



Wheal Jane Consultancy
Old Mine Offices
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Wheal Jane
Consultancy



Geotechnical, environmental
& mining services

Footings Inspection

Site: Site at St Austell Business Park
Carclaze
St Austell
Cornwall
PL25 4EJ

Your Ref.:

Our Ref.: MS41226

Date: 10 November 2021

Client: Karl Ford Ltd
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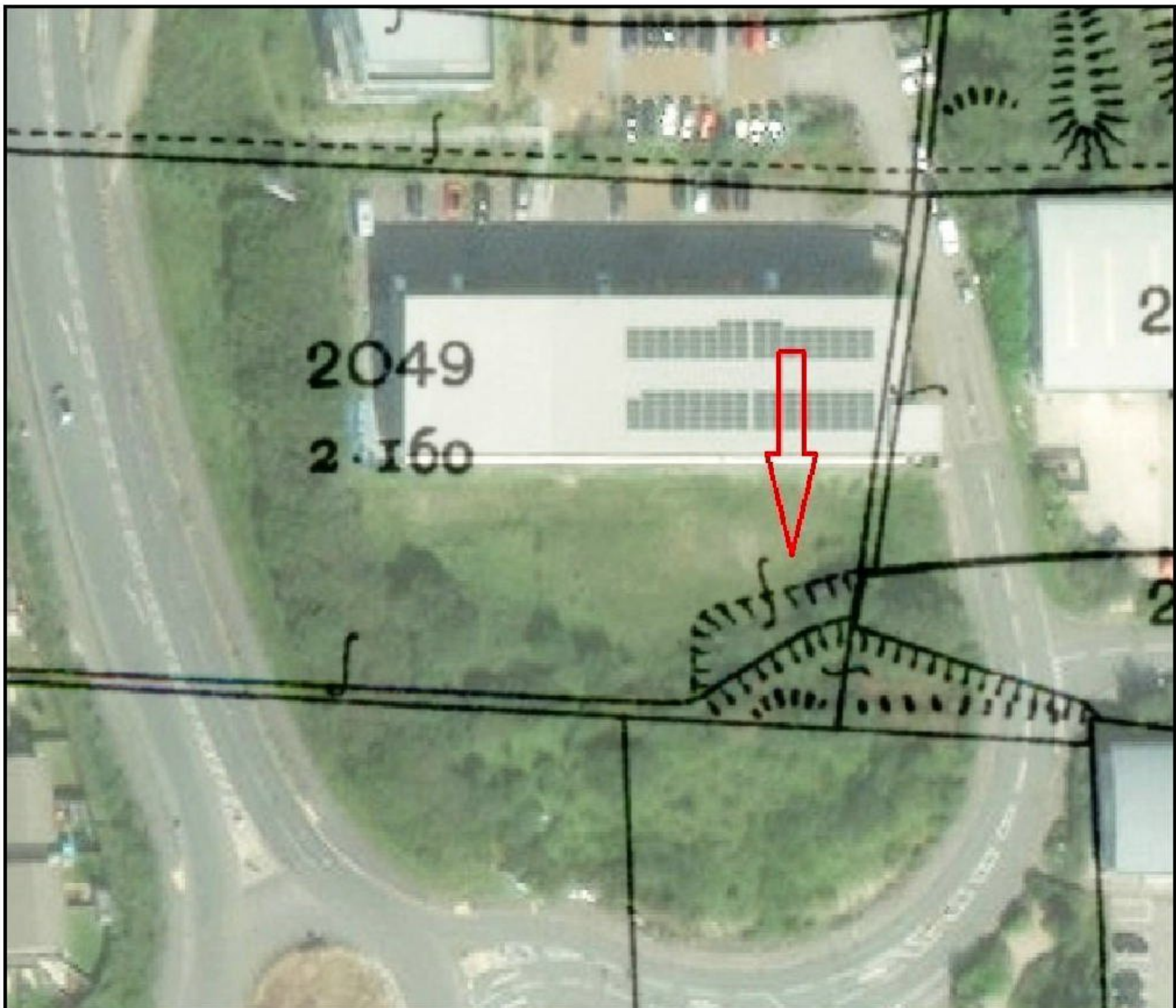


1 Summary

Wheal Jane Consultancy was contacted in respect of undertaking a footings inspection for a series of new construction at St Austell Business Park.

It is located adjacent the lease area of the former Great Carclaze Mine.

Whilst no mine workings were identified by a mine search, an unspecified surface pit feature is indicated on an old map:



As such it was considered prudent that an inspection of the footings excavation was undertaken.

The footings excavations at the site of the proposed development do not exhibit any signs of historical mineral working activity that would cause subsidence to the proposed new structures on the property.

1 Introduction

This report is intended to give an indication of the subsidence risk to the proposed development from historical mining activity.

In particular it addresses the risk of subsidence posed by old mine workings, which are common in some parts of Cornwall.

The site is located at St Austell Business Park, Carclaze, an area which has witnessed intensive China Clay mining activity during the 19th and 20th centuries and working for tin in the 18th and 19th centuries.

It was considered prudent that a footings inspection be undertaken as part of the new development on the site to check for any evidence of unrecorded or otherwise unknown mineral working related features.

2 Site Inspection

Inspections of the footings excavations on the site were carried out by Wheal Jane Consultancy on the 17th November 2021, with due consideration in regard of current Covid-19 guidance.

The footings are stable and self supporting.

The footings exposed a rab of partially decomposed granite, locally known as 'growan'.

No evidence of mineral veins or any form of prior mineral working related disturbance was noted.

No groundwater was noted within the excavations.



Fig 1: Footings, looking north-west.



Fig 2: Footings, looking west.



Fig 3: Footings, looking south-east.

3 Conclusions and Recommendations

From our observations of the footings excavations, we have no reason to believe that the footprint of the proposed new development is likely to be adversely affected by mining or mineral working related subsidence.

We would consider that the footings trenches are suitable to receive concrete.

We would recommend that should any further footings or other excavations on the site reveal any made/unstable ground that differs from the natural soil horizons observed, they should be examined by a Mining Geologist prior to such works continuing.

4 Notes

This report is concerned solely with the area investigated or parts thereof examined and should not be used in connection with adjacent properties or land.

This report is confidential to the client, the client's buyer and the client's professional advisors, and may not be further reproduced or distributed without the permission of either ourselves or the commissioning party, other than to facilitate the sale, remediation or development of the site in question.

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Yours faithfully,



Wheal Jane Consultancy

Appendices

Appendix 1

References and Glossary

Mining References (generic listing)

H G Dines - The Metalliferous Regions of South West England (2 Vols)
A K H Jenkin - Mining & Miners of Cornwall (16 Vols)
A K H Jenkin - Mines of Devon (2 Vols)
A K H Jenkin - Wendron Thom. Spargo Tin Mines of Cornwall (6 Vols)
J H Collins - Observations of West of England Mining Region
Sellwood, Darrance & Bristow - Geology of Cornwall Darrance & Laming, Geology of Devon
Burt, Waite & Burnley - Cornish Mines
MRO Plans (CRO)
MRO Copies (SC Archive)
MRO Microfiche (SC)
South Crofty Archive
Tehidy Minerals Archive
JMS/JAB/JHB Archive
Wheal Jane Collection
Wheal Pendarves Collection
Geevor Collection
Thyssen Review & Plans
A K H Jenkin, Annotated 6" Plans
Geological 6" Plans
Richard Thomas Plans
Robert & Brenton Symons Plans
Nicholas Whitley Plans
K Bennet Annotated Plans
R Lyon Annotated Plans
Ordnance Survey 1880, 1906, etc Maps
H G Dines Composites

Mining Glossary

Adit	Horizontal mine drainage tunnel driven from low ground into mine workings. The adit tunnel is the shallowest level shown on mine plans and usually represents the earliest period of workings recorded. Adits have ventilation shafts at regular intervals, which are mostly unrecorded.
Alluvium	Clay, sand and debris deposited by a river. Often streambed for tin.
Burrow	A mine waste tip.
Caunter lode	A lode which runs in a different direction to the general trend of lodes in the district.
Coffin/Koffen	Trench-like openwork at surface.
Costean Pit	A small surface pit excavated to locate and/or sample a lode.
Crosscourse	Geological features which run at right-angles to the principal lodes of a district, and are vertical or sub-vertical faults. Mostly barren of payable minerals, but can carry values of iron ore, cobalt and other metallic minerals. Also known as guides or trawns in St Just and St Ives mining districts, respectively.
Crosscut	Tunnel driven underground, usually at right-angles to the lodes.
Dip of Lode	Angle of inclination of a lode from the horizontal.
Drive	Tunnel driven along the course of a lode.
Elvan	Igneous rock (quartz-porphry) occurring as a vein or dyke. Can be extremely hard. Exploited by quarrying.
Granite	Igneous rock. Crystalline mixture of quartz, feldspar and mica.
Greenstone	Igneous rock also called 'blue elvan'. Generally extremely hard.
Gunnis	Open stope at surface or underground.
Kaolinisation	Alterations or weathering of granite to clay and sand from solid rock.
Killas	Generic term given to sedimentary rock in Cornwall.
Leat	A man-made watercourse.
Level	Horizon underground where ore movement and communications are maintained. Levels consist of lode drives and crosscut tunnels: i.e. 12 fathom level; the system of tunnels driven at the 12 fathom below adit horizon.
Lode	A mineralised structure or vein. Most lodes run from surface vertically or sub-vertically, and can vary from a few inches to several metres in width.
Mundic	Iron pyrite, arsenic and sulphur - arsenopyrite.
Openwork	A surface working, which has usually left a pit or backfilled excavation.
Outcrop	The part of the lode which breaks surface. Worked-out voids and backfilled areas are outcrop features.
Rab	Weathered zone of mixed rock and soil (natural profile)
Sett	An area of land leased for mining.
Shaft	Holes in the ground, which can vary from 0.5m x 1m up to shafts 7m across. Engine shafts tends to be large (typically 3m x 2m) and adit shafts are smaller (typically 1.2m x 1.8m). Depths vary down to 700m.
Stockwork	Mass of narrow veins or lodes running parallel and sub-parallel.
Stope	Ground where lode has been removed leaving void. Often open to surface.
Tailings	Residual sands and slimes from ore dressing. Usually heavily contaminated.

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