

ROBERT JAMES LONG, Senior Environmental Engineer and Planner

PERSONAL: Born, Brampton, Ontario
Married, 3 children

EDUCATION: University of Guelph, School of Engineering
B.Sc., Water Resources Engineering, 1971

Harvard Graduate School of Design, Land Resource
Analysis and Land Use, Summer 1976

REGISTRATION: Registered Professional Engineer, Ontario
Designated Consulting Engineer

Member, Canadian Institute of Planners &
Ontario Professional Planners Institute

AFFILIATIONS: Lambda Alpha International - Honourary Land Economics Society
Soil and Water Conservation Society

TECHNICAL PAPERS:

Water Supplies for Rural Subdivisions, Long, R.J. and Witbeck, W. O.,
Workshop Paper presented to Annual Meeting, Ontario Section, American
Water Works Association, Sudbury, Ontario, May 1976

*Beaver Valley Secondary Planning Study, an Alternative Niagara
Escarpment Plan for the Beaver Valley*, May 1982. Director of Grey
County consulting team of 14 environmental specialists and 4 person Expert
Witness Panel, presented to the Niagara Escarpment Plan Hearing Officers,
June 1982

*Report on Extracting, Processing, Manufacturing and Emission Control
for Shale Products*, Cheltenham Brickworks Redevelopment, April 1983

*The Niagara Escarpment Plan - A Decade of Planning From the Land
Owners/Developers Perspective*, Long, R. J., presented to Annual
Conference, Canadian Parks and Recreation Association, Kitchener, August
1984

Proposed Revisions to the Niagara Escarpment Plan, submission for the
Clay Brick Association of Canada, Principal author for 7 person Review
Committee, May 1991

*Rural Sewage Systems: Environmental Features and Approval
Process*, Workshop Paper presented to Annual Conference, Ontario Non-
Profit Housing Association, October 1993

*Site Planning for Pits and Quarries, Workshop Presentation to the
CCRS - Caledon Community Advisory Group*, September 1997



PROFESSIONAL EXPERIENCE

1964-69 TRITON ENGINEERING SERVICES LIMITED, ORANGEVILLE
Project Manager and Company Director

Management of municipal engineering, planning and land development projects in rural and urban areas. Specific responsibility for sewage and water works, including a number of OWRC/Ministry of the Environment and private sector sanitary sewer systems, hydrology and land development studies.

ATTENDED UNIVERSITY: PART TIME 1966-1969. FULL TIME 1969-1971.

1971-74 Director and Principal Environmental Engineer and Planner
1974-78 President and Principal Environmental Engineer and Planner

Responsible for environmental engineering and planning, including: Ministry of the Environment sewage and water works projects; Conservation Authority studies and designs for flood and erosion control; stormwater management; waste management; environmental and site planning. Mr. Long was responsible for private land development projects, including environmental appraisals, draft plans, municipal services, sewage and water works, design and construction.

1975-82 ECOLOGICAL SERVICES FOR PLANNING LTD., GUELPH
Director of Environmental Consulting Firm

Founder and principal shareholder of environmental consulting firm. Management and organization of environmental assessment studies for drainage, aggregate resources and land development. Specific responsibility for water resources inventories, hydrologic impact, stormwater management and aggregate resources. Name changed to ESG International, now Stantec Consulting Ltd..

1978- LONG ENVIRONMENTAL CONSULTANTS INC., ORANGEVILLE
LONG ASSOCIATES CONSULTING LIMITED
Environmental Engineers and Planners

Environmental engineering and planning services for private development of land, mineral and water resources. Integrated land resource analysis; computer design and drafting; electronic surveying, data base, and information technology. The firm provides a complete environmental engineering and planning service, including advisory services, resource appraisals, site plans, planning documents, design of environmental protection works, compliance assessment and monitoring, with associated consulting specialists, retained as required. Mr. Long has been qualified, as a Senior Environmental Engineer and Planner, at the Consolidated Hearing Board, Ontario Municipal Board, County, District and Supreme Court of Ontario, the 3 Niagara Escarpment Tribunals and the National Energy Board Compensation Committee.



PROFESSIONAL EXPERIENCE RELEVANT TO ONTARIO'S CONSTRUCTION AGGREGATES AND INDUSTRIAL MINERALS

Mineral resource development services provided by Long Environmental Consultants Inc. include studies to identify alternative sources of supply; surveys for new pits and quarries; site evaluations; economic appraisals; site plan preparation; and modelling, monitoring and design for measures to mitigate the effects of pit and quarry operations, particularly dust, ground and surface water issues, noise and traffic. The firm provides a complete environmental engineering and planning service, from initial project concepts and planning, through site analysis and design, planning document amendments, agreements, licences and permits, in association with supporting technical experts, as required. Follow up services include administration, during site preparation and construction of environmental control works, landscaping, monitoring, progressive rehabilitation and compliance assessment. Advisory services have been provided to resolve special design, operating and permitting problems and expert testimony, on behalf of proponents and selected opponents, before Ontario courts, boards and hearing officers.

AGGREGATE PRODUCERS' ASSOCIATION OF ONTARIO

An active Member of its new Environment Committee, from 1990 until 1996, Mr. Long played a leading role, in the formulation of the APAO "*Statement of Environmental Principles*", and as Sub-Committee, for its 1994 "*Environmental Management Guide for Ontario Pits and Quarries*".

CLAY BRICK ASSOCIATION OF CANADA

Retained to review January 1991 "*Proposed Revisions to the Niagara Escarpment Plan*", by Ontario's clay brick manufacturers. Coordinated a team of industry and consulting specialists in an examination of available shales resources, industry trends, proposed policies, map changes and Escarpment Link annexation on clay products manufacturing. Principal author for CBAC submission "*Proposed Revisions to the Niagara Escarpment Plan*", May 1991. Participated in Plan Review Hearing, August 1991 to April 1992, as Environmental Engineer and Planner for Canada Brick and Brampton Brick. Long Environmental continues to be retained by Brampton Brick Limited and Hanson Brick Ltd. , formerly Canada Brick , for compliance, licensing, permitting and planning matters. Mr. Long was recently involved, as a Steering Committee Member, in the City of Brampton's Northwest Shale Resources Review, for its proposed urban boundary expansion and as the consultant to the Clay Brick Association of Canada on the Halton Region Official Plan and the Greenbelt Protection Act.

ONTARIO PITS AND QUARRIES

Mr. Long has been involved in more than 40 Ontario pits and quarries, producers of building stone, construction aggregates and industrial minerals. Several new license applications were approved without referral to a hearing, including Gormley's Tottenham Pit, 1990; Greenwood's East Garafraxa Pit, 1994; Duff's Erin Township Pit, 1995; and the Leslie Eramosa Pit, March 1997. He has acted as principal consultant for precedent setting applications, including Caledon Sand and Gravel's 80 hectare expansion; Brampton Brick's Cheltenham Quarry; and Canada Brick's Milton Brickworks development, within the Niagara Escarpment Plan Area. The November 1997 application, to expand Canada Brick's Streetsville quarry, was approved by Mississauga Council in February 1998 and the License was issued on May 1st, 1998. Mr. Long has participated in numerous studies of Ontario clay and shale resources, for clay products manufacturing, dimension stone, dolostone site searches and licensing construction aggregates and industrial minerals, since the late 1970s.



ALDERSHOT QUARRY AND BRICK PLANT, Canada Brick, now Hanson Brick Ltd.

Planning, engineering and advisory services for the Client's 174 acre Aldershot Quarry, purchased in 1990 from NSP Limited, the former National Sewer Pipe company. The west quarry was rezoned, for development of a \$60 million brick plant, for which Long Environmental was responsible for development of the overall site plan. Several Site Plan Amendments were completed. The stormwater management system was designed, including settling ponds with pumped discharge to Indian Creek, in 1998. Our services included the industrial wastewater Certificate of Approval, under the Ontario Water Resources Act, 1992 - 1999.

Replacement Site Plan, 2000 - 2004

CALEDON PIT EXPANSION, Caledon Sand & Gravel Inc.

Principal environmental and site planning consultant for 200 acre expansion of existing 560 acre sand and gravel pit on Highway 10 and Caledon First Line. Preplanning studies of natural environment, hydrogeology and mineral resources. Site Plans with groundwater monitoring; acoustical and dust controls; ecological landscaping; and plans to extract mineral resources from 20 metres below water table and within First Line right of way. Project includes amendments to *Caledon Official Plan*; *Niagara Escarpment Plan*, Section 1.1 Boundary Interpretation; NEC Development Permit; and Licence, under the *Aggregate Resources Act*, 1988-1994

ARA Replacement Site Plan for existing pit, 1991-1993

CARDEN QUARRY SITE PLAN, Essroc Canada Inc.

ARA Replacement Site Plan for 533 acre limestone quarry in Carden Township, east of Brechen. Analysis of surrounding quarry development and hydrologic regime, to develop plans for stream diversions. Preparation of new Sequence of Operations Plan, new processing plants and development of edge and pond standards for progressive rehabilitation, 1990-1991.

CHELTENHAM BRICKWORKS REDEVELOPMENT, Brampton Brick Limited

Environmental planning and engineering consultant for Brampton Brick Limited for the ecological analysis and design of site plans and services for a 245 acre shale quarry and brick manufacturing complex, situated on the Niagara Escarpment, adjacent to the Credit River, between the settlements of Cheltenham and Terra Cotta, in the Town of Caledon. Detailed environmental studies to derive criteria for mitigating measures and natural resources management. Design of special measures for communal water supply, Regional road improvements, and environmental management. Principal witness for successful hearings for NEC Plan Amendment, Development Permit and OMB Report, under the *Pits and Quarries Control Act*. Preparation of final site plans, specifications and tenders for site preparation, services, control systems and ecological landscaping. Preliminary and final approvals from CVCA, MNR under the *Lakes and Rivers Improvement Act* and MOE under the *Environmental Protection and Ontario Water Resources Acts*. Supervision during construction and ongoing monitoring of dust, groundwater, microclimate, noise, stormwater and progressive rehabilitation, 1980-1990

ARA Replacement Site Plan, 1993



HALTON QUARRY HAUL ROUTE ANALYSIS, Halton Region Legal Services

Retainer to evaluate the economics of alternative haul route options, for the Dufferin Aggregates limestone quarry in Milton, to convey shot rock from a new excavation area to the existing processing plant. Analysis of alternative measures to excavate and transport, including capital and operating costs of excavating equipment, loaders and trucks, with 20 year cash flow, to enable the Client to negotiate a lease rate for Dufferin's proposed crossing of Regional land. 1996

McKEAN QUARRY EXPANSION & SITE PLAN, Seeley & Arnill Aggregates Inc.

Site planning and environmental engineering consultant for 20 acre expansion and final rehabilitation concepts for 145 acre limestone quarry. Site studies include hydrogeology, vegetation and long-term progressive and final rehabilitation. Applications for NEC Development Permit and MNR Licence, including participation in successful Development Permit Hearing, 1989-1992.

Design of landscape plan and ARA Replacement Site Plans for 145 acre quarry. Development of sequential excavation and progressive rehabilitation, including Final Rehabilitation Plan for 100 acre lake. Site features include a mix of complementary activities, including waterfowl, marsh and lake habitat; upland wildlife habitat; mixed recreational activities; development of geological features for educational purposes; and establishment of permanent route for a portion of the Bruce Trail, 1991-1992.

Engineering consultant for road alignment and traffic safety analysis of downhill haul route, from McKean Quarry to Duntroon, on Highway 24. Survey of haul route and evaluation of alternative control measures, for control of loaded tractor trailers. Research to establish truck arrester bed design standards. Preliminary design of runoff detour and descending truck arrester bed, for approval of Simcoe County and MTO officials, 1988-1989.

MELANCTHON GRAVEL PIT, Strada Aggregates Inc.

Principal engineering and planning consultant for new 40 ha pit in Melancthon Township, Dufferin County. Advisory services to review alternative sites. Site planning, including scoping and coordinating archaeological, environmental, hydrogeological, soils, traffic, dust, noise and related studies and reports. Preparation of planning reports, documents and Site Plan design. Advisory and support services during approval process and haul route agreement negotiations, including one day OMB Hearing. Assistance during monitoring, site preparation and initial pit operations, 2001-2004.

MILTON BRICKWORKS REDEVELOPMENT, Canada Brick Limited

Environmental planning and engineering consultant for redevelopment of brick manufacturing plant for the production of 150 million clay bricks per year. Coordination of site studies, including acoustical, air quality, hydrogeological, hydrological, landscape analysis and design, traffic, visual and water quality. Preparation and submission of Development Permit Application to NEC and site plan proposals to the Town of Milton and the Region of Halton. Negotiation of approval conditions with Niagara Escarpment Commission and approval agencies; preparation of preliminary design for mitigation works; and attendance at Niagara Escarpment Development Permit Hearing, 1988-1990.



SHALE QUARRY MANAGEMENT PLANS, Canada Brick Limited

Long Environmental prepared management plans for Canada Brick's quarries at Aldershot, Burlington, Milton, Niagara and Streetsville. The studies, completed over 18 months, involved a team of ceramic engineers and geologists. Core drilling was completed at each site. Shale quality was assessed in detail and reserve estimates were prepared. Three ring binder manuals were prepared for each quarry, with chapters on geology, ceramic properties, mining, reserves, compliance assessment, permitting, contingency plans and environmental management, 1998 - 1999.

TOTTENHAM PIT, Gormley Aggregates Ltd.

Environmental engineering and planning for sand and gravel pit expansion on an 80 acre property in the Town of Caledon. Predesign studies and monitoring of existing pit operations and expansion area. Detailed monitoring of groundwater quality and quantity. Mineral resource analysis and preparation of site plans, control measures and rehabilitation for an estate residential after use. Assistance to resolve official plan and zoning amendments and licence, without referral to OMB. Design of control systems and ecological landscaping plan for rehabilitation of existing and proposed pit and pond. Advisory services for licence conditions and development agreement. Supervision during construction and monitoring of dust, groundwater, landscaping, noise and rehabilitation, 1985-1991.

ARA Replacement Site Plan, 1990.

EXPERT TESTIMONY AS ENVIRONMENTAL ENGINEER AND PLANNER BEFORE:

COMMITTEES OF ADJUSTMENT

CONSOLIDATED HEARING BOARD

EXPROPRIATIONS ACT - HEARINGS OF NECESSITY

LAND DIVISION COMMITTEES

MUNICIPAL COUNCILS

MUNICIPAL PLANNING BOARDS/COMMITTEES

NIAGARA ESCARPMENT DEVELOPMENT PERMIT HEARING OFFICERS

NIAGARA ESCARPMENT PROPOSED PLAN HEARING OFFICERS, 1981-1982

NIAGARA ESCARPMENT PLAN REVIEW HEARING OFFICERS, 1991-1992

NIAGARA ESCARPMENT PLAN AMENDMENT HEARING OFFICERS

ONTARIO MUNICIPAL BOARD



S.E. YUNDT LIMITED

RÉSUMÉ SHERALYN (SHERRY) E. YUNDT

- EDUCATION:** University of Waterloo, Master of Arts (Geography) M.A.
University of Guelph, (Honours Geography) B.A. (Hons.)
- MEMBERSHIPS:** Aggregate Producers' Association of Ontario
Canadian Institute of Mining and Metallurgy
Director, Canadian Land Reclamation Association
Fellow, Institute of Quarrying (U.K.) FIQ
Society of Mining Engineers of AIME (U.S.A.)
- QUALIFICATIONS:** Presented and published over forty papers on aggregate resources, the aggregate industry and pit and quarry rehabilitation.
Authorized by the Minister of Natural Resources to prepare and certify site plans under the Aggregate Resources Act.
- AWARDS:** Dr. Edward M. Watkin Award 1998 from the Canadian Land Reclamation Association in recognition of major contributions to land reclamation in Canada

Noranda Land Reclamation Award 2003 the most prestigious award given by the Canadian Land Reclamation Association for an outstanding record of contribution and achievement in reclamation both nationally and internationally

PROFESSIONAL EXPERIENCE:

July 1989 to Present President, S.E. Yundt Limited

Responsibilities:

- ◆ providing consulting services related to aggregate resources and the aggregate industry
- ◆ advising individuals, companies and groups on communicating with government at all levels
- ◆ counseling companies, associations, the Federal and Provincial Governments and municipalities on aggregate issues and the Aggregate Resources Act
- ◆ producing reports and information on aggregate resources planning, management and licensing
- ◆ co-coordinating projects or cases before the Ontario Municipal Board
- ◆ expert witness or advisor at hearings related to aggregate projects
- ◆ advising on rehabilitation of pits and quarries

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**January 1988 to June 1989 Executive Co-coordinator, Economic Policy
Cabinet Office, Government of Ontario**

Responsibilities:

- ◆ provided leadership to both Cabinet Office staff and line Ministries in policy development
- ◆ provided support and advice to the Chairmen of various Cabinet Committees and Deputies Committees, the Secretary of Cabinet and the Secretary of the Policy and Priorities Board
- ◆ wrote and reviewed reports and minutes of Cabinet Committee meetings

**March 1984 to December 1987 Director, Land Management Branch
Ontario Ministry of Natural Resources**

Responsibilities:

- ◆ provided direction for the management of Crown Land in Ontario
- ◆ promoted awareness of the use of Crown Land as a development tool
- ◆ provided services to the Ministry of Northern Development & Mines as an officer with respect to Crown Land title documents, dispositions for mining lands and mine hazards
- ◆ co-ordinate the Ministry's road access activities to open up new resources
- ◆ administrated the land acquisition budget and program
- ◆ ensured future availability of aggregate resources and fuel minerals
- ◆ administered and updated legislation as required, for example, the Public Lands Act, the Pits and Quarries Control Act, the Petroleum Resources Act and the Mining Act

**June to September 1981 Acting Director, Management Planning and Analysis
Ontario Ministry of Natural Resources**

Responsibilities:

- ◆ assisted senior management in the Ministry to identify their operational information needs
- ◆ designed and implemented a management information system

**September 1977 to March 1984 Supervisor, Industrial Minerals Section
Ontario Ministry of Natural Resources**

Responsibilities:

- ◆ managed the Industrial Minerals Section with responsibility for provincial policy matters for industrial minerals including aggregates
- ◆ supervised and provided leadership to a multi-disciplinary staff composed of engineers, economists, planners, geologists and administrative staff
- ◆ developed and recommended policy, standards, guidelines and legislation, for example, the development and approval of the Policy Statement on Mineral Aggregate Resources under the Planning Act
- ◆ member of a committee that wrote new provincial legislation, i.e., the Aggregate Resources Act
- ◆ monitored and liaised with consultants and professors awarded major provincial contracts

**January 1976 to September 1977 Executive Secretary, Ontario Mineral Aggregate Working Party
Ontario Ministry of Natural Resources**

Responsibilities:

- ◆ acted as the Executive Secretary to the Ontario Mineral Aggregate Working Party. This Working Party formulated "A Policy for Mineral Aggregate Resource Management in Ontario"

May 1974 to January 1976

**Planning Consultant, Proctor & Redfern Limited
Engineering & Planning Consultants**

Responsibilities:

- ◆ prepared specific site studies for aggregate producers
- ◆ prepared mineral aggregate policies in official plans and by-laws for local municipalities
- ◆ coordinated the "Eastern Ontario Mineral Aggregate Study" for the Ministry of Natural Resources

January 1972 to March 1974

**Assistant Secretary (Planning),
Sand and Gravel Association Limited, London, England**

Responsibilities:

- ◆ coordinated and managed planning matters for the Association
- ◆ prepared planning policies for the industry
- ◆ liaised with various government agencies, environmental groups, sport bodies and agricultural groups on behalf of the sand and gravel industry

1971

**Geological Assistant, Industrial Minerals Section
Ontario Department of Mines**

Responsibilities:

- ◆ analyzed aggregate resources in the Toronto Centred Region resulting in publishing "Mineral Resources of the Toronto Centred Region" with Dr. D.F. Hewitt