., Baron-Robbins, Adrian, and Clark, Sam. 1994. *Building for a Lifetime*. Newtown, CT: Taunton Press (CALL #TH4812 .W95 1994 FLOOD)
- Zeisel, John. 1981. *Inquiry by Design*. Cambridge: Cambridge University Press.
- Zimring, C. 1981. Stress and the designed environment. *Journal of Social Issues* 37(1):145-71.

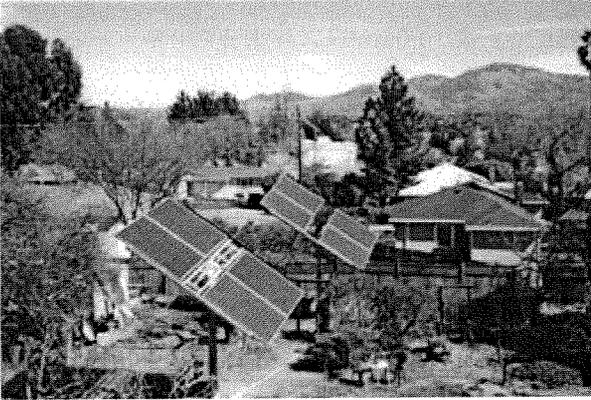


Website caption: Newington, CT, USA: Schüco Solar Energy System Delivers Power to Yale University. Schüco USA and Sunlight Solar have completed a 40 kilowatt flat roof photovoltaic (PV) system installed on the roof of a dormitory building on the campus of Yale University in New Haven, Connecticut.

Source: <http://www.solarbuzz.com/news/NewsNAPR681.htm>

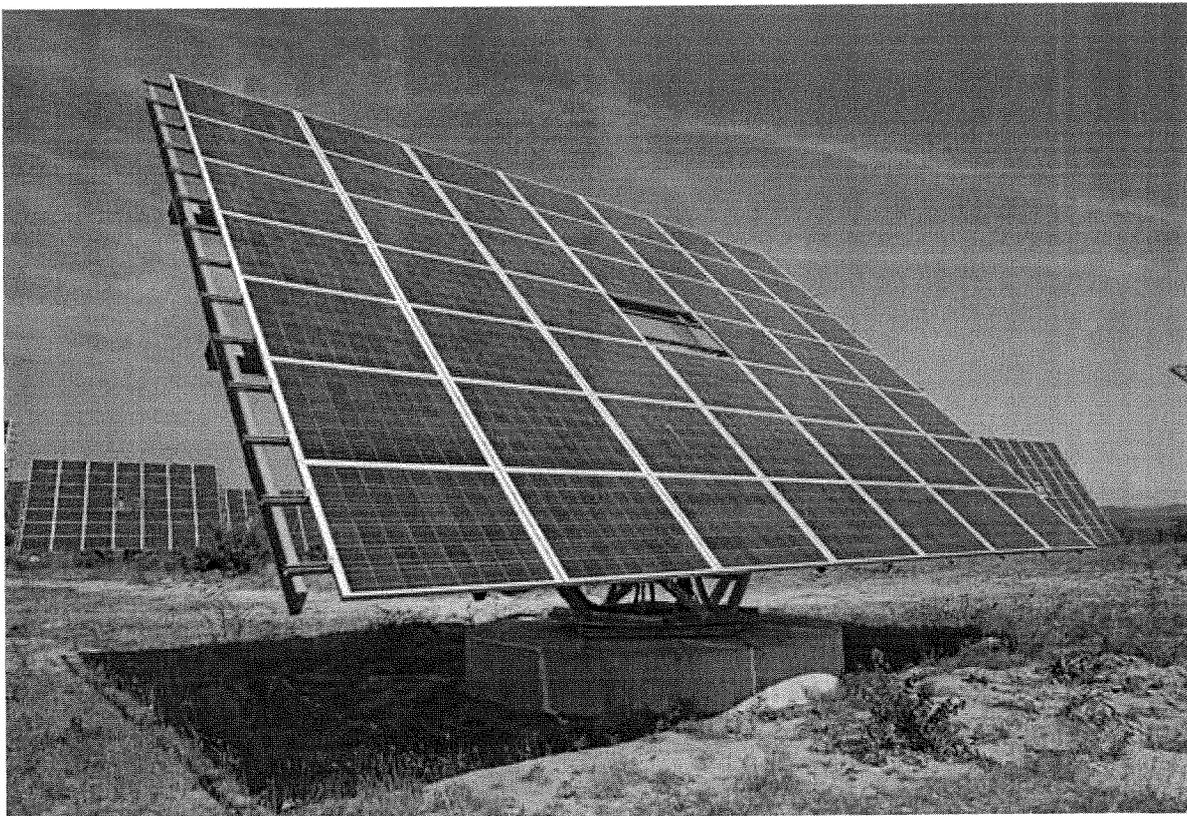


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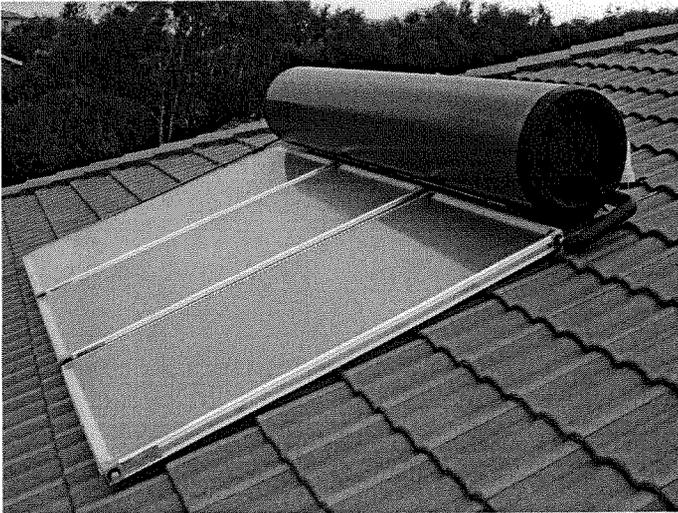
Website caption: Rooftop view of backyard solar trackers with ASE DG-285 and DG-300 panels. This is a nominal 50 volt system driving a Trace on-grid inverter (no batteries are used). These are Zomeworks passive trackers. Axis tilt is adjusted at the Spring and Fall equinox. Of the four positions available only two are used.

Source: <http://en.wikipedia.org/wiki/Image:SolarTrackerRoofView300W200H.jpg>



Website caption: Badajoz, Spain: OPDE Group Develops 8.8 Megawatts of PV Projects. The OPDE Group is currently developing 8.8 Megawatts of photovoltaic projects in the western Spanish community of Extremadura. All told, the projects on three different sites, involve an investment of over 69 million euros. Two of the plants are located in the Badajoz province at Valencia de Mombuey and La Portuguesa. The other system will be located in Fuente de Cantos.

Source: <http://www.solarbuzz.com/News/NewsEUPR314.htm>

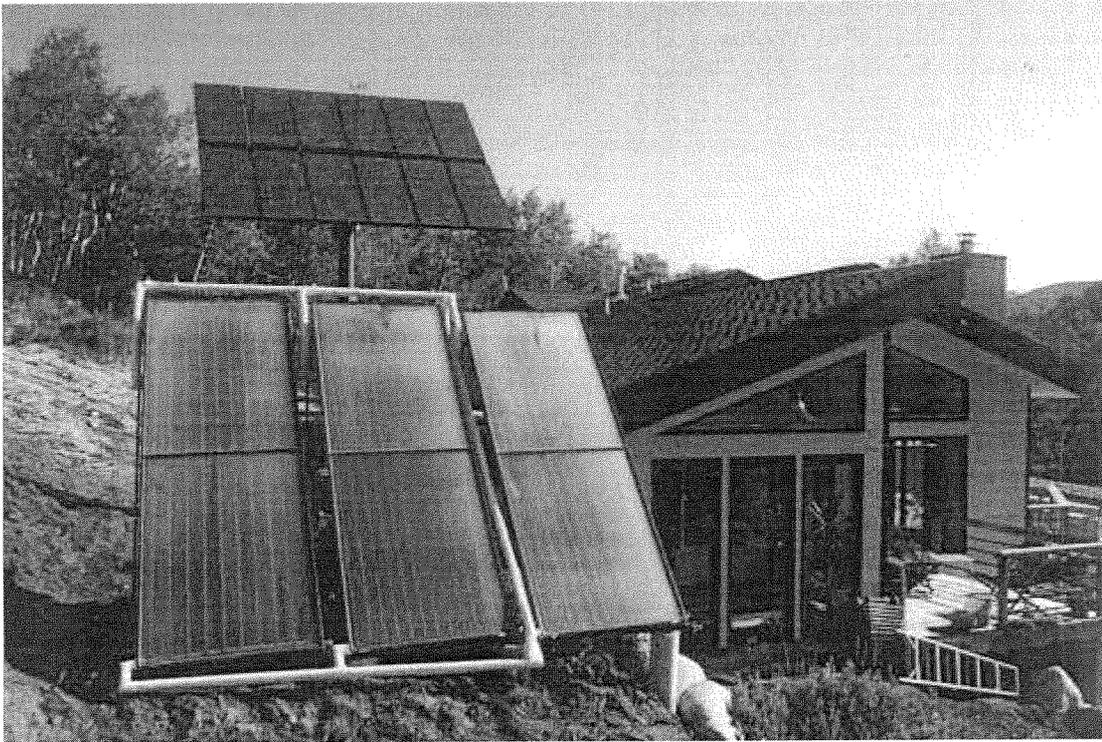


Staff Note: This solar thermal design is not usually a preferred aesthetic solution. The storage tank could be located under the roof surface or in a less conspicuous location elsewhere instead of mounted on top of the roof.

Source: www.superiorsolar.com.au/images/Beasley_Red_Tiles.jpg

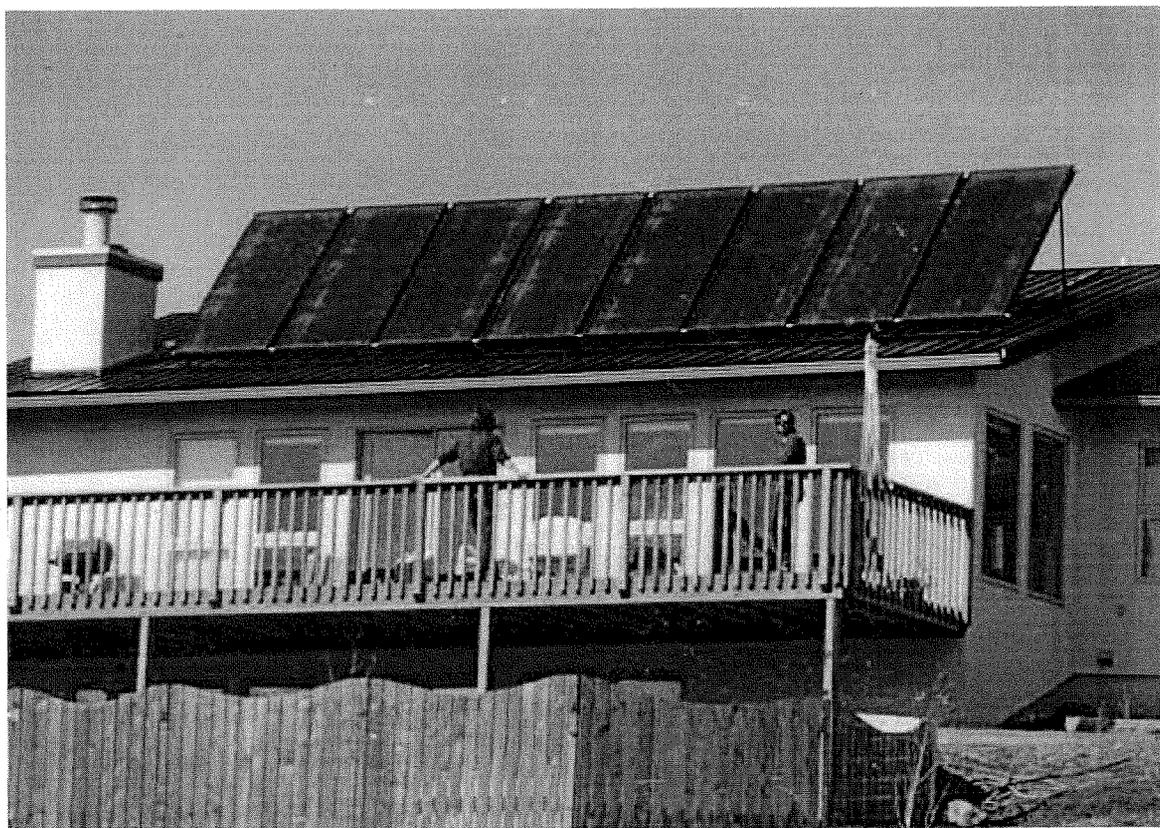


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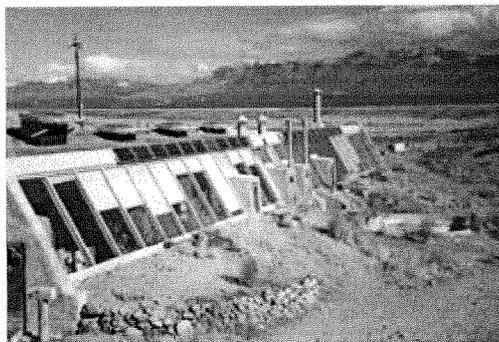


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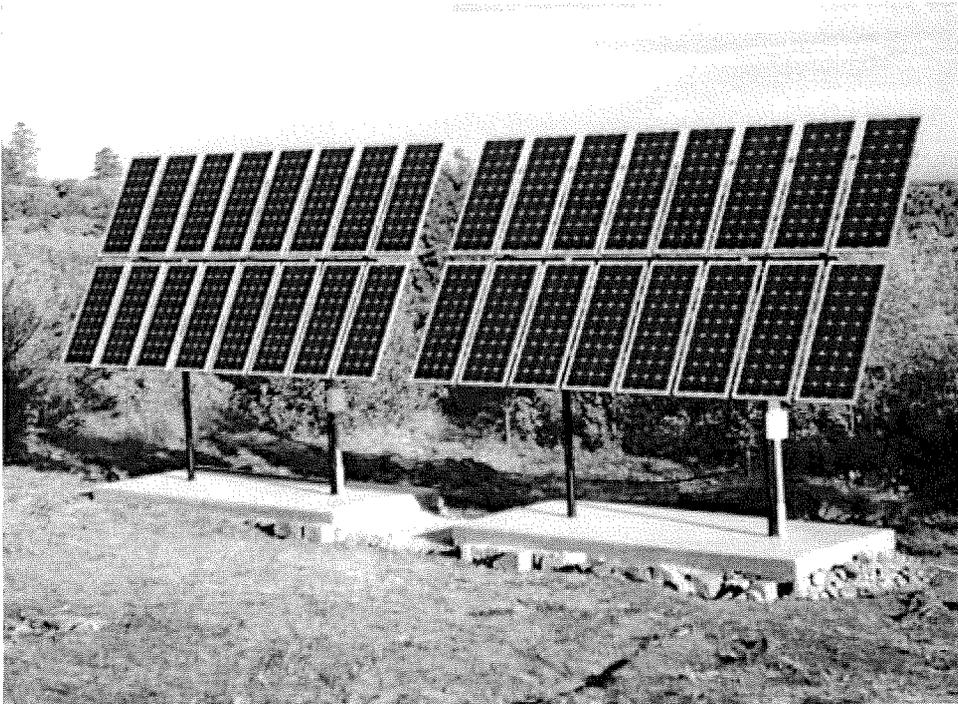




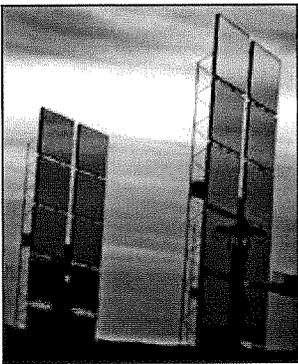
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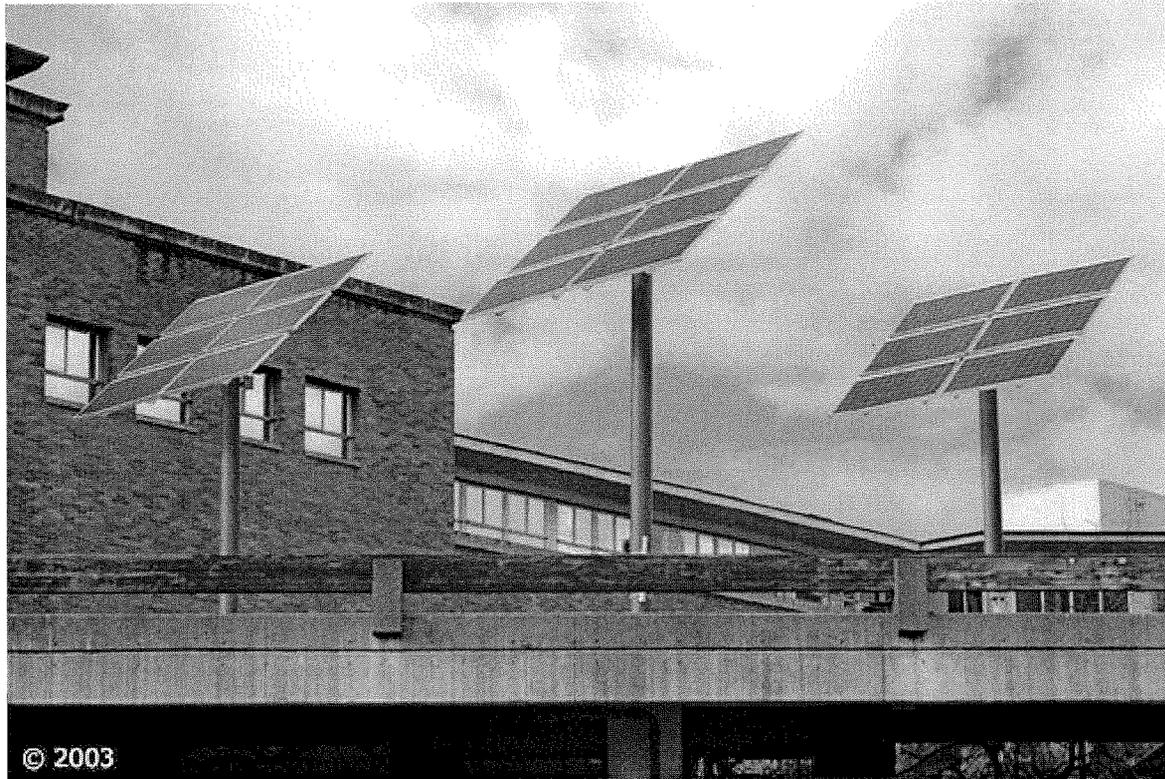
Website Caption: This house in New Mexico, United States, uses solar panels as an alternative source of energy.



No caption available.



British website caption: Solar Power has huge potential.



Website caption: Student investment in solar panels on the roof provide the University of Oregon with green, clean electricity.



No caption available.



Website caption: Solar panels at MIT
Photo courtesy DOE/NREL; Credit - Ascension Technologies



Website caption: A house powered by solar panels in Israel.

Staff note: This array looks like it is designed to serve much more than a house, perhaps the website caption is inaccurate.



Website caption: The large dish beside the creek is not a satellite antenna, it is the ANU's "Big Dish". This 400 square metre solar concentrator and is the largest in the world. A boiler at the top produces up to 100 gallons per second of steam 500 degrees to generate electricity.