

From Friends of Lye Valley (FoLV)



To : planning@oxford.gov.uk

Re Application: 21/02639/FUL Land West of 75 Town Furze,
Oxford OX3 7EW

Second Objection 07.10.2026

*[Friends of Lye Valley are a voluntary group that work to protect and preserve the extremely rare and threatened habitat of **alkaline, calcareous spring/seepage lowland fens (irreplaceable habitat as in the NPPF)** found in Lye Valley SSSI and LWS. See weekly news of wildlife and conservation activities on our website (<http://www.friendsoflyevalley.org.uk/>) and on our social media (<https://www.facebook.com/friendsoflyevalley/> and [@friendlyevalley.bsky.social](https://www.bsky.social/friendsoflyevalley))]*

Friends of Lye Valley maintain their strong objection to this two house proposed development within 50m of Lye Valley South Fen unit 2 of the SSSI. **All the points in our first objection dated 03 Nov 2021 still apply.**

See our **previous objection** for points covering:

- harm to landscape setting, character and appearance
- approval would set a damaging precedent, likely further urban ribbon development of other plots along Lye Valley Road in a green infrastructure area
- proposed car parking on site

Climate Change threat and our work

This group is focussed on positively helping the fen wildlife to thrive; our practical conservation work has prevented local extinction of many rare and beautiful species, now in strong and safe populations as a result. The fen lives or dies by water supply; so we also work to preserve the fen's

water supply system, promoting **rain water infiltration (Sponge Headington project) re-greening of urban areas** and fighting for the **survival of every precious remaining green softly vegetated soil area** within the fen's upslope water supply zones.

This is crucial with the hot and dry climate change-driven summers here now damaging the fen (2018, 2022, 2025, and 2026) and this problem will worsen in future - more severe heat and droughts are expected – we are currently in a **'Super El Niño event'** where next summer 2027 is predicted to be even hotter/drier than 2026. Recharge of water that feeds the fen spring/seepage zones is already much reduced by previous urban development soil-sealing. **The fen is already on 'life-support' in terms of essential water supply. For it to survive, soil-sealing in the catchment must decrease and green catchment areas must actually increase.**

What has happened of relevance to this application since 2021?

For the last five years volunteers from FoLV and the Oxford Conservation Volunteers (OCV) have continued working in the Lye Valley South Fen SSSI to a Natural England management plan agreed by all landowners. This has been with support from staff of the City Council's ODS and involves continued annual cutting and raking and scrub control.

'Favourable' habitat condition (Natural England assessment) has been maintained by **hundreds of volunteer hours per year**. The rare plants on site are increasing in populations due to this work; just two examples being the increase in numbers of key species like the **Marsh Helleborine orchids** (many thousands) and the iconic **Grass of Parnassus** (our logo flower). This last was nearly extinct at only 22 flowers in the south fen before 2009 and now thriving at over 2000 flowers estimated in 2026. Grass of Parnassus seed originating in the south fen has enabled restoration of this species to abundance in the Lye Valley North Fen and seed from here has enabled its restoration in three other important fen restoration sites near Oxford, all facilitated by FoLV.

Regular ecological studies of the South Fen continue to reveal increasing evidence of the huge biodiversity and increasing ecological worth of the site to Oxford City's **wildlife heritage** (most recently grant-funded invertebrate biodiversity survey in 2025).

In the years since this application was lodged, a **badger sett has developed** on the application site, above the fen, this species could be negatively impacted by development.

New hydro-geological information and impact assessment

A rare spring-fed calcareous alkaline wetland such as the **Lye Valley SSSI south fen** has very particular and special **water chemistry** and there is a complex pattern of water flow to the spring/seepage emission zones. The **tufa** (limescale, calcium carbonate)-forming chemistry in emerging **groundwater** is required for the health of the habitat and the support of its special biodiversity of plants and invertebrates. Only green vegetated sponge-like soil areas really create the right water chemistry via rain penetration and underground water treatment (see **https://www.friendsoflyevalley.org.uk/about/how_calc_valley-head_spring-fen_works.pdf**).

Since 2021 and for the Oxford Local Plan 2042, Oxford City Council commissioned a '**Lye Valley Hydrogeological Impact Assessment**' from **JBA Consulting, (June 2025)**. This is viewable in the Local Plan documents at:

<https://www.oxford.gov.uk/downloads/file/4381/gre018---lye-valley-sssi-hydrogeological-impact-assessment-report>

This study identified water supply routes for the Lye Valley SSSI fen. Diagrams showing that this proposed development above the SSSI South Fen unit 2 is within the following fen water catchments: '**Modified Surface Water Catchment**', '**Direct Run-off Zone**' and most importantly the '**Direct Groundwater Supply Catchment**'. These may be viewed in the Local Plan via this link:

[Lye Valley Site of Special Scientific Interest \(SSSI\) Hydrogeological Impact Zones](#)

The sensitivity of Lye Valley fen sites to development in in these catchments and evidence requirements any application needs to submit are discussed in the council's **Technical Advice Note (TAN) No. 19 on Lye Valley, Sept 2026**, Available to read/download at:

<https://www.oxford.gov.uk/downloads/file/4734/technical-advice-note-19---the-lye-valley>

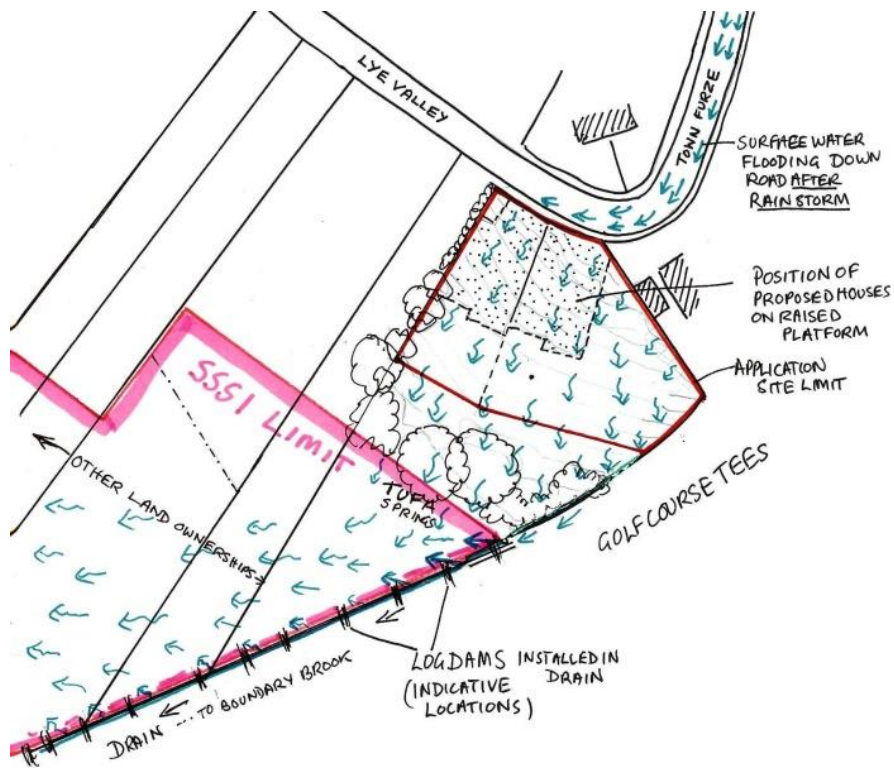
Peat amount estimation and archaeological interest/geological or 'Earth Heritage' importance.

For the last few years investigations of the sediments under the surface of the south fen unit have been studied by staff (Professor Adrian Parker) and students from **Brookes University**. Most recent coring of the site in **June 2025** revealed **considerable quantities of peat and tufa (limescale)** along with sands and clays lower down. Carbon content of peat and total **carbon storage** in the south fen is in process of calculation currently in an undergraduate project. Results will be supplied to Natural England for their **peat mapping** and thus will be publically available. Peat (a carbon sink) forms where the water table is at the surface and is thus downslope of the spring/seepage emergence zone at the SSSI north-east limit. A transect of corings in this recent study (early results) reveal that **peat of at least 40cm depth is forming within 60m of the application site**. This peat formation will be significantly dependent on water supply in terms of volume and pattern of supply (flow paths) from the application site. Oxford Local Plan 2042/2045 **Background paper 009** on protection of Natural Resources and **draft policy R6 on soil quality** is relevant, the fen peat must stay wet to prevent oxidation and CO2 emission. Analyses of cores taken from the south fen by Brookes students in previous years have also revealed archaeological interest – evidence of the chemical impact (lead levels) of Civil War activities locally. Radiocarbon dating funded by Brookes University discovered that the fen started forming as long ago as **14,000 years B.P at the end of the last Ice Age**. The fen is thus truly an ancient ecosystem and the history it contains important to Oxford.

Climate Change drying-effect on the fen mitigated by hydrological work

Drain-blocking with water re-direction saved the south fen in recent Climate change-induced severe droughts. Hot and dry summers in the last eight years threatened the survival of the south fen flora and fauna by damaging drying. Fortunately, water was retained in the fen by Natural England's grant-funded drain-blocking (2016) with spring water (groundwater) re-direction into the centre of the site from the south-east marginal drain. The City Council staff and FoLV carried out this work. This **drain water supply originates on the housing application site** (spring and surface flow) as in the diagram below. This shows the current situation of beneficial water redirection; flow from the application site now wets fen areas in a wide part of the south fen **including other land-ownership strips** to the west. It is crucial water flow from the application site is undamaged by development; the survival of the whole

South Fen in future depends on what happens to this re-directed water flow that will help keep the fen alive in coming years.



Sketch map to show application site (red outline) SSSI limits (pink) land ownership strips and water flow result from log damming of southern marginal drain, 2016. Drawn by Judy Webb from the definitive SSSI limits map supplied to FoLV by Natural England.

Evidence required by Natural England (NE)

FoLV have been waiting for five years but have seen no evidence of information connected to this application needed as follows (from Natural England Comment Document dated 09 December 2021):

- *'Details should be provided by the applicant to demonstrate that the development will not result in a change in the specific water quality conditions supporting the features of interest within the SSSI.*
- *Further information is required to demonstrate that the development will not have any significant impact on groundwater levels and flow paths supporting the SSSI, including further groundwater level monitoring to demonstrate how groundwater levels change seasonally.*

- *Confirmation that any material imported to site for the purposes of earthworks must be certified as clean, non-reactive and free from any potentially contaminative substances to prevent changes to the water chemistry or contamination of the groundwater supplying the SSSI. ' We note NE then say 'Without this information Natural England may need to object to this application.'*

Have appropriate studies been carried out and this information provided? If so, the documents should be available to view in a new public consultation.

What constitutes a '**significant impact**' (second bullet point above)? We would argue that any negative effect at all from development to this south fen site will be 'significant' because it is already deprived of spring water due to previous urban development and highly threatened with further water shortage by current and future Climate Change hot and dry summers. The cumulative effect of this development on top of these other challenges could be the end for the fen.

Evidence needed according to the City Council's TAN 19

Newly published in the Local Plan, the City Council's **TAN 19** regarding developments in the Lye Valley Catchments is of great importance. From the **TAN 19 it appears** this application does **not** fall into the category of '**small scale development**' as listed under section 5.3 so more rigorous and detailed evidence of no impact on water flow and water chemistry to the fen will be required, **mirroring that requested by Natural England.**

Should Infiltration SUDS be seemed sufficient, **location is important.** This application proposes geocellular underground crates and permeable paving upslope above houses and just off Lye Valley Road. A quick internet search reveals upslope of houses **is not a recommended location for such underground crates.** Water from these SUDS will flow some into the porous ground of Beckley Sands, but some downslope underground flow is to be expected though the imported rubble and house foundations. The potential for foundation damage and **washing pollutants out from the rubble (builders waste?) down to the fen below should be obvious.** In addition the SUDS infiltration underground crates appear to be far too close to the west boundary with the adjacent

landowner, possibly causing flooding on their land after our future climate change-induced deluge rainstorms.



Figure 13: Proposed Drainage layout

4.2.4 Runoff Water Quality

According to CIRIA SuDS manual, the Simple Index Approach (SIA) is a method indicated to estimate water quality management requirements for roofs, individual driveways and low traffic roads – Table 7. The water treatment strategy for this particular development will therefore be based on the SIA.

A snip from the SuDS location diagram West Waddy/Hydrointernational. Hydrological Assessment for Land West of 75 Town Furze, Sept 2021

TAN19, Section 5 on pages and 13 and 14 explains the types of detailed evidence that any fen catchment development will be required to submit alongside a planning application. A previously agreed close housing development is relevant, as follows.

Comparison with the requirements for a previous development

FoLV have much experience of the requirements of a development on city council land in the water catchment closely adjacent to the North Fen section of Lye Valley SSSI (**Land East of Warren Crescent**

CT/01555/CT3) for 10 houses for Oxford City Housing Ltd.

Application passed in 2016 with a large soakaway/ swale infiltration SUDS system). This case is an example of the hydrogeological assessment required by the council for such a close development to the fen. FoLV (advised by an expert hydrogeologist) were involved in the negotiations over the following evidence gathering protocol, paid for by the City Council:

- Baseline year (2018) of monitoring water depth and annual level fluctuations (with data-loggers) and bi-monthly water chemistry analyses in **6 dipwells** on the development site and **three locations** at spring emergence points in the adjacent dependent North Fen. Two of the boreholes were located in the area where the SUDS soakaway/swale was to be located.
- Baseline year of chemical analyses included measurement of the following: organic carbon, ammoniacal nitrogen, fluoride, pH, phosphate, sulphide, nitrite, nitrogen, chloride, nitrate, sulphate, alkalinity, heavy metals, hardness as CaCO₃, phenols, BTEX, MTBE, TPH, PAH, SVOCs and VOCs.
- After housing development, bi-annual water chemistry monitoring for 5 years of all those chemical compounds in dipwells to determine that beneficial water chemistry for the fen is unchanged and no pollutants were detectable from the development. This monitoring is still on-going in 2026.

Should this development of two very large houses near the south fen be allowed, a similar protocol of a comprehensive hydro-chemical study in dipwells for a baseline year, plus five years follow-up water level and chemistry monitoring as above would be the least the south fen deserves, as it is of the same importance as the North Fen section of the SSSI. The expense of all this would need to be borne by the applicant, with an expert hydrogeologist employed to report to the council and NE annually for those 5 years. Independent expert assessment would then be needed.

In summary, some Key Points

Distance of any development in the catchments from the fen is very important. The risk of having a negative impact increases the closer to the fen any housing proposal is planned. Developments at the far outer reaches of the calculated catchments are likely to have far less impact on fen hydrology than developments very near to the fen such as this (see comment in TAN 19).

Yes SUDS will always be required for a catchment development, **but for developments very near to the fens** (such as **21/02639/FUL**) our view is that **SUDS will not be good enough as mitigation**, very near the fen there is a big chance that normal underground water supply routes/water chemistry may be seriously disrupted and detrimentally changed. Obviously this can happen by soil-sealing over a large area (previously permeable) and putting all run-off water from that sealed area into the smaller area of the SUDS soakaways (deprive one soil area of water, overload another soil area with large quantities of rain water).

We re-iterate our view that with housing development on a previous greenfield site very close to the fen will result in detrimental **soil-sealing (estimated 540 m²)** removing the sponge-like rain water-absorbing action of the green vegetated area on the upper slope. The impact of development, even with infiltration SUDS upslope, is that the – flow pattern, volume and chemistry of surface and groundwater supply to a dependent fen down-slope is altered unpredictably. All SUDS decline in effectiveness as they silt-up and no future regular maintenance can be enforced in a private site like this. SUDS are good at reducing flood risk offsite, they are not designed to help spring-fens. **In this very close location, they are not adequate to replicate the pattern of water supply flows and specific water chemistry needs of a rare calcareous, alkaline, spring/seepage (groundwater) irreplaceable fen at all, let alone in perpetuity.**

In consideration of all the above points and those presented in more detail in our first objection of 03 Nov 2021, please refuse this planning application.

From: Members of the Committee of Friends of Lye Valley:

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