Phase 1 Desktop Contamination Report

In support of:
Full Planning Application to –

North View, Violets Lane, Furneux Pelham, Herts
Date: Feb 2023

EXECUTIVE SUMMARY

- The report has been prepared to assess the potential for ground contamination to be present in relation to the proposed residential dwelling, parking and landscaping.

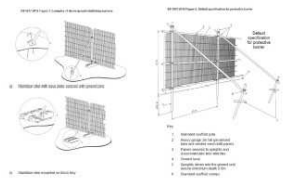
- The proposed development site is an L shape and covers an area of approximately 0.1 hectares. The site is bounded by private residential dwellings with gardens paddocks and agricultural fields form the remaining boundaries. Access to the site is via an existing access way connecting to the highway.

- The site appears to have been undeveloped throughout most of its history apart from the existing properties on the western part of the site. The surrounding area has generally become developed since World War II with sporadic residential developments.

- The site comprised a large semidetached residential home with private garden. The eastern portion of the site formed by a large open paddock. No other contaminative land uses were observed within 250m of the site.

- Current and historical uses of the area surrounding the site are not considered to represent potentially significant sources of contamination.

1:200 Proposed Bio-Enhancement Site Plan



Land North - North View, Violets Lane, Furneux Pelham, Buntingford, SG9 0LF

Fig.1 OS Extract

INTRODUCTION

General

- The purpose of the study was to evaluate the contamination status at the site and assess the risk based on the past uses of the site and the proposed end use.

Planning Status

- The proposed scheme, covered by East Herts District Council Planning Department is for a residential development of a single dwelling parking and landscaping. The proposed site layout is shown in Appendix A.

- This desktop study was produced to assist in the assessment for a full planning application process.

SOURCES OF INFORMATION

The following has been relied upon as sources of information for this report:

- Ordnance Survey Historical Maps
- Planning Flood Maps
- Geology of Britain Viewer – British Geological Survey
- Aquifer designation – Environment Agency
- Radon Data – UK Radon Mapping

SITE DESCRIPTION AND SETTING

Site Location

- The site is located at North View, Violets Lane, Furneux Pelham, Herts. The site location is shown below.

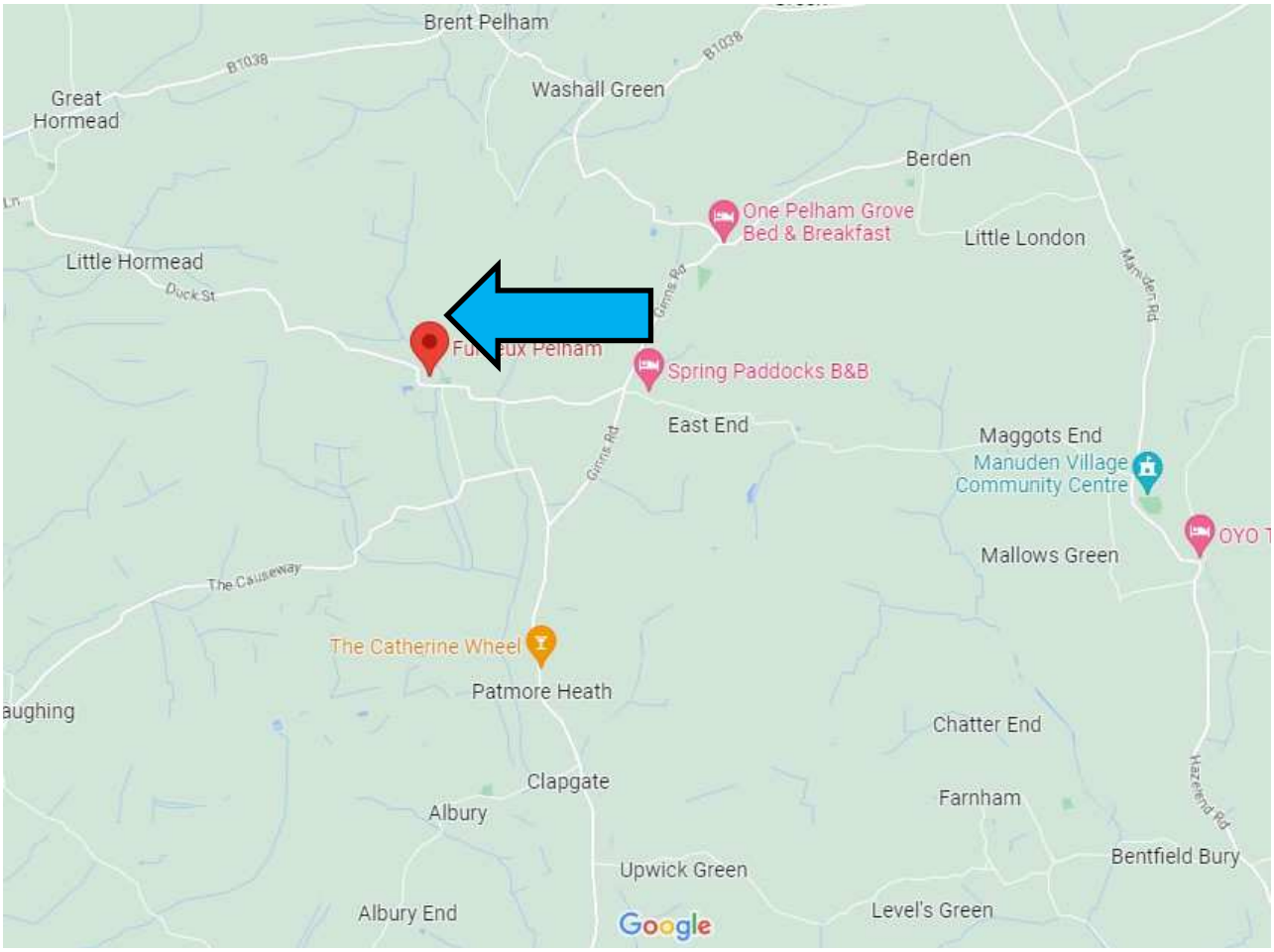


Fig 2. Site Location Map

Site Description

- The proposed development site is an L shape and covers an area of approximately 0.1 hectares.
- The site is bounded by private residential dwellings with gardens paddocks and agricultural fields form the remaining boundaries.
- Access to the site is via an existing access way connecting to the highway.

Fig 3. OS Extract

Proposed Use:

- The development is for the construction of a new build dwelling.
- It is anticipated the construction of the unit will be on traditional strip footings with masonry external envelope.
- Formal garden space/amenity will form part of the proposal.

Walkover Survey

- The walkover survey was undertaken on 2nd February 2023
- The site comprised a large semidetached residential home with private garden. The northern portion of the site formed a large garden and open paddock.
- The site has a continuous gradient from East to West.
- Underground services at the site are not known.
- No overhead cables were present in the immediate vicinity.
- The surrounding land is populated with residential homes and agricultural land.
- The historic Brewery site situated to the West of the site has been converted into residential units for some considerable time and is not considered to present a risk to the proposed site.
- No other contaminative land uses were observed within 250m of the site.

HISTORICAL MAP SURVEY

Maps

A review of relevant historical maps for the area surrounding the subject site has been undertaken and is summarized below. The historical maps are included below:

- Map Data: Hertfordshire O/S Mapping Data 1916 - 1:2500.
- The site is shown with the residential use with open agricultural land to the East and brewery to the West.

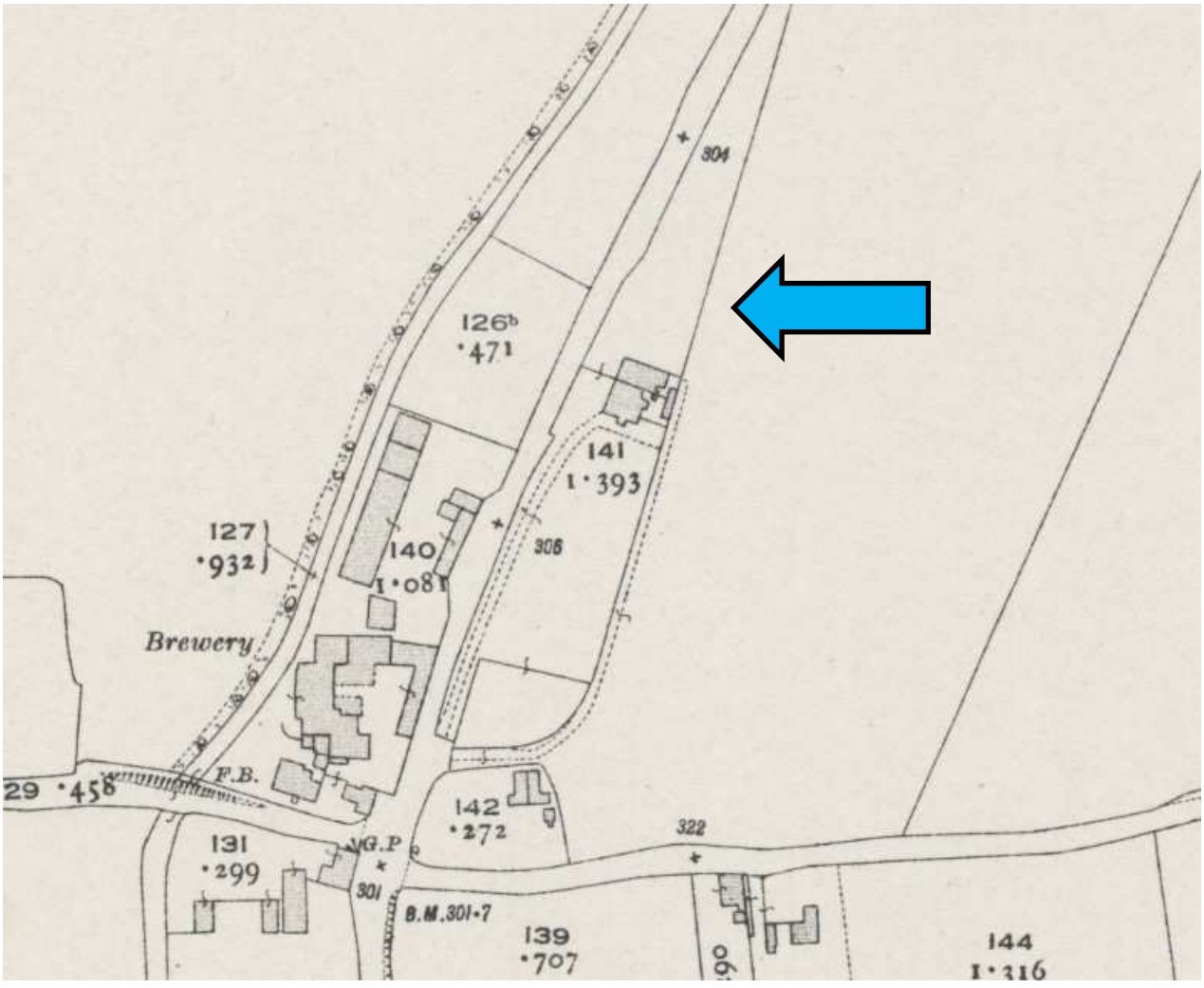


Fig 4. 1916 OS

- Map Data: Hertfordshire O/S Mapping Data 1933 - 1:2500
- The site is shown with the residential use with open agricultural land to the East and brewery to the West.

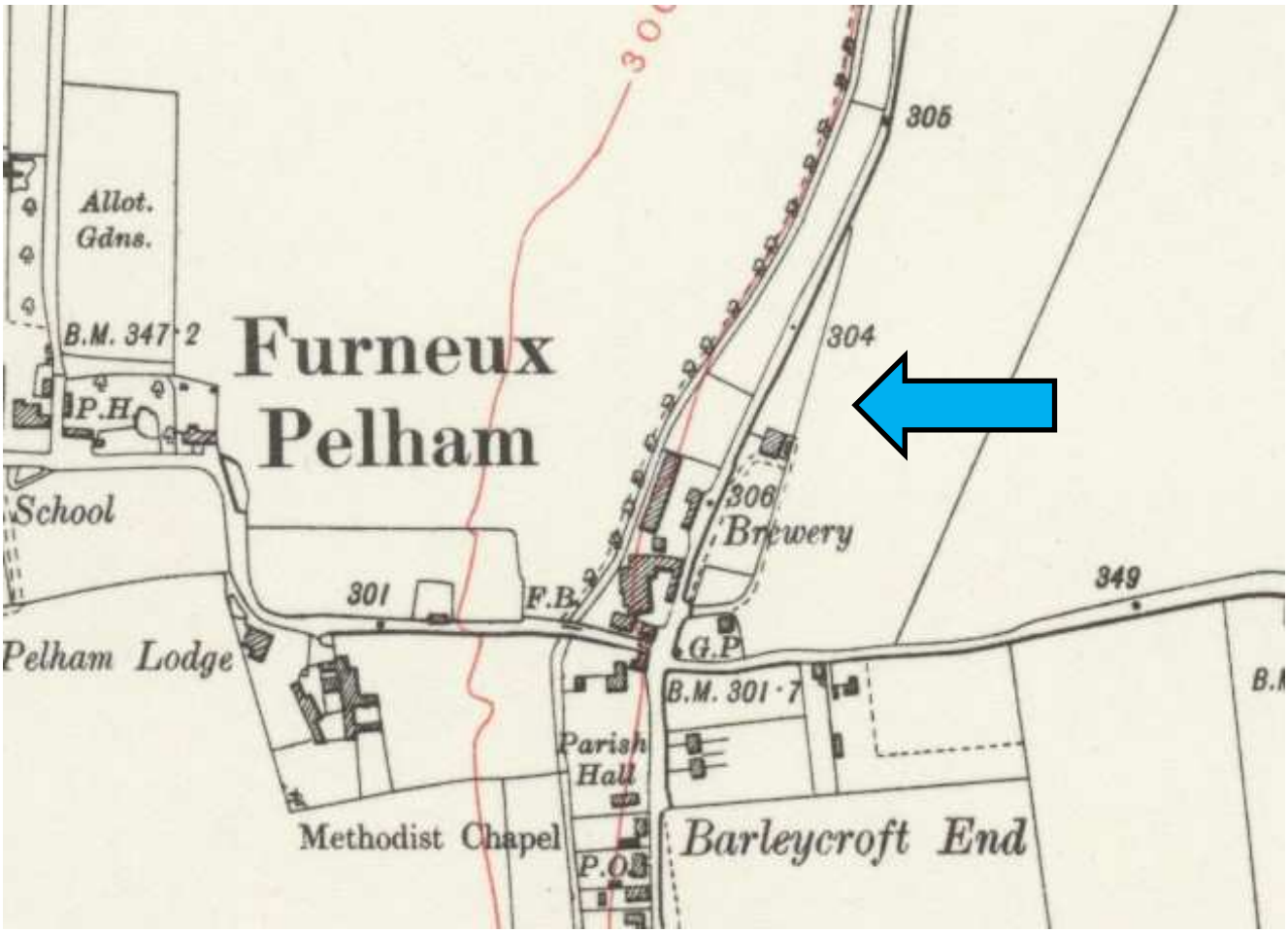


Fig 5. 1933 OS

- Map Data: Hertfordshire O/S Mapping Data 1944 - 1972 - 1:2500
- The site is shown with the residential use with open agricultural land to the East and brewery to the West.

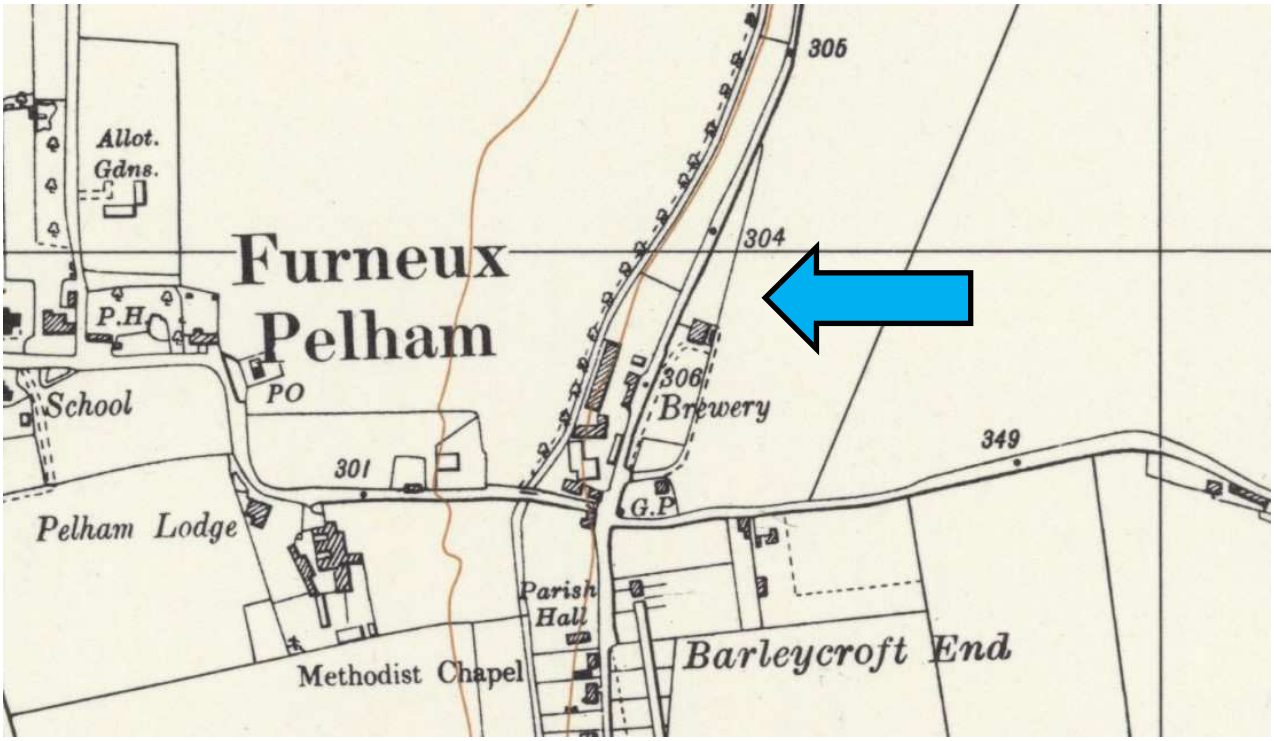


Fig 6. 1944 OS

- Map Data: Hertfordshire O/S Mapping Data 1980 - 2020 - 1:2500.
- The site is shown with the residential use with open agricultural land to the East and the converted brewery to the West.
- New Build Residential units are also indicated to the West of the site on the old Brewery site.

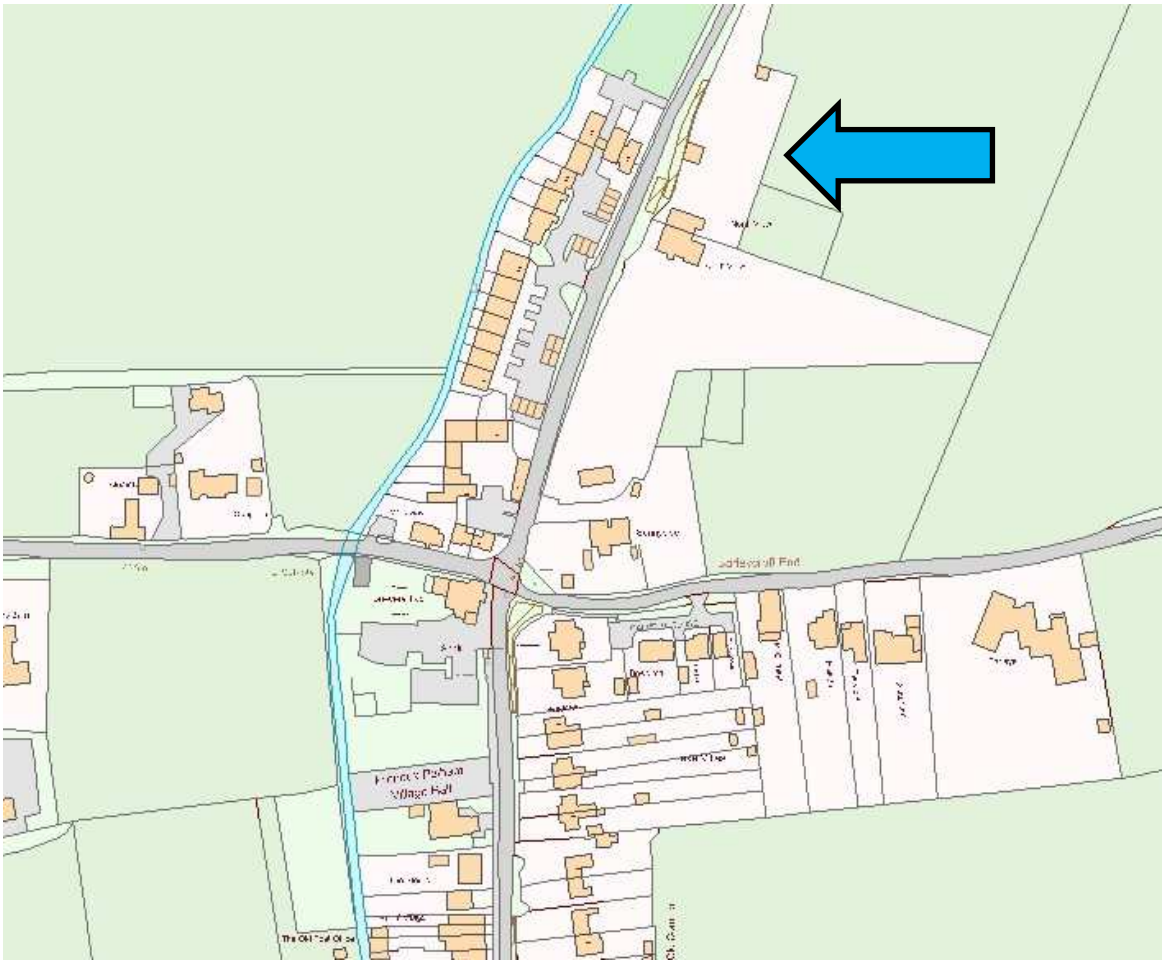


Fig 7. 1980 OS

FLOOD DESIGNATION

- The site lies within Flood Zone 1 where have a low probability of flooding – less than 0.1% annual probability.

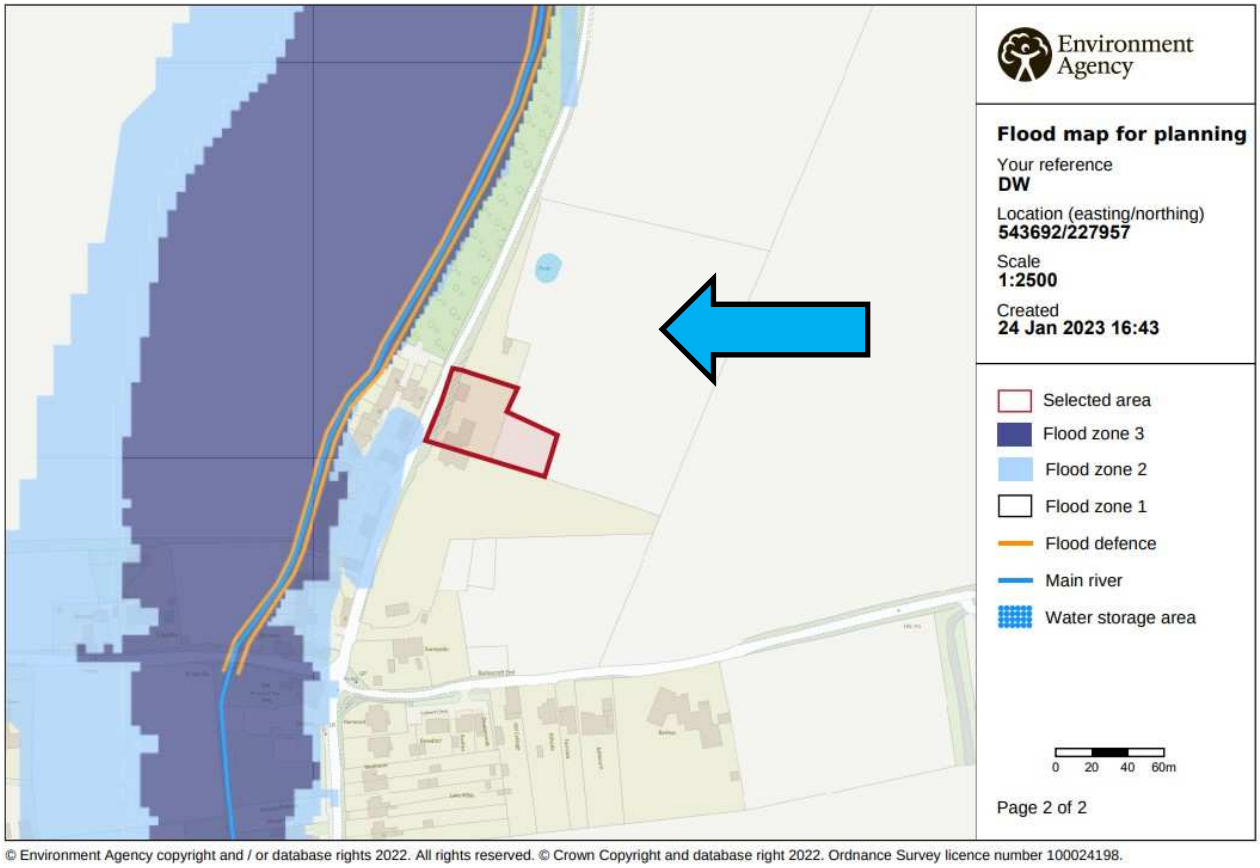


Fig 8. EA Flood Mapping

PLANNING HISTORY

Numerous proposals have been approved to the property on site (refer to below):

- Ref. No: 3/11/0566/FP | Received: Fri 01 Apr 2011 | Validated: Fri 01 Apr 2011 | Status: Decided Two storey and single storey side extension (Amendments to previously approved scheme ref 3/09/1712/FP).
- Ref. No: 3/09/1712/FP | Received: Mon 26 Oct 2009 | Validated: Mon 26 Oct 2009 | Status: Decided Two storey and single storey side extension.
- Ref. No: 3/02/1757/FP | Received: Thu 22 Aug 2002 | Validated: Tue 24 Sep 2002 | Status: Decided First Floor Rear Extension, Ground Floor Side Extension, Detached Double Garage.
- Ref. No: 3/98/0873/FP | Received: Thu 04 Jun 1998 | Validated: Thu 04 Jun 1998 | Status: Decided Conversion of Loft Space with Velux Windows and Front Dormer.

Numerous residential developments and works have been approved within the immediate proximity of the site (refer to planning statement).

- There are no inhibitive findings relating to the investigation of potentially contaminated land attached to any decision notices for works on or around the site.

SUMMARY OF SITE HISTORY

- The site appears to have been undeveloped for the majority of its history.
- The historic use of the site does not suggest processes which would create a risk to end users.
- The surrounding area has generally become developed since World War II;
- predominantly with sporadic residential developments with no major contamination issue noted.

ENVIRONMENTAL SETTING

Geology

- Based on British Geological Survey website www.bgs.ac.uk the classifications beneath the site are as follows:

Fig 9. Descriptions of Geological Strata

- Given the limited development history of the site, a significant thickness of Made Ground is considered unlikely to be present beneath the site.

Hydrogeology and Hydrology

- Information indicates that there are no records of licensed groundwater abstractions within 500m of the site.
- There are no records of significant or major pollution incidents to controlled waters within 1km of the site.

Fig.10 Aquifer

Radon

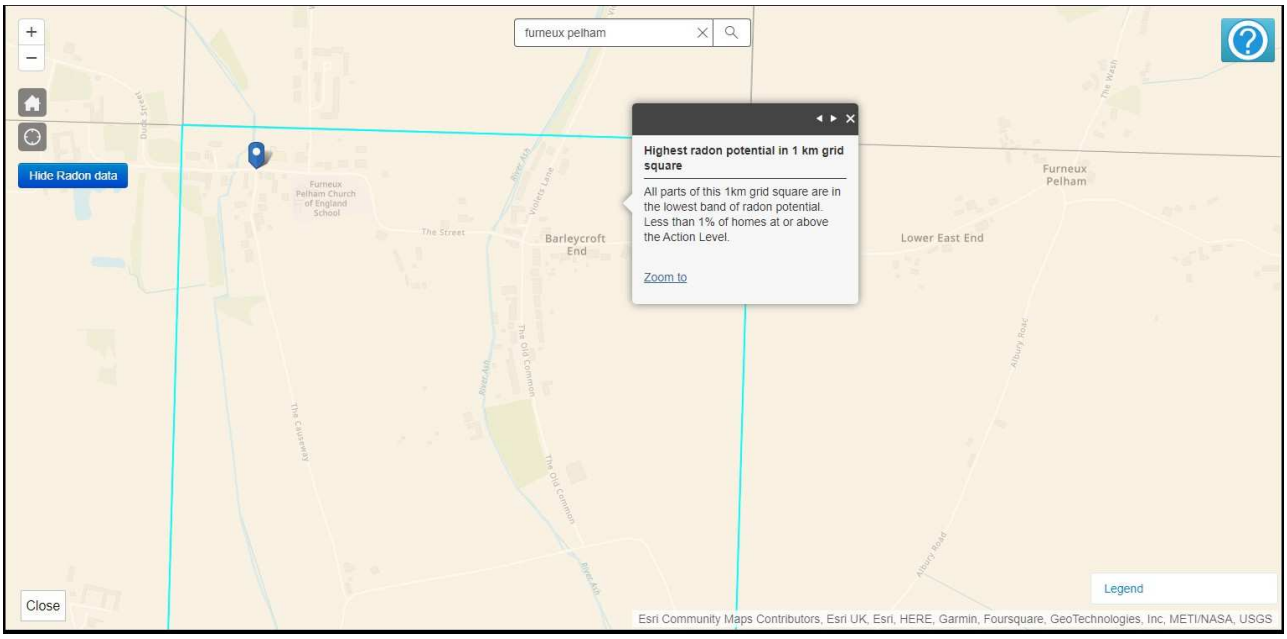


Fig 11. Radon Map Data

- The Radiation Protection Division of the Health Protection Agency, indicates the site to lie within an area where there is a probability of <1% of present or future homes being above action the level of 200Bq/m³.
- The site is therefore not classified as a Radon Affected Area.
- No radon protection measures are deemed necessary for the proposed development.

Soil Geochemistry

- The British Geological Survey data indicates the following concentrations of naturally occurring metals to be characteristic of the natural levels in the soil underlying the site.

- The levels are based on those present in rural soils and would indicate no risk to end users.

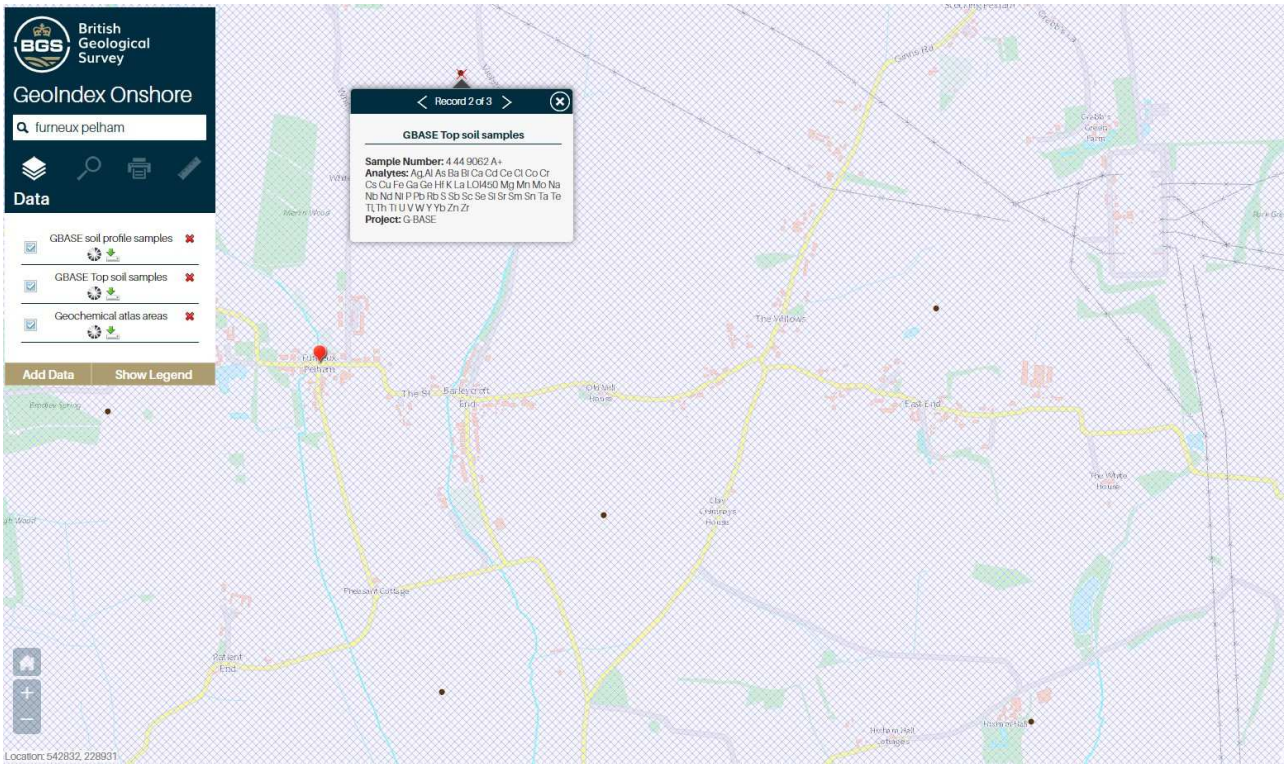


Fig 12. Soil Geochemistry

ASSESSMENT OF GEOTECHNICAL RISK

Geological Constraints

- The initial research would indicate there is no risk to end users of the site.

Soil Conditions

- Given the limited previous development across the site, a significant thickness of Made Ground is not anticipated to be present overlying natural strata.

Previous Use

- Historic footings and services may be encountered beneath the site during any excavation works required.
- It is considered that these may be broken out using standard construction plant to enable the formation of foundations and floor slabs.

Proposed Use:

- The development is for the construction of a new build dwelling.
- It is anticipated the construction of the unit will be on traditional strip footings with masonry external envelope.
- Formal garden space/amenity will form part of the proposal.

Geological Constraints

- The low foundation loads from the proposed residential dwelling, the Chalk Subgroup will provide a suitable bearing for traditional foundations supporting the structure.

ENVIRONMENTAL SEARCHES

Potential Sources of Contamination

- There are no records of active environmental permits indicated to be present within 500m of the site.

- There are no other records of landfills, waste management or treatment sites within 500m of the site.

Green Belt Areas

- There are no designated areas of Adopted Green Belt land within 500m of the site.

PRELIMINARY RISK ASSESSMENT

- The site appears to have been undeveloped for the majority of its history.
- The historic use of the site does not suggest processes which would create a risk to end users.
- The surrounding area has generally become developed since World War II;
- predominantly with sporadic residential developments with no major contamination issue noted.
- Due to the nature of the site, its historic use and the lack of evidence of potential contamination sources and Potential Pathways
- The assessment has not identified potential pollutant linkages associated with the proposed residential development of the site.

APPENDIX A

1:200 Proposed Bio-Enhancement Site Plan

0 5m 25m

Landscaping Specification

GENERAL

Soil conditions - cultivate and plant only in moist friable soil that is not waterlogged. Do not plant into frozen or snow covered soil.

Climatic conditions - carry out the work while soil and weather conditions are suitable for the relevant operations. Do not plant during periods of frost or strong winds.
Plant during the following periods:
Bare root deciduous trees and shrubs: late October to late March.
Container grown plants: at any time if moist and weather conditions are favourable. Ensure that adequate watering and weed control is provided.

Machines and tools - use only machinery and tools suitable for the site conditions and the work to be carried out. Use hand tools around trees, plants and in confined spaces.

Underground services - Contractor is responsible for knowing the precise/using the position of any underground services and shall take precautions to prevent any damage occurring to them immediately inform the appropriate body if damage occurs. The contractor shall be responsible for any claims resulting from such damage.

PLANT MATERIAL

Plant quality in general - to comply with the relevant part of BS 3936 and BS 5236 for any advanced nursery stock where applicable.
Materially undamaged, sharply, healthy, vigorous, of good shape and without elongated shoots. Grown in a suitable environment and hardened off. Free from pests, diseases, discoloration, weeds and physiological disorders. With balanced root and branch systems. True to the names and sizes indicated within the plant schedule.

Bare root plants - all bare root plants shall have vigorous fibrous root systems which are reasonably equally developed in all directions and of adequate extent to support the growth of the plant it will system.

Container grown plants - supplied in a growing medium with adequate nutrients for the plant to thrive and permanently planted. Checked in the container, firmly and well watered. With root growth substantially filling the container, but not root bound, and in a condition conducive to successful transplanting. Grown in the open for at least two months before being supplied. Grown in containers with holes adequate for drainage when placed on any substrate commonly used under irrigation systems.

Planting pits - spread a minimum of 75mm thick layer of well-rotted manure in the bottom of each pit and fork over. Lay rubber mix, mixture of peat substitute/soil manufactured sand 0.5:1 by volume, the pits being well moistened. All manure is to be covered so that none comes in direct contact with the tree roots. Soak the roots of bare-rooted trees in water for at least six hours before planting. Container backfilling with top soil into which 175gm of bonemeal has been mixed (per tree). Firm down well by treading as filling proceeds.
The tree must be planted to the same depth as in the nursery and to the same orientation. Before unloading, the depth and diameter of the rootball shall be measured to facilitate the digging of the pit to the correct size. Back filling shall be done in layers of 150-225mm depth with each stage firmly consolidated to eliminate air pockets.

Staking - to be requisite length, pressure impregnated (with preservative not injurious to plants) or tanked softwood 75mm diameter.

Tree ties - to be plastic ties "Tornz" pattern, nailed to stake with large head galvanised nails.

Watering - at the time of planting, each tree shall be well watered in. If there is a risk of frost within the 24 hours the watering shall be delayed until such risk has passed.

Tree, Hedge & Shrub Planting Schedule

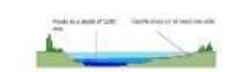
Species	Qty	Height on Supply	Pot Size or Spacing	Specification
Birch - Betula pendula	2	Extra Heavy Standard 12-14 (3.50 - 4.00)	12-14	Cg/RB
Beech - Fagus sylvatica	1	Extra Heavy Standard 12-14 (3.50 - 4.00)	12-14	Cg/RB
Oak - Quercus robur	1	Extra Heavy Standard 12-14 (3.50 - 4.00)	12-14	Cg/RB
Hazel - Corylus avellana	4	Feathered Tree 1.00-2.00	150	Cg/RB
Hornbeam - Carpinus	1	Feathered Tree 1.50-2.00	150	Cg/RB
Betula pendula	1	Feathered Tree 2.00-3.00	150	Cg/RB
Malus sylvestris - Malus sylvestris	1	Feathered Tree 2.00-3.00	150	Cg/RB
Wild Cherry - Prunus avium	1	Feathered Tree 2.00-3.00	150	Cg/RB
Common Hornbeam - Carpinus betulus	5	1.50 x 1.50	0.6	Bare/RB
Mixed Native Hedge - 60% Hawthorn, 30% Blackthorn, 5% Dogwood, 5% Guelder rose (Viburnum opulus), 5% Bay tree. Planting Size 600-900mm		Under 1 m	1 M	

Lighting Specification

External Lighting

1. Minimising spill of light with the use of directional luminaires, shields, baffles and louvers to direct light where it is needed and prevent overspill.
2. Minimise light spill by eliminating any bare lights and upward pointing light fixtures. The spread of light should be kept even to or below the horizontal plane, by using as dome or downward angle as possible and/or sheet facing.
3. Use light sources that emit minimal ultra-violet light (van Langevelde and Hehs, 2007) and avoid the white and blue wavelengths of the light spectrum.
4. Limiting the height of lighting to 4 m and increase the spacing of lighting will reduce the spill of light into adjacent habitats.
5. Avoid using reflective surfaces under lights or light reflecting off windows.
6. Only the minimum amount of light needed for safety and access will be used and on screen off when the site is not in use.
7. Artificial lighting proposals should not directly illuminate habitats, which may be of value to foraging or commuting bats and birds (e.g. hedgerows and adjacent gardens).
8. Lighting that is required for security reasons should use a lamp of no greater than 2000 lumens (150 Watts) and be PIR sensor activated, to ensure that the lights are not on only when required.
9. Lighting positioned in locations indicated on attached drawing.

Proposed LED lamps
(Max 2000 lumen / 150 Warm) with PIR sensor



Section of Proposed Pond

Plan of Proposed Pond (also

Mulch - apply 50mm mulch around trees immediately after watering in. Mulch to consist of (untreated) natural pine bark such as 'Cambark' ornamental grade from Cantland Products Ltd, 36 Regent Street, Cambridge or equivalent. Mulched particles 8mm-35mm with all fines removed, free from seeds, diseases, weeds and additives.

Rootballed plants - soil balls shall be well filled with fibrous roots and consist of reasonably cohesive natural soil which has been carefully lifted at the nursery so that it remains fully attached to the roots of the tree. Roots which have had their roots hedged up with soil or containerised are not acceptable.

Transplanted at least twice in the nursery. Single, straight leader. Substantial and evenly developed side shoots to within 2.5m of ground level.
Main stem to be substantial enough to be supported by short stake and single tie.

Labelling - when supplied to site trees to be labelled in accordance with the relevant part of the latest BS 3936 in order that they can be readily identified.

Substitutes - if specified trees are unobtainable or known to be likely to be unobtainable at the time of ordering, submit alternatives and obtain approval from LPA before making any substitution.

PREPARATION OF PLANTING

Site clearance - Prior to cultivation of rubbish including stones, bricks, concrete, rendice, building materials, bottles, cans, litter, wood, plastic etc to be removed to tip. Remove all weed from planting areas either by hand pulling or using a herbicide containing glyphosate as the active ingredient which should be applied in accordance with the manufacturer's instructions allowing sufficient time prior to cultivation for the chemical to be effective.

Cultivation - do not dig or cultivate within the root spread of trees and shrubs to be retained. Break up compacted subsoil to its full depth.

Tree pits - shall be of a diameter 900mm greater than the root ball. The depth of the pit shall be 225mm deeper than the root ball and not less than 600mm deep.
The base of the tree pit shall be forked over to a depth of 225mm.

MAINTENANCE AND BANNING OCCURRENCES

Maintenance prior to practical completion - all all trees shall be planted shall be in a clean, tidy and largely 10m weed free state.

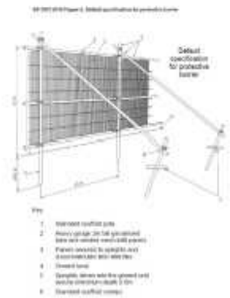
Maintenance and defects liability period - the maintenance and defects liability run concurrently for thirty months (three years) after practical completion.

Maintenance - Make visits at approximately monthly intervals during the growing season and as necessary to fulfil the requirements of this specification.
After each visit remove soil and other debris from surrounding hard surfaces and leave the site in a clean and tidy condition. Fork over beds as necessary to keep soil loose. Ensure that the trees are not damaged by the use of mowers, nylon filament rotary cutters and similar powered tools.
Every two months check condition of stakes and ties and replace if missing or broken. Adjust as necessary to allow for growth and prevent the rubbing of bark.
Prune as appropriate trees to remove dead, dying, diseased or damaged wood and suckers, to promote healthy growth and natural shape.

Failures of Planting - Excepting theft or malicious damage after practical completion, any of the trees that have failed to thrive, during the defects liability period, will be regarded as defects due to materials or workmanship not in accordance with this specification. Unless otherwise instructed they must be replaced by approved equivalents.
Replacements must match the original specification. Replacement planting is to be carried out during the planting season within which the defects are discovered.

Legend

- Existing / Proposed Hedges
- Post and rail Fence
- Close boarded fence
- Construction Fencing
- Timber Clad Bin Enclosure
- Hedge Hog Nesting Box
- BB BAT BOX
- SB SWIFT BOX
- BNB BUMBLEBEE NEST BOX (Above earth into the ground)
- Entrance road with tarmac finish. Raised kerb edge with surface water gullies
- Garden Space
- Ornamental Planting
- Proposed pond



PLANNING

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SG9 0EX

Project Name: Land North - North View, Violets Lane, Furneux Pelham	Project No: 360
Drawing Title: Planning Application	Drawn by: LM
Scale: 1:200 @ A1	Date Drawn: 08/10/2025 DRG NO. 002

Land North - North View, Violets Lane, Furneux Pelham, Buntingford, SG9 0LF