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**Flood Risk Assessment 50,000 m³ and landscape impact, winter storage reservoir
Church Farm Seething.**

Introduction.

The report below details the construction and design aims in relation to flood risk and landscape of the proposed reservoir.

Reservoir design.

The proposals will fall within the 1975 Reservoirs Act as amended by the Water Act, design and construction works will be completed to the standards recommended by the Act. Statutory safety inspections are required annually.

The construction will involve a balanced cut and fill operation, no soil will leave or be brought onto site. The reservoir will be lined with natural clay found at the site.

Landscape impact.

To reduce both the dam break volumes and the visual impact of the proposals, low and wide banks has been designed. The embankment maximum height is 2.7m, this is below the height of the trees in the adjacent wood.

The wood adjacent to the south boundary effectively screens the low reservoir banks from views to the south and south west.

On completion the reservoir will be grassed to allow sheep to graze the banks.

Theoretical Dam break.

The reservoir is sited on a level plateau area however there is a fall to the north west. 25,000m³ is retained above the lowest natural adjacent ground level. This would result in water from an uncontrolled release spread out across the fields and then flowing to the water meadows surrounding the Little Beck and the River Chet. The closest houses are 500m away.

Conclusion.

The theoretical, dam break flood will spread out across the flat fields and flow toward the Little Beck and River Chet.

At no point would the theoretical dam break cause a risk to life.

It should be noted that no dam breach has occurred, in the UK, of a structure within the 1975 Reservoirs Act. Any reported incidents have only occurred to impounding dams, damming a river valley. No incidents have been reported with a non impounding, pump filled, reservoir. The proposal at Seething is a non impounding pump filled reservoir with a formalised overflow with a statutory safety inspection regime.

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