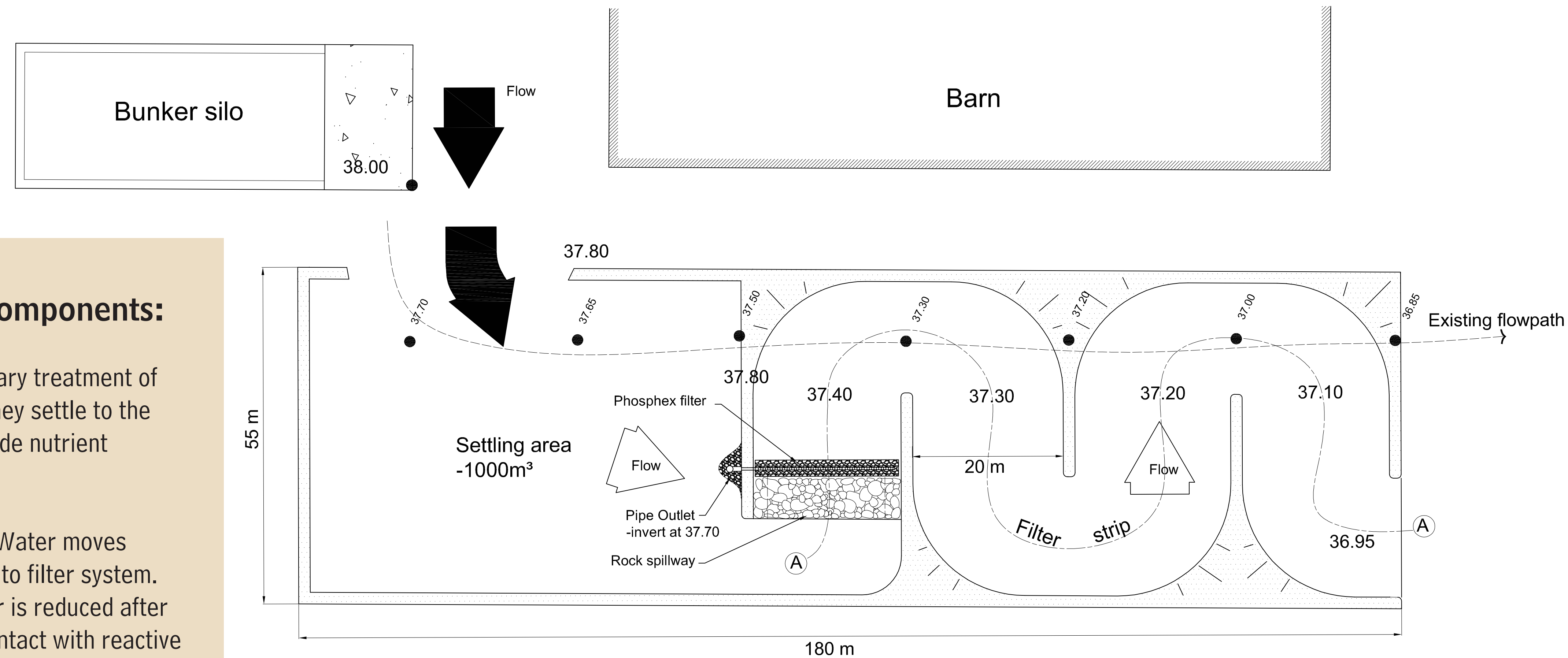


Ontario's First Farm-scale Phosphorus Filter

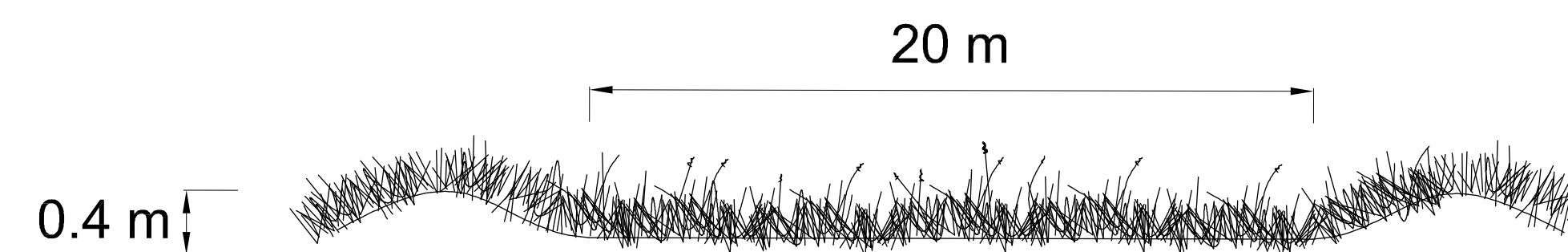
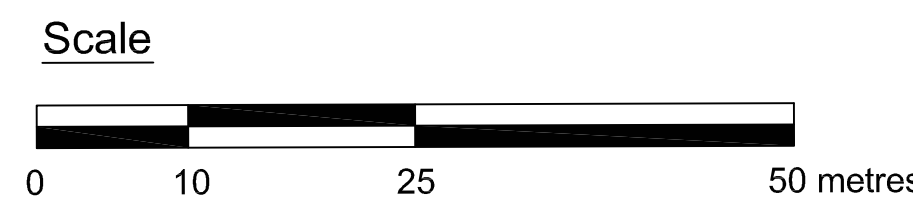
What: Reduce phosphorus in bunker silo leachate.

Why: Phosphorus is the key nutrient triggering harmful algae blooms in the Thames River and Lake Erie. Reducing phosphorus sources in rural and urban areas will help to improve water quality significantly.

How: The phosphorus filter will absorb and immobilize dissolved and non-soluble forms of phosphorus and other contaminants, and destroy any waterborne pathogens, viruses and bacteria.



Notes:
 Runoff to flow from yard area passively into settling area.
 Standpipe inlet to allow outlet into phosphex filter, then onto grassed filter strip.
 Flows in excess of settling area/inlet capacity to flow uniformly over rock-lined spillway onto filter strip.



Typical Cross-section - Filter Strip

Filter System Components:

- Settling area - Primary treatment of solids in runoff as they settle to the bottom. Plants provide nutrient uptake and filtering.
- Phosphex™ filter - Water moves through drop inlet into filter system. Phosphorus in water is reduced after 12 to 24 hours of contact with reactive media made from slag (recycled steel industry byproduct donated by U.S. Steel Canada - Lake Erie Works).
- Serpentine vegetated filter strip - Water infiltrates into ground as it moves through orchard grass filter strip. Orchard grass takes up high levels of phosphorus, biologically tying up the remaining extra phosphorus.
- Monitoring equipment - Agriculture Canada will conduct continuous monitoring of this site to ensure flow rates are performing correctly for optimal phosphorus removal.



Project
Wetland Development

Location
G Wensink
 Township of East Zorra Tavistock
 Oxford County

UPPER THAMES RIVER
 CONSERVATION AUTHORITY

1424 Clarke Road, London, Ontario N5V 5B9
 Contact: B Glasman

Date: June 2013

