

ANDERSON & GLENN

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By email

Mrs Joanna Gass,
Environment Agency
Senior Environment Officer (p/t Mon, Tues, Thurs and Fri)
Land and Water South Environment Management Team
Lincs and Northants

04 September 2015

Dear Mrs Gass,

Weston, St. Mary's Church

Justification for using a trench arch system for one WC to the north side of the church.

Weston church has a small but thriving Sunday School which the vicar is keen to encourage parents and their children to attend. The survival of this operation is however dependant on a suitable WC being provided in the church.

The only location that the Diocesan Advisory Committee were able to agree, following a site visit, was near to the location of the existing redundant boiler house on the north side of the church.

The Anglian Water Wastewater map shows that the nearest manhole is to the south west of the church at manhole 2002 which has a cover level of 4.28 and an invert level of 2.59. This would involve a long route through the churchyard, which would need to follow the church path to avoid potentially disturbing graves as it is a well filled churchyard. The minimum distance possible is about 115m and that would involve quite a number of bends in the pipe to follow the line of the path.

At a gradient of 1 in 100, for a low peak flow rate and a minimum depth of cover for the pipe of 300mm that would give a depth from the start of the drain of 400mm. As the table shows it is theoretically possible for a connection to be made to the sewer. However the distance from the gate of the churchyard to the manhole is 50m which would involve a highways contractor digging up the pavement or the road and expensive partial road or pavement closure.

When we looked into a similar situation for Old Leake Church at Boston, where the route was less complicated but it involved having to cross a busy road to get to the sewer we had an indicative quote from a reputable drainage contractor to carry out this work. That is attached to the email.

Mary Anderson, BA, B.Sc., AA Dip (Cons), IHBC, FRSA, AABC, RIBA.
Dr John Glenn, PhD (Architecture), AA Dip (Cons), FRSA, MCMI, MI Hort.
Architectural and Landscape Consultants for Historic Buildings and Gardens.
Restoration Management, Access Audits, Planning Inquiries, Urban & Landscape Design.
Specialists in the maintenance and restoration of Ecclesiastical Architecture.

The trench arch system would be a lesser cost to the church and has been used successfully on a number of church projects where the use of the WC is limited and cannot be justified in terms of cost of expensive sewer connections.

Yours Sincerely,

Mary Anderson

For Anderson and Glenn

St. Mary's Church Weston near Spalding

Drainage chart – ignoring for the time being intermediate ICs or rodding points en route

Gradient taken as 1:100

Manhole/IC Ref	Cover Level	Invert Level	Depth to Invert	Distance
Church start	4.01	3.61	400mm	
Church gate	4.3	3.29	1.01	61
Footpath at gate	4.43	3.26	1.17	3
Access at 2002	4.28	2.78	1.5	48
AW 2002	4.28	2.59	1.69	