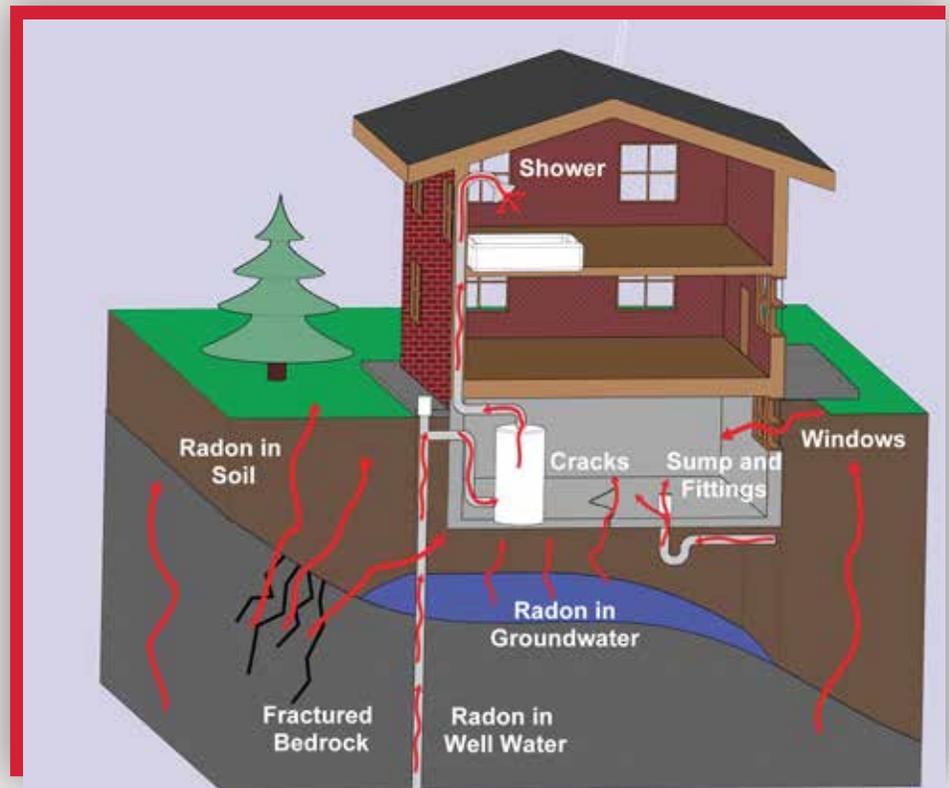




RADON MANAGEMENT

HOW RADON ENTERS A HOUSE

Radon gas can occur naturally in soil, originating from decomposing uranium in the ground. It has been detected across North America; some locations have a higher concentration of Radon gas than others. It is important to consider a Radon gas mitigation system that will restrict movement of Radon gas into a building.



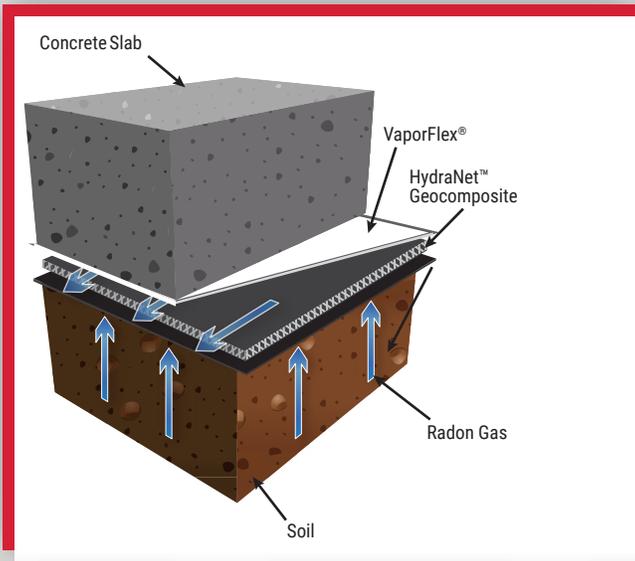
INNOVATIVE SOLUTION TO MANAGE RADON GAS

The most common and efficient radon mitigation method is soil depressurization. A soil depressurization system requires interstitial space to move soil gases between the ground and the air barrier system. Our HydraNet™ composite gas permeable layer, in combination with a synthetic vapour barrier can serve as an efficient and cost-effective solution for radon mitigation.

HydraNet™ and VaporFlex® connect to a radon vent pipe that extends to the exterior of the building terminating in a safe location. In areas where a higher concentration of radon is expected, a fan is typically installed to create a negative pressure in the space between the air barrier system and the ground. This active depressurization system can effectively exhaust soil gases outside the building. (Please see Radon Management Geosynthetic System Detail 1.)

MANUFACTURED IN CANADA.

HydraNet™ Composite is made in Canada at our ISO 9001 certified facility. The geotextile is bonded to one or both sides of a HydraNet™, creating a drainage structure that can be used between layers of geomembranes, soil layers, and in many other situations.



Drainage geocomposites allow gases to flow much faster than in a granular drainage media. In terms of waterflow, a 5mm thick drainage geocomposite can manage an equivalent flow to a 150 mm thick granular drainage layer (GDL). The specified permeability of a GDL typically varies from 10^{-1} m/s to 10^{-4} m/s and the under slab application can typically have hydraulic gradients of 0.01 to 1.0. The flow rate comparison is provided in the table below:

Type of drainage material	Thickness	Flow rates, $i=1.0$
HydraNet composite 220-2-6	5 mm	25 l/min.m
Granular material (compacted) <small>K value= $1 \times 10^{-3} \text{ m/s}$</small>	150 mm	9 l/min.m

HydraNet™ Geocomposite

CHOOSE A SUSTAINABLE SOLUTION

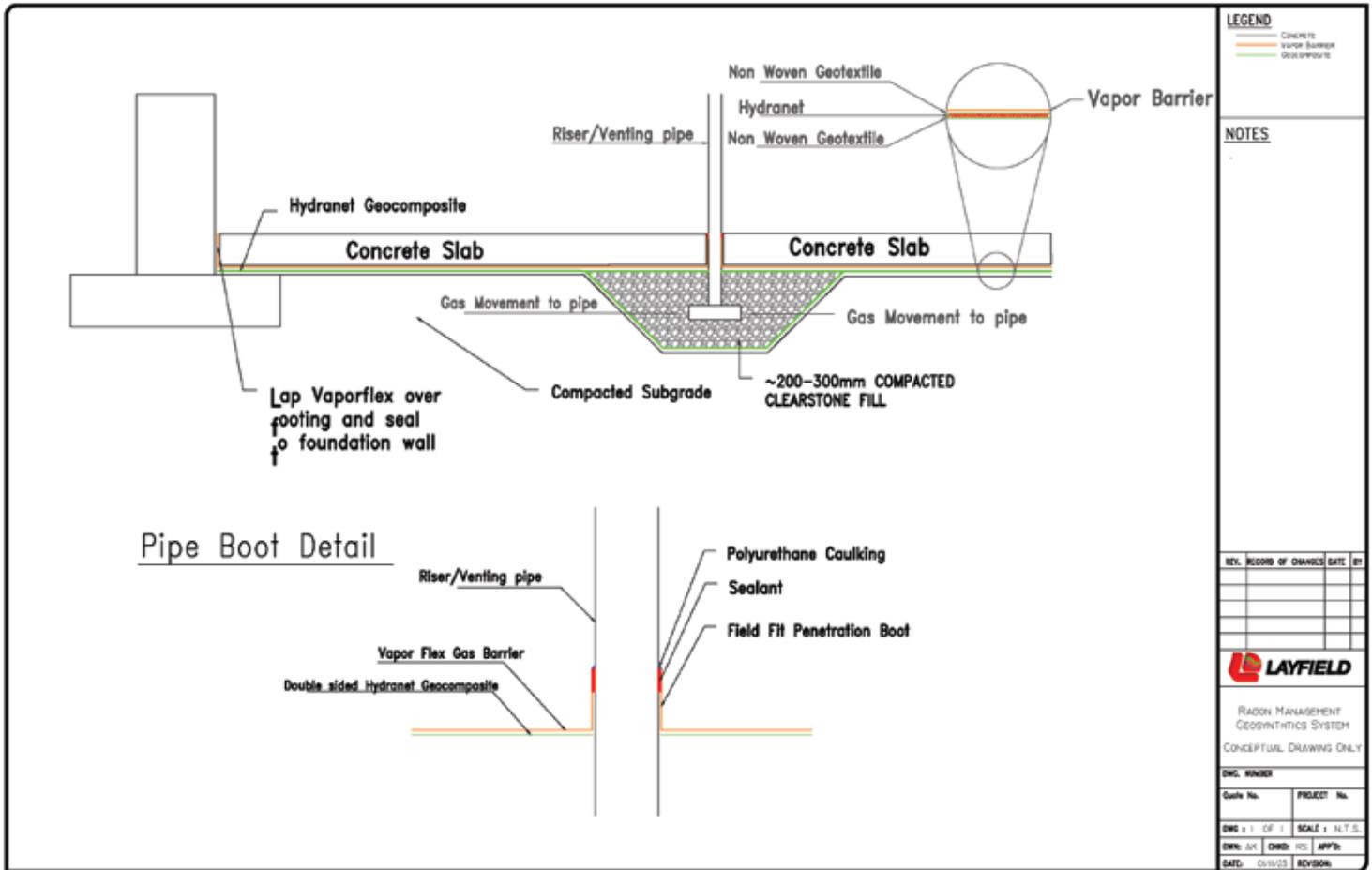
- *HydraNet™ uses up to 15% recycled content and is both environmentally friendly and cost effective.*
- *The replacement of granular fill with a geosynthetic also helps lower the CO2 emissions.*

VaporFlex® 10 and 15 mil Vapor Barrier manufactured by Layfield has been tested and determined to help reduce radon gas permeance when used as part of a properly designed radon gas mitigation system. Specifically, our determination is based on our Vaporflex® product being tested in accordance with K124/02/95 method C of ISO/TS 11665/13 and was found to have the following radon diffusion coefficients:

Product	Radon Diffusion Coefficient
VaporFlex, 10 mil	$2.2 \times 10^{-11} \text{ m}^2/\text{sec}$
VaporFlex, 15 mil	$2.4 \times 10^{-11} \text{ m}^2/\text{sec}$

VaporFlex® 10 and 15 mil Vapor Barrier

RADON MANAGEMENT GEOSYNTHETIC SYSTEM



Detail 1. Conceptual Drawing

