

Day One - Track Two

Wednesday, March 21st, 2018

10:00 a.m. – 10:30 a.m.

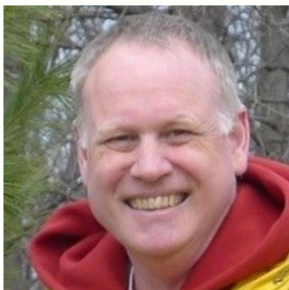
Lessons Learned from ESC Implementation at Tottingham Airfield

Presenters: Matthew Graham and Peter Nimmrichter, Amec Foster Wheeler

Biography



Mr. Graham is a Senior Water Resources Specialist, a Chartered Water and Environmental Manager (MCIWEM), Chartered Scientist (CSci), and a Certified Professional in Erosion and Sediment Control (CPESC). He has been engaged in the delivery of a wide range of flood and water management projects in Canada and the United Kingdom. He specializes in the planning, design, and construction of erosion control, flood and water management projects. He has demonstrated the ability to develop and implement innovative solutions and has proven leadership skills that promote a collaborative team environment.



Peter Nimmrichter is a Professional Engineer licensed to practice in Ontario. He holds the positions of Associate Water Resources Engineer and Climate Resilience Program Lead for Canada. His water resources expertise spans about 30 years and is focused on urban stormwater management and flood risk assessment and mitigation planning. Peter has been working in the climate resilience field for about 15 years and his expertise is focused on climate change impacts and vulnerability assessment of infrastructure, adaptation planning, resilience engineering and sustainability planning and implementation.

Abstract

Off-site discharge of sediment is a recognized environmental consideration during project development of all scales and types; however, erosion and sediment control (ESC) is often handled using a “one-size-fits-all” approach (i.e., perimeter silt fencing at the start, hydroseed at the end, with little emphasis on implementation and monitoring in between). To protect downstream riparian habitat and meet regulatory requirements developers need an adaptive approach that enables the selection of ESC measures best-suited to the site conditions and, through regular site inspections, monitoring and feedback, alteration and enhancement of these measures to adjust to changing or unanticipated conditions. This requires distinct planning, implementation, and monitoring phases as well as buy-in from contractors and owners. This paper will focus on the importance of flexible ESC planning and working in tandem with contractors and owners to navigate through these phases and develop an ESC plan that is clear and implementable while also establishing a feedback loop that encourages ESC planners to learn what is and what is not working. The intent of this presentation is to share the experience of the challenges of ESC planning and implementation using Tottenham Airfield as a case study. Ongoing development of this site has required fill and grading operations over a four-year period, thereby requiring a 'living ESC Plan'.

Learning Objectives

1. Discuss challenges and opportunities of developing a living ESC Plan to support the development of a large airfield in Tottenham, Ontario;
2. Share experiences of stabilizing fill slopes using a combination of linear rock check dams, Erosion Control Blankets (ECBs), supplemented with biotic earth and hydraulically-applied mulch; and
3. Discuss methods to develop a performance-based standard to close-off a stabilized construction work area.