

WITNESS STATEMENT OF REG LANG, OPPI, P. ENG.

SOCIAL IMPACT ASSESSMENT

Reg Lang & Associates  
P.O. Box 580  
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In the matter of the Consolidated Hearing for the environmental  
assessment of the proposed Halton Region landfill.

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Role and Responsibilities

Reg Lang is a Professor in the Faculty of Environmental Studies, York University, and Principal in the consulting firm of Reg Lang & Associates. He holds a B.E. (Civil Engineering) and a M.Sc. (Community Planning). He has extensive experience as a professional engineer and planning, administrator, educator and consultant/researcher in the fields of urban and regional planning, impact assessment and waste management. Professor Lang has undertaken a number of studies and has been an expert witness with regard to the assessment of environmental and social impacts resulting from the generation and disposal of waste. In addition, he was a member of three federal environmental assessment panels that examined projects involving waste management and its social impacts.

Professor Lang's responsibility as consultant to the Canadian Environmental Law Association and the West Burlington Citizens Group centered on a critical evaluation of the Region of Halton's assessment of the social impacts of a sanitary landfill at Site F in Burlington. He undertook this work personally.

Approach

Professor Lang's work involved:

- o A detailed review of the Region's SIA and other pertinent documentation. This included a comparison of Halton's SIA with a recent state-of-the-art social impact study conducted for the Region of Peel as part of its search for a landfill site, along with perusal of the social impact study done for the Ontario Waste Management Corporation.
- o Examination of statistical material on the community context and the official plan.

- o Interviews with selected community leaders and other key informants in Aldershot and Forestvale, the communities directly affected by a landfill at Site F. The intent was, within the limitations imposed by the budget and time available, to obtain information considered relevant to determination of the potential social impacts. This included information on: the community context (community boundaries, community character, community cohesion and stability, interaction and activities, and satisfaction with place); local perceptions of existing and past landfill operations as well as of the proposed landfill, to identify impacts that residents have experienced and impacts expected to occur; residents' confidence in the Region to address community concerns and their satisfaction with its attempts to consult them during the landfill siting process; and, finally, their perceptions of the fairness of past, present and proposed landfilling activities in their community.
- o Independent research, including a literature review, on social impact assessment of waste management facilities and on the stress they can produce for individuals and communities.
- o Additional consultations with key individuals regarding certain aspects of this work.
- o Preparation of a report and attendance at the Joint Hearing to present, clarify and defend the report's findings.

Professor Lang's study focused on Site F. The nature of his work did not enable a comparative evaluation to be made of Sites F and D.

### Main Findings

The term "social impacts" refers to changes in people's lives -- changes that result from introduction of a project into their community environment, changes that may adversely affect their well-being, and changes that they consider important.

Professor Lang therefore began by examining the community perspective on the proposed landfill at Site F. To do this he drew on residents' submissions, other background data and the interviews with key informants in Aldershot and Forestvale. Their "ordinary knowledge" and long experience with waste disposal have caused residents of the two communities to be quite concerned about a landfill at Site F beside the existing facility. Aldershot residents are especially alarmed since their community

lies downstream of the past, present and proposed landfills. Resident concerns focus on surface and groundwater pollution (the #1 issue), unsightliness, noise and dust, truck traffic, litter, odour, effect on property values and community image, and stress. The interviews indicated pervasive dissatisfaction with the way the Region has handled community concerns in the past and little confidence that it will do better in future.

Three themes were found to characterize the community perspective on the proposed landfill. First, the proposal is seen as illogical; it simply does not make sense to residents that a landfill with considerable potential to pollute the environment should be located on high ground and on fractured shale, above an established residential community and so near Lake Ontario. Second, residents believe their communities should have been included fully in social impact assessment; they cannot understand how the study area boundaries, intended to capture the proposed landfill's social impacts, could have excluded them, and they reject outright the consultants' claim that Highway 403 and the CNR tracks buffer their communities from the adverse effects of landfilling. Third, residents feel that it is quite unfair to burden their communities with another landfill, especially when account is taken of the long time over which they have been taking waste from the rest of the Region, the history of broken promises about ending landfill operations in the area, and the fact that other areas have not yet done their share.

Professor Lang's critical evaluation of the Region's SIA included examination of the consultants' basic approach to social impact assessment, identification of significant deficiencies in that approach and in the SIA that resulted, and consideration of the equity issue, which has special significance for Site F. Overall, the results of this evaluation confirmed the validity of the community perspective and indicated that the Region's SIA, in its treatment of Site F, was fundamentally flawed. Much of this can be attributed to the decision of the Region's consultants to take a "technical" approach to social impact assessment. The technical approach stresses scientific method, objectivity, quantified empirical analysis, measured impacts and a primary role for experts. By adhering to this approach, rather than combining or replacing it with an interactive approach, the consultants severely limited the area studied, the range of social impacts addressed and the evidence considered valid.

The main deficiencies in the SIA that resulted were: its inappropriate study design; its lack of comprehensiveness and internal consistency; and its failure to provide an integrated picture of the landfill's potential social impacts. Of special concern for Site F was the selection of inadequate study area

boundaries. By applying the 0.8 km limit and by assuming that a "psychological barrier" effectively would buffer the Aldershot community from adverse social impacts -- an assumption that was never field-tested or backed up with references to the literature -- the consultants excluded Aldershot and Forestvale from social impact assessment. This fundamental error was compounded by another: the focus on individuals and consequent failure to take "community" adequately into account. As a consequence of this narrow application of the technical approach, a study area that was too small and a set of social impacts that was unduly limited, the Region's SIA ignored social impacts on the affected communities of Aldershot and Forestvale as well as the impacts on most of the people who live and work in them. Omission of this large population from the study's quantified inventory of social impacts seriously distorted the ranking of sites which showed Site F as least impacted.

A final, major deficiency of the Region's SIA was its summary dismissal of equity as a factor in ranking the sites, on the grounds that all sites could claim equal inequitable treatment. This decision, which worked to the disadvantage of Site F, ignored the fact that not all sites have an equal claim to unfair distribution of waste disposal facilities in Halton Region; the Aldershot area has a unique claim in this regard. Equity deserved, and still deserves, much more consideration in terms of the role it plays in contributing to social impacts.

As a consequence of the foregoing deficiencies in the Region's SIA, the Board does not have before it a complete SIA, one that assesses the full range of potential social impacts of the proposed landfill. However, the Board does have the Region's SIA for Site D, along with submissions from residents of that area. Professor Lang's report, together with submissions by residents and others with regard to Site F, provides the Board with a data base for comparing the two sites.

Professor Lang's report indicates that the following social impacts would be likely to occur if the landfill were located at Site F:

1. disruption of residents and others in the two communities, including disruptive changes to the way of life of people living in the vicinity;
2. displacement and disruption of community facilities and services;
3. loss of community character, due to the basic incompatibility of landfill with the residential environment;

4. loss of community cohesion and stability, which have to do with the nature and extent of social interaction in the community, and the willingness of residents to allocate personal and financial resources to the community and its future; and
5. increased stress that could follow a decision to impose this feared and unwanted facility on the community.

The Environmental Assessment Act requires that social impacts be assessed as one of the necessary inputs to the Board's deliberations. Professor Lang's report demonstrates that the Region's SIA left the Board with an information gap with respect to Site F. While not a full-scale SIA, his report can assist in closing that gap by providing the Board with the "next best thing", an indication of the potential social impacts at Site F.

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**Education**

Bachelor of Science (Civil Engineering), University of Saskatchewan, 1957.

Master of Science (Community Planning), University of Manitoba, 1963.

Candidate, Doctor of Education program, Ontario Institute for Studies in Education (Adult Education Department, Human Resources Development Focus)

Intern Counsellor, Toronto Institute of Human Relations: 1986-88.

**Professional**

1957-62: Sewer Design and Construction Engineer, City of Regina, Engineer's Department.

1963-65: Central Mortgage and Housing Corporation, Planning Research Group, Ottawa, and Assistant Branch Planner, Halifax.

1965-71: Director of Community Planning, Nova Scotia Department of Municipal Affairs. Responsible for 20-25 person multidisciplinary planning team administering the Town Planning Act and providing assistance to urban and rural municipalities across the province. Study Director for Town Planning Act Review, 1968-69, which resulted in a new Planning Act.

1971 to present: Principal, Lang Armour Associates, 1976-86, and Reg Lang & Associates, 1986-present. Consultant to various agencies concerning urban and regional planning and policy, social and environmental impact assessment, environmental planning, resource management, energy conservation, waste management planning, peer review and professional development. Clients during the past 10 years have included:

Federal Environmental Assessment Review Office, 1977-80: member of three environmental assessment panels reviewing Eldorado Nuclear Limited proposals to build uranium hexachloride refineries at five sites in rural Ontario and Saskatchewan.

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Environment Canada, Lands Directorate, 1979-80: assistance with organizing and conducting a national symposium on energy, conservation through land use planning in Montreal, and conduct of a workshop on land use impacts.

Canada Mortgage and Housing Corporation, 1980: preparation of feasibility study for handbook on energy conservation through urban planning.

Indian and Northern Affairs Canada, 1981: participation in Northern Land Use Planning Workshop, Mont Ste. Marie, Quebec.

Ontario Ministry of Transportation and Communications, 1981: survey of transportation energy-conserving activities of Ontario municipalities.

Ontario Ministry of Energy, 1981-83: preparation of guide to community energy profiling as part of "Handbooks for Planners" series; and design of microcomputer program to estimate community energy consumption.

Energy, Mines and Resources Canada, 1982: design of training program for municipal energy managers.

The Banff Centre School of Management, 1983-1985: development and conduct of two one-week seminars on "Integrated Approaches to Resource Planning and Management".

Atomic Energy of Canada Ltd., 1984: review of social impact analysis of pre-closure concept of federal Nuclear Waste Management Program.

David Estrin, Barristers and Solicitors, 1985-86: expert witness on impact assessment, Waste Not Wanted v. The Queen; and critical evaluation of Regional Municipality of Peel's waste management master planning process, emphasizing site selection, social impact assessment and public participation.

Marbek Resource Consultants Ltd. for Canadian International Development Agency, 1986: conduct of workshop on energy use in urban areas, for ASEAN-Canada Study Tour.

Canadian Environmental Law Association and West Burlington Citizens Group, 1986-88: study of social impacts of landfill in Burlington, and expert witness at Joint Board hearings.

Volunteer advisor to various community and environmental groups.

## Academic

1977-present: Professor, Faculty of Environmental Studies, York University. Associate Professor, 1971-1977. Member of Faculty of Graduate Studies. }

Courses taught, all to graduate students, have included lectures, seminars and workshops in: Introduction to Environmental Studies; Introduction to Planning Processes; Urban/Regional Planning Theory; Strategic Planning and Management; Policy Analysis; Environmental Planning; Environmental Impact Assessment; Energy in Urban Settlements; Creative Problem-Solving; and Synthesis in Environmental Studies. Supervision of numerous directed readings, independent studies, major papers and field experience, and participation in oral general and final examinations. Advisor to 25-30 graduate students per year.

Thesis evaluator, Osgoode Law School. Ph.D. examiner, University of Waterloo. Guest lecturer at York University, University of Toronto, Queen's University, McGill University, Concordia University, Dalhousie University and Technical University of Nova Scotia.

Program Coordinator, Dean's office, Faculty of Environmental Studies, York University, 1973-1976. Currently, member of Faculty Council, Committee of Instruction, Faculty Appointments Advisory Committee (Chair) and Curriculum Committee. Membership on various University committees including Academic Policy and Planning Committee, 1986-89, and Advisory Council of York University Development Corporation, 1987. F.E.S. liaison to Canadian Institute of Planners and Ontario Professional Planners Institute.

Editor, Faculty of Environmental Studies Review. Co-Director, FES Writing Skills Development Project.

Non-degree courses taught in impact assessment, planning and energy conservation.

University of Nairobi, 1982: course in environmental impact assessment for graduate students and civil servants in the Kenya government.

University of California, Davis, 1979: Research Associate, Faculty of Agricultural and Environmental Sciences (sabbatical leave).

## Awards

Listed in Canadian Who's Who, 1987 onward.

Research Fellowship, Faculty of Environmental Studies, York University, 1984.

Queen's Silver Jubilee Medal, 1977, for "worthy and devoted service" to the planning profession in Canada.

Nuffield Travelling Fellowship, 1969-70, to study regional development planning in Europe, based at Centre for Environmental Studies, London.

Town Planning Institute of Canada, Certificate of Distinction, 1963.

## Memberships

Member, Canadian Institute of Planners, since 1964. National Councillor, 1967-70. National Examiner, 1970-72. Member, National Editorial Board, Plan Canada, 1986-present.

Member, Ontario Professional Planners Institute, since its inception in 1986.

Member, Association of Professional Engineers of Ontario, since 1971.

Member, American Planning Association, Association for Psychological Type, World Future Society, and Society for Teaching and Learning in Higher Education.

## Research Over Past 10 Years

**Resources for Environmental Planning.** Preparation of a resourcebook for environmental planners and managers in Canada; included theoretical background to environmental problems and planning, description of key environmental resources and activities, elaboration of an environmental planning/management approach, extensive documentation of the literature, and development of 99 case studies using a network of practitioners across Canada. Funded by Environment Canada, 1977-78.

**Energy in the Community.** Evaluation of the California experience with energy planning and management at the local level; included an on-site two-month case study of Davis, California, funded by Ontario Ministry of Energy, 1979. Report on energy conservation and the municipal planner, including a review of energy and land use relationships, a classification of energy-conserving measures available to planners and a survey of Canadian practice, funded by Energy, Mines and Resources Canada, 1979-80. Documentation of

40 case studies of energy conservation through land use planning in Canada and the United States, funded by Environment Canada, 1980-81. Study of concepts and methods of community energy profiling, 1980-83. Study of relationship between residential density and energy conservation, funded by Canada Mortgage and Housing Corporation, 1985. Evaluation of Ontario's Energy Conservation Through Land Use Planning Grant Program, 1984-88.

Social Impact Assessment. Study of concepts and practice of social impact assessment and implications for the federal Environmental Assessment and Review Process, 1979-80. Study of community stress and waste management and equity-based approach to waste management, ongoing. 77

Integrated Resource Planning and Management. Editor of a book on integrated approaches to resource planning and management in Canada (including survey of the field and preparation of two papers), for The Banff Centre, 1985-86. Study of integrated land/water planning and management in the Great Lakes Basin, 1986-87.

Ethics of Intervention. Study of ethics in planning as seen by students and practitioners, 1987.

Strategic Planning and Management. Overview of strategic planning in the public and not-for-profit sectors in Ontario, 1988.

Self-Directed learning. Examination of self-directed learning concepts and applications, 1988-89.

Other Research Interests. Planning as a way of thinking and acting; planners in transition; and reframing planning practice. Learning and self-development in the organization; counselling in the workplace.

### Recent Presentations

Conferences, lectures and seminars during the past five years include:

"Politics of Conservation", presentation to Soil Conservation Society of America, Ontario Chapter, Cambridge, March 1983.

"Integrated Resource Management: What It Is and Why It's Needed", presentations to seminars at the Banff Centre, November 1983 and January 1985.

"Achieving the Energy-Efficient Community: The Planner's Role", paper to Annual Conference of Canadian Association of Planning Students, Halifax, January 1984.

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"Contingent Theory and Planning Practice", paper to Annual Conference of Association of Collegiate Schools of Planning, New York City, October 1984.

"Rural Planning and the Future", presentation to University School of Rural Planning and Development, University of Guelph, March 1985.

"Conflicts in Codes of Ethics", panel presentation to Workshop on Ethical Issues in Natural Resources, sponsored by Occupational Ethics Group, University of Toronto, April 1985.

"Planning for Integrated Development", theme paper to Conference on Integrated Development Beyond the City, Mount Allison University, Sackville, June 1986.

"Energy in Urban Areas", presentation to ASEAN seminar, Toronto, September 1986.

"Integrating Water Quality Considerations with Land Use Planning in the Great Lakes Basin", with Ann Brooks, paper to Annual Conference of Association of Collegiate Schools of Planning, Milwaukee, October 1986.

"Ethics and Professional Planners", paper to Dean of Graduate Studies Seminar on Practical and Professional Ethics, York University, February 1987.

"Ethics in Planning", with Sue Hendler, workshop at National Conference of Canadian Institute of Planners, Toronto, July 1987.

"Alternative Views of Program Planning: A Strategic Approach," guest lecture to School of Urban and Regional Planning, Queen's University, March 1988.

#### Publications on Impact Assessment

Armour, Audrey and Lang, Reg. Impacts of Urban Railways. University of Toronto/York University Joint Program in Transportation, March 1979. 267 pp.

Lang, Reg. "Environmental Assessment Changes Planning". Plan Canada 17 (March 1977): 59-69.

Lang, Reg. "Environmental Assessment: Ontario Prospects." Proceedings of Geographical Inter-University Resource Management Seminar, 1976. Waterloo: Waterloo Lutheran University, Geography Department, 1976.

Lang, Reg. "Environmental Assessment: Reform or Rhetoric?", pp. 233-255. In Ecology Versus Politics in Canada, edited by William Leiss. Toronto: University of Toronto Press, 1979.

Lang, Reg. "Impact Planning for Village Development." Urban Forum, Fall 1977, pp. 42-49.

Lang, Reg. "The Review Side of EIA: Lessons from a Panel Member", pp. 88-104. In *Issues in Environmental Impact Assessment*, edited by Audrey Armour. York University, Faculty of Environmental Studies, 1983.

Lang, Reg and Armour, Audrey. *Environmental Planning Resourcebook*. Montreal: Multiscience, 1980. 335 pp. Section 5.5, "Environmental Impact Assessment." Section 5.7, "Regulation and Review." Section 5.8, "Public Participation."

Lang, Reg and Armour, Audrey. *The Assessment and Review of Social Impacts*. Ottawa: Federal Environmental Assessment Review Office, 1980. 163 pp.

Lang, Reg and Armour, Audrey. "The Process of Environmental Assessment: Making It Work for Canada," pp. 15-30. In *Environmental Impact Assessment in Canada: Processes and Methods*, edited by M. Plewes and J. Whitney. Toronto: University of Toronto, Institute for Environmental Studies, 1977.

Lang, Reg and Armour, Audrey. *Urban Environmental Assessment in Canada and the United States*. Ottawa: Ministry of State for Urban Affairs, 1976.

Lang, Reg and Morley, David. *Environmental Impact Assessment. Brief to the Ontario Ministry of the Environment in Response to Ontario's Green Paper on Environmental Assessment*. York University, Faculty of Environmental Studies, 1974.

Lang, Reg, et al. *Impact: Regina Relocated Rail Facility*. Regina: Regina Rail Relocation Project, 1976.

Unpublished:

Lang Armour Associates. *Assessing the Social Impacts of the Canadian Nuclear Fuel Waste Management Concept: A Critical Review of Ontario Hydro's Preliminary Assessment*. Pinawa, Manitoba: Atomic Energy of Canada Ltd., 1984. 108 pp.

Lang, Reg. *A Critical Review of Waste Management Master Planning in Peel Region*. Prepared for David Estrin and the Regional Municipality of Peel, 1986. 94 pp. Section 3, "Social Impact Assessment."

## Other Publications Over the Past Decade

Lang, Reg. "The Natural Environment Component in Ontario's Municipal Plans", pp. 145-153. In *Ecological (Biophysical) Land Classification in Urban Areas*, edited by E.B. Wiken and G. Ironside. Ottawa: Environment Canada, 1977.

Lang, Reg and Armour, Audrey. "Preserving the Environment Comes First". *Canadian Chemical Processing* 62 (Feb. 1978): 21-25.

Lang, Reg. "Environmental Information in a Planning/Management Context", pp. 285-294. In *Applications of Ecological (Biophysical) Land Classification in Canada*, edited by C.D.A. Rubec. Ottawa: Environment Canada, 1979.

Lang, Reg and Lounds, John. *Information Resources for Municipal Energy Planning and Management*. York University, Faculty of Environmental Studies, 1979. 125 pp.

Lang, Reg and Armour, Audrey. *New Directions in Municipal Energy Management: The California Experience*. Toronto: Ontario Ministry of Energy, 1980. 185 pp.

Lang, Reg and Armour, Audrey. *Sourcebook: Energy Conservation in 20 Canadian Cities*. Toronto: City of Toronto, 1980. 126 pp.

Lang, Reg and Armour, Audrey. *Energy Conservation and the Municipal Planner*. Ottawa: Energy, Mines and Resources Canada, 1980. 199 pp.

Lang, Reg and Armour, Audrey. *Planning Land to Conserve Energy: 40 Case Studies from Canada and the United States*. Ottawa: Environment Canada, 1982. 212 pp.

Lang, Reg and Armour, Audrey. *The Community Energy Profile: Concepts, Methods, Applications*. Toronto: Ontario Ministry of Energy, 1983. 101 pp.

Lang, Reg and Armour, Audrey. *Guide to Community Energy Profiling*. Toronto: Ontario Ministry of Energy, 1983. 199 pp.

Lang, Reg. *Review of Environmental Strategy and Action: The Challenge of the World Conservation Strategy* by Peter Jacobs. *Plan Canada* 23 (June 1983): 26.

Lang, Reg. "Achieving the Energy-Efficient Community: The Planner's Role", pp. 29-37. In *Energy: New Horizons for Canadian Planning*. Canadian Association of Planning Students Conference Proceedings, 1984. Halifax: Nova Scotia College of Art and Design and Technical University of Nova Scotia, 1984.

Lang, Reg. *Energy & Density*. Ottawa: Canada Mortgage and Housing Corporation, 1985. 101 pp.

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Lang, Reg, ed. Integrated Approaches to Resource Planning and Management. Calgary: University of Calgary Press, 1986. 302 pp.,

Lang, Reg. "Achieving Integration in Resource Planning," pp. 27-50. In Integrated Approaches to Resource Planning and Management, ed. Reg Lang. Calgary: University of Calgary Press, 1986.

Lang, Reg. Residential Density and Energy Conservation. York University, Faculty of Environmental Studies, 1986. 80 pp.

Lang, Reg; Keeble, Ronald; and Carrothers, Gerald. "What Planners Need To Know: CIP Recognition of Planning Degrees." Plan Canada 26 (1986): 252-256.

Lang, Reg and Brooks, Ann DeWitt. "Integrating Water Quality Considerations with Land Use Planning in the Great Lakes Basin". Environmental Planning Quarterly 5 (1987): 3-10.

Lang, Reg and Hendler, Sue. Ethics: Drawing the Boundaries for Professionals". Ontario Planning Journal, July-August, 1986.  
"Planning and Ethics: Making the Link". September-October, 1986.  
"Right or Wrong: Planners Respond". November-December 1986.  
"Towards a New Ethical Code". January-February 1987.

Lang, Reg. Energy Conservation Through Land Use Planning: A Critical Review of the Ontario Program. York University, Faculty of Environmental Studies, 1988. 146 pp.

Forthcoming:

Lang, Reg and Hendler, Sue. "Ethics and Professional Planners." In Moral Expertise ed. by Don MacNiven. Croom Helm.

Hendler, Sue and Lang, Reg. "Moral Theories: Do They Make a Difference in Practice?" Submitted to International Journal of Applied Philosophy.

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