

ZE811 – Proposed fibre broadband cabinet, Wardentree Lane, Spalding, Lincolnshire

Flood risk assessment note Rev A

For Up Connect

August 2023

1. This note presents an assessment of the sources of flooding (as defined in the Flood and Water Management Act) and their potential impact on a proposed fibre broadband cabinet adjacent the Wardentree Lane/Benner Road roundabout in Spalding, Lincolnshire, PE11 3ZN.
2. The note has been prepared following a topographical survey and a review of the South Holland 2016 Strategic Flood Risk Assessment (SFRA).
3. The site extends to less than 100 m² of undeveloped scrub/verge and is approximately centered on Ordnance Survey grid reference 525379, 325136. Existing ground levels at the site are in the order of 3.5 m AOD (refer to the appended topographical survey).
4. The site forms part of a Proposed Main Employment Area (PMEA) in the in the Local Plan (Policy 7). The proposed use, whilst not a direct employment use, would reasonably be considered as compatible with the PMEA.
5. The proposed development will be an “Eco Pop” cabinet (see image below and appended plans). The floor will be raised, and equipment inside the cabinet will be set above the floor level. The internal equipment will be 1.2 m above ground level, or at a level of 4.7 m AOD conservatively.



Image 1 – Typical installation

6. The site lies in Flood Zone 3 (see Figure 1 overleaf) and benefits from defences (note that areas which benefit from flood defences are no longer identified on the Flood Map for Planning). The site is identified in the SFRA mapping as lying in a fluvial (river based) flood risk area.

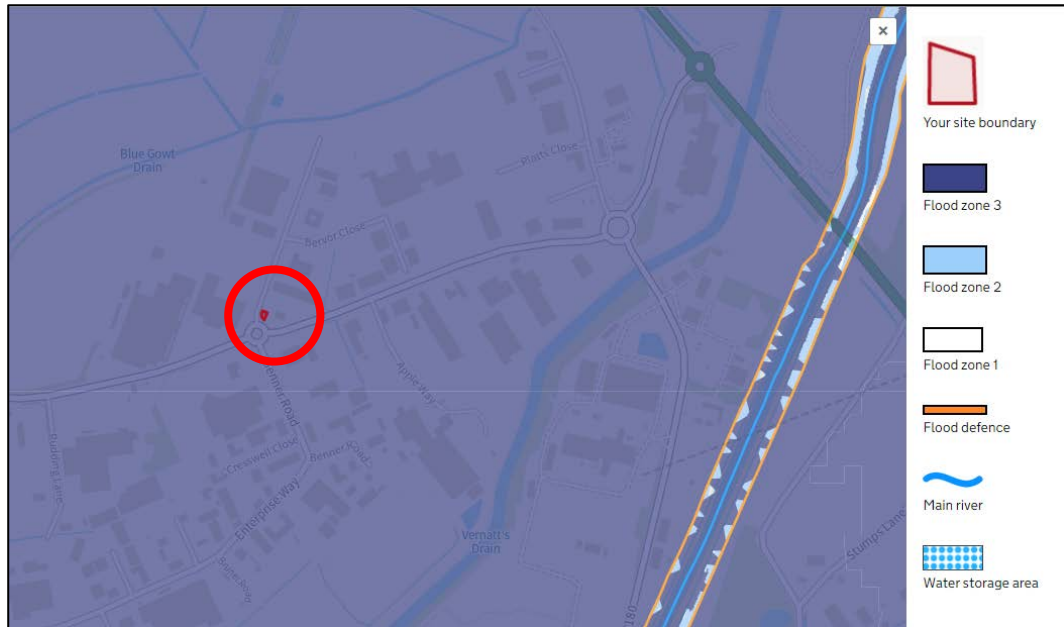


Figure 1, extract from the Flood Map for Planning © Crown copyright and database rights 2023 Ordnance Survey 100047325.

7. The residual flood depth mapping from the 2016 update of the SFRA (drawing title “Residual Peak Depth District – Year 2115 0.1 % Tidal Event Probability” revision 2) shows the on-site depth of water as between 0.25 m and 0.5 m (the light amber band). The drawing notes confirm that the flood depths shown are the result of “*direct overtopping of defences, where this would occur, together with breach failure which is assumed could occur at any point along the defences*”. The proposed equipment will therefore be set more than 1 m above the ‘worse case’ depth of floodwater resulting from a defence failure and overtopping during the 1 in 1,000 annual probability event in 2016.

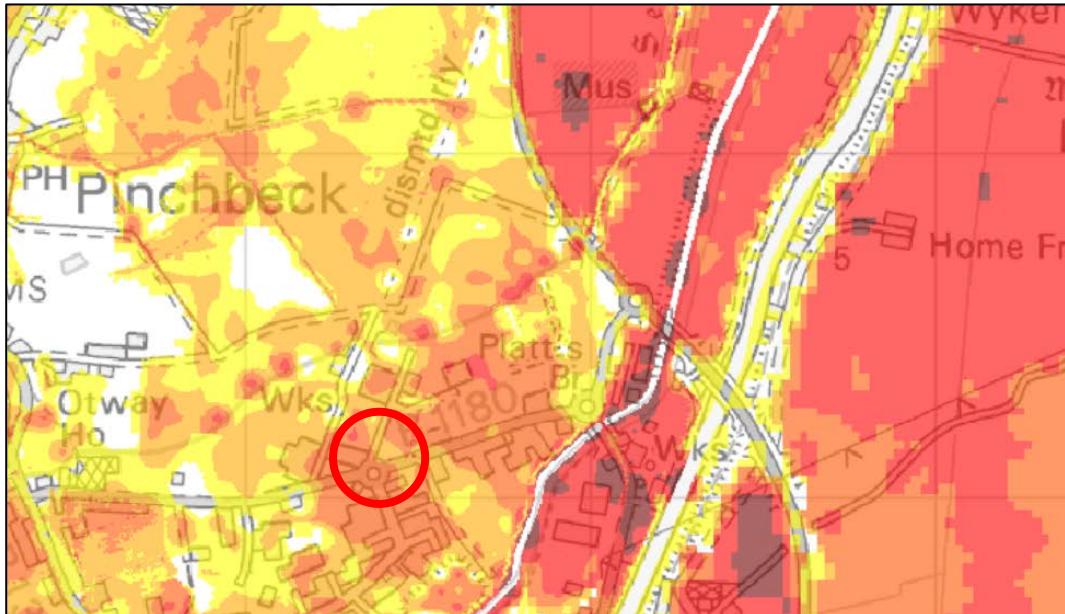


Figure 2, extract from the depth mapping for the 2016 1 in 1,000 annual probability event from the SFRA update © Crown copyright and database rights 2023 Ordnance Survey 100047325

8. Surface water flood mapping for the low risk category (the category which results in the deepest flooding) in Figure 3 shows a patch of flooding to the rear of the site. The flooding is most likely the result of pooling in the lower lying area behind the site (see appended topographical survey) and is not considered likely to reach a level where it would affect the equipment in the cabinet (i.e. 4.7 m AOD).

9. The proposed unit is small and would not reasonably be considered to displace sufficient flood volume to generate a measurable increase in flood levels in the area. The size and location of the unit would not reasonably generate enough rainfall runoff to notably increase surface water flows in the catchment.



Figure 3, extract from the low risk category surface water flood map showing depths of water © Crown copyright and database rights 2023 Ordnance Survey 100047325

10. The site lies in the Pinchbeck Marsh catchment of the Welland and Deepings internal Drainage Board (IDB). The catchment is a pumped catchment (with the low level network draining to the Pumping Station to the north-east of the site. A failure of the pumps may result in a build-up of water in the catchment. However given that the pumps are maintained and operated by the Board the chance of failure is low. The low likelihood of failure, combined with the equipment being at a level of 4.7 m AOD means that the risk from the IDB drainage network is low enough to be considered as acceptable.

11. The area's soils are described as free draining on Cranfield University Soilscape maps. The geology of the area is made up of the Folkestone, Sandgate, and Hythe Beds. Appendix F of the SFRA lists the area as having up to a 25 % chance of groundwater emergence (groundwater appearing at the surface). The Section 19 flood report notes that the risk of groundwater flooding in the area is low. Any emergence of groundwater would tend to run overland following the topography as shallow flow.

12. The area is not affected by a reservoir inundation zone (see Figure 4 for an extract from the reservoir inundation map).

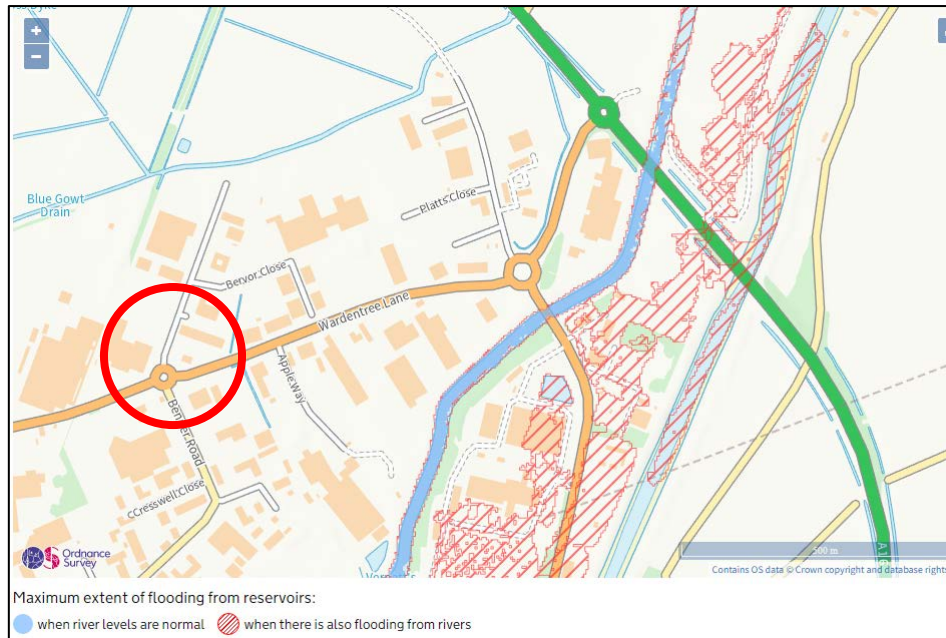


Figure 4, extract from the reservoir inundation map © Crown copyright and database rights 2023 Ordnance Survey 100047325

Conclusion

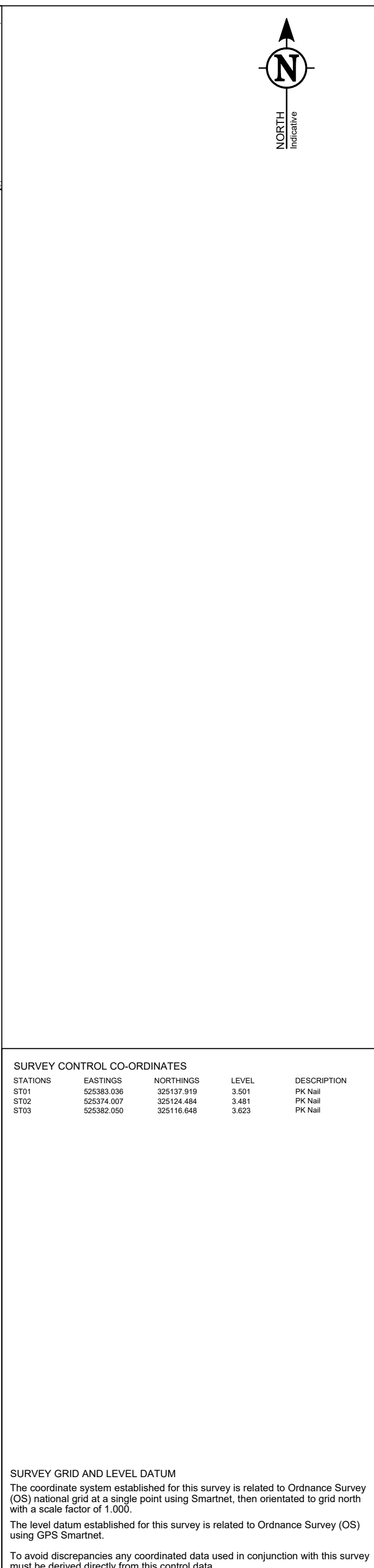
The proposed equipment will be 1.2 m higher than the ground level at the site, sitting at a level of circa 4.7 m AOD and is not therefore considered to be at a significant risk of flooding from the sources identified in this document.

The proposed unit would not result in a notable and/or measurable increase in flooding in the catchment as a result of displacement of floodwater or an increase in surface water runoff.

Appended information

Topographical survey

Proposed plans



DRAWING NOTES

Topographical Surveys

Trees are drawn to scale showing the average canopy spread. Descriptions and heights should be used as a guide only.

All building names, descriptions, number of storeys, construction type including roof line details are indicative only and taken externally from ground level.

All below ground details including drainage, voids and services have been identified from above ground and therefore all details relating to these features including; sizes, depth, description etc will be approximate only. All critical dimensions and connections should be checked and verified prior to starting work.

Detail, services and features may not have been surveyed if obstructed or not reasonably visible at the time of the survey.

Surveyed physical features may not necessarily represent the legal boundary line.

Measured Building Surveys

Measurements to internal walls are taken to the wall finishes at approx 1m above the floor level and the wall assumed to be vertical.

Cill heights are measured as floor to the cill and head heights are measured from cill to the top of window.

General

The contractor must check and verify all site and building dimensions, levels, utilities and drainage details and connections prior to commencing work. Any errors or discrepancies must be notified to Survey Solutions immediately.

The accuracy of the digital data is the same as the plotting scale implies. All dimensions are in metres unless otherwise stated.

The survey control listed is only to be used for topographical surveys at the stated scale. All control must be checked and verified prior to use.

© Land Survey Solutions Limited holds the copyright to all the information contained within this document and their written consent must be obtained before copying or using the data other than for the purpose it was originally supplied.

Do not scale from this drawing.

©Land Survey Solutions Limited 01/01/2010 Original Sheet Size A2H