

A REAL 'AGGREGATES 101' COURSE

A new credit course - PLAN 474 / 674 - *Aggregate Resources Planning, Development and Management* - was introduced in the Fall term of 2015 at the University of Waterloo as an elective in the School of Planning. The course exposed participants to a variety of topics associated with aggregate resources (sand, gravel and stone), important but contentious issues in planning and resource management in Ontario and elsewhere. It is believed that PLAN 474 / 674 is the first of its kind in Ontario, and possibly in Canada.

Products produced by pits and quarries are critical to infrastructure and urban development, but are subject to a variety of land use, environmental, transportation and other issues and probable conflicts. The course provided students with exposure to many topics related to aggregate resources including: geology, economics, technical requirements for licensing, Site Plans, peer / technical reviews, resource management, rehabilitation and after-use.

Initially, students were introduced to a series of core topics related to aggregate resources - geology, economics, pit / quarry licensing requirements (including required background studies, Site Plans and Planning Act aspects), interdisciplinary and policy issues, rehabilitation and after-use strategies, and Provincial Plans related to aggregate resources. Additional topics included conflicts and conflict resolution, critical / technical or peer review of aggregate resources development proposals, cumulative effects of multiple extractive operations, water resources issues related to pits and quarries, recent or significant OMB / ERT decisions regarding aggregate resources, and future issues in aggregate resources planning, development and management. Students were exposed to a range of information sources, techniques and practices used in the evaluation of resources, development proposals and current management practices. Emphasis was placed on practical applications and 'real world' issues. Among the topics discussed was "*A Blueprint for Change A proposal to modernize and strengthen the Aggregate Resources Act policy framework*" document, released in October 2015.

Assignments for the course involved a series of required readings, group Field Report assignments, and an individual research project. There were a full-day and two part-day field investigations. A total of seven sites were toured - active pit and quarry operations, rehabilitated lands with successful after-uses, and several pre-extractive properties for which Licence applications were pending.

PLAN 474 / 674 is currently aimed at senior undergraduate and Graduate students with interests in environmental and rural / urban fringe planning, and in resources management. However, for current professionals, the course would be appropriate, after 2017, as an elective on the on-line and part-time Graduate Diploma in Planning or the Master of Planning programs at the University of Waterloo. In 2016 and 2017, the course will be offered on-campus only, but is available to practitioners under a non-degree admission policy.

PLAN 474 / 674 may be of specific interest to planning and resource management professionals working in regional planning, consulting, resources management, and in the aggregates industry itself. If it is intended that the course is to be taken for either undergraduate or Graduate credit, a formal program application would, however, be necessary.

PLAN 474 / 674 might be considered as a 'microcosm' of planning - land use, economics, environmental, transportation, conflict resolution and other issues related to aggregate resources planning, development and management.

Further information is available from Wayne Caston, P.Geo., FGC, RPP, MCIP, PLAN 474 / 674 principal lecturer and course coordinator at awcaston@uwaterloo.ca, or from the [School of Planning](#) (University of Waterloo, Waterloo, Ontario N2L 3G1).