

Bridleway Improvements Specification

WILT18 – Stockham Marsh, Wiltshire

Reference: WILT18-EB-PLA-Works Specification

Version: v01.00

Issued on: 17th July 2026

Objective

The proposed works comprise the installation of two 450 mm diameter twin-wall HDPE culverts beneath a raised bridleway embankment to maintain existing drainage connectivity whilst providing an all-weather crossing for bridleway use. The revised design has been developed to address the planning authority's comments regarding separation of materials, pipe support, embankment construction and scour protection.

Construction

Culvert Construction

Each culvert shall comprise a 450 mm internal diameter twin-wall HDPE pipe complying with BS EN 1295-1 and installed on a prepared formation. Existing topsoil, vegetation and any unsuitable or organic material shall be removed beneath the embankment footprint to a minimum depth of 150 mm. A non-woven geotextile separation membrane complying with BS EN 13252 shall be laid on the prepared formation and beneath all imported materials.

Pipe bedding, haunch and surround shall comprise SHW Class 6N selected granular material extending continuously along the full length of each culvert. The granular surround shall extend from beneath the pipe to a minimum of 150 mm above the pipe crown and at least 150 mm beyond either side of the pipe barrel. Pipe installation and backfilling shall be undertaken in accordance with the manufacturer's recommendations and the Specification for Highway Works (SHW) Series 500.

Embankment Construction

The culvert embankment shall be formed using selected site-won fill complying with SHW Series 600. Material shall be free from topsoil, roots, peat, organic matter and other deleterious material. Fill shall be placed in layers not exceeding 200 mm thickness and compacted to a minimum of 95% Maximum Dry Density.

Embankment side slopes shall generally be constructed at a gradient of 1V:2H. To ensure adequate compaction at the embankment edges, the embankment shall be temporarily over-built during construction and subsequently trimmed back to the finished profile following compaction.

Bridleway Surface

The finished bridleway shall comprise a 130 mm thick Type 1 sub-base complying with SHW Clause 803, laid over a geotextile separation membrane and compacted in accordance with SHW Series 800 requirements.

Scour Protection

To prevent erosion and washout around the culvert ends, inlet and outlet protection shall be provided using 300 mm thick riprap stone armour comprising clean, durable, angular quarried stone with a nominal size of 150-300 mm. Riprap shall be laid on a geotextile filter membrane complying with BS EN 13252 and keyed into the embankment slopes around the pipe ends. Scour protection shall extend a minimum of 1.0 m upstream and 1.0 m downstream of each culvert.

Materials Separation and Drainage

Geotextile separation membrane shall be installed beneath the embankment, beneath riprap protection and at interfaces between dissimilar materials to prevent the migration of fines and maintain the long-term performance of the structure. The culverts shall remain free-draining and maintain the existing flow paths through the site.