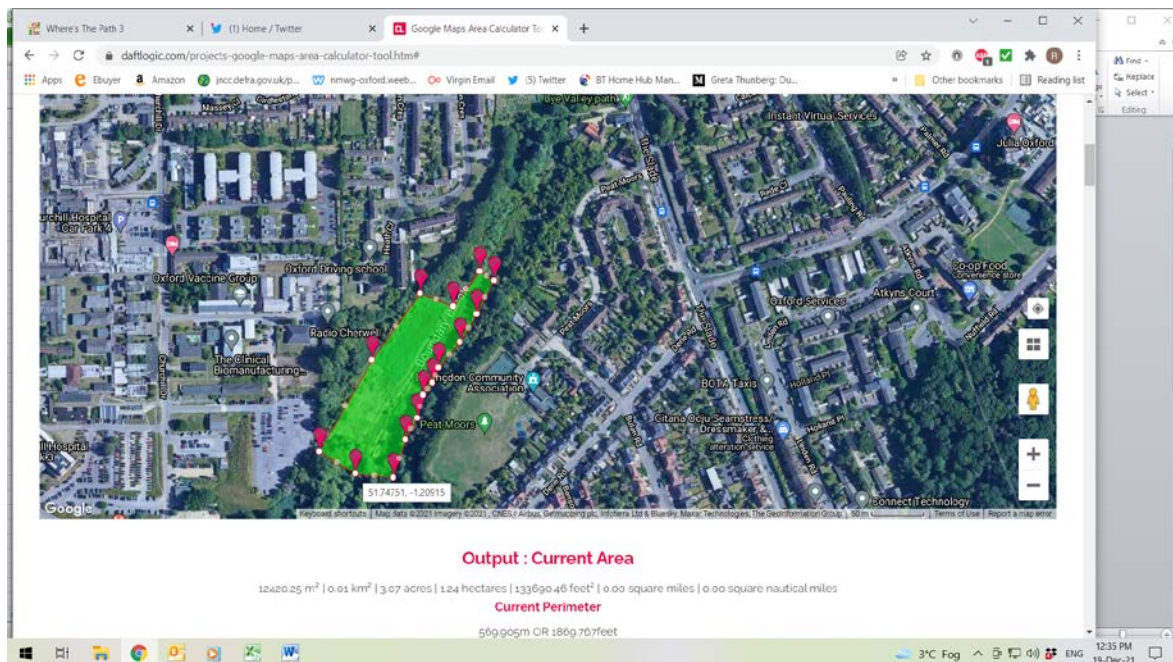


Carbon in the Lye Valley SSSI, North Fen Unit 1,

J A Webb estimate on 07.02.2022 using Darcey Haldar's 2021 project data. Outlined below is the wet peat area of the Lye Valley SSSI North Fen unit 1 from my knowledge of the site.



My estimate of the **exposed fen peat in LNVF SSSI unit 1** using google area calculator is **1.24 ha** from the above outline.

The north fen SSSI unit I is stated to be **1.8037ha** according to the NE SSSI citation. However this area includes an amount of made ground dry clay and rubble bank on the east side, sloping up to the edge of Peat Moors recreation field. I have left this out in the area perimeter drawn above.

Carbon Stock calculation in LNVF unit 1 (visible exposed peat area only, goodness knows how much peat might be buried under the east side rubble bank).....

Darcey Haldar studied cores from three transects within the SSSI (see her project). From these three, the carbon value varied from 148 tonne per ha to 302 tonne per ha. The average is **229.33tCha**.(see page 49 of her project)

Multiplying this by the area of visible wet peat (1.24ha) in the **North fen unit 1 of the SSSI**:

So $229.33 \text{ tCha} \times 1.24 = \mathbf{284.37 \text{ tonnes of Carbon}}$ stored in North Fen Unit 1 of the SSSI

[information from Good Energy, my electricity supplier, is that one tonne of carbon is = carbon stored in lifetime of a full grown oak tree, thus in the North Fen we have the carbon equivalent of 284 full grown maybe 200yr old oak trees; however in peat, carbon should be safe forever if the peat is kept wet, unlike oak trees which eventually will die and decay, releasing CO2 to the air.]

Not all of this north fen area is now still accumulating peat as too dry – some springs no longer function due to development around; eroded stream dries peat for metres into fen, oxidation must be occurring . In what wet area of the SSSI might peat be actively forming? I have yet to try and work out where peat is still accumulating and where it might be oxidising. Also of interest but harder to calculate is what the carbon store in the whole bigger area of the LNR owned by OCC might be.