

Practice Note: Flood Protection Assembly Dikes

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One of the flood protection methods that was adopted following the 1997 Red River flood was demountable structural dikes - often referred to as assembly dikes. Seepage control works installed as permanent features including demountable structural dikes, often referred to as assembly dikes, require qualified professional design in accordance with local guidance and regulations.

Typically, they have an engineered foundation and some form of seepage control works as permanent features. The remainder of the dike, vertical members, panels and other components, are to be stored on site for erection when a flood condition is imminent.

Dikes installed as permanent features involve a variety of design activities to ensure new or rehabilitated works are constructed and maintained to an appropriate standard. Qualified professionals with suitable expertise must be involved in the design. This would typically include structural engineers and geotechnical engineers with demonstrated dike design experience. Water resource engineers, biologists and other professionals may also be required to design specific project components. It should be recognized that, typically, an individual practitioner may not be sufficiently qualified to assume responsibility for all aspects of such a design.

Given that, with the passage of time, the availability and suitability for assembly of the unassembled components of assembly dikes may be problematic, installation and storage instructions for the unassembled components are critical to long-term performance. Designers should also make note of the potential for future liability claims associated with the performance of the installation.

Several authorities having jurisdiction (i.e. local municipality, City of Winnipeg, Manitoba) have developed guidelines and regulations that are available via their offices and practitioners providing services for such installations should review and consider the most current versions.