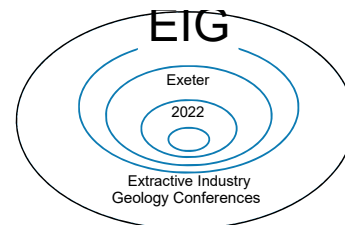


*EIG FIELD TRIP GUIDE*Saturday 9TH JULY 2022**HEMERDON*****Tungsten West plc***

Hemerdon Mine, Drakelands, Plymouth PL7 5BS (Sat Nav user PL7 5BW)

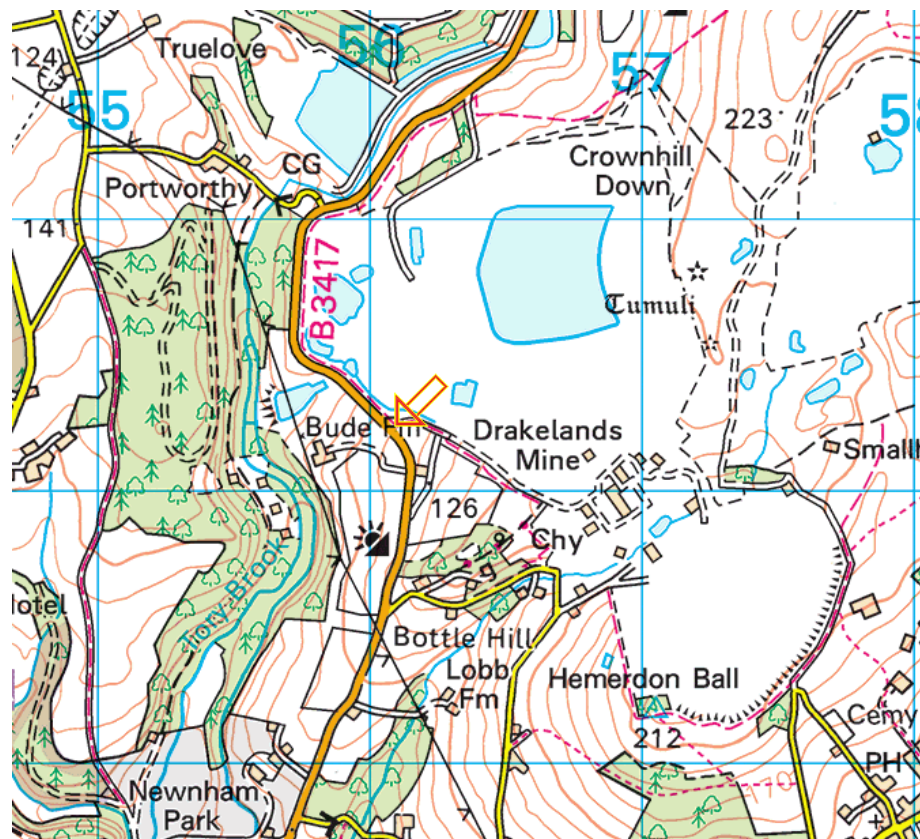


Location	Hemerdon Mine, Drakelands, Plympton, Devon PL7 5BW
Field Trip Leader	Marica Lyndon – Tungsten West plc (01752 749955) marica.lyndon@tungstenwest.com
Meeting Point	Car Park 2
Website	www.tungstenwest.com
Objective	To understand the history and future development of the mine
Time of Arrival	9.30 am
Length of Visit	Until 1.00 pm
PPE Required	Steel toe-cap boots Hard hat High visibility top (vest or jacket) AND Trousers Safety glasses Gloves
Driving time to Exeter University	1 hour approximately from site

Location Map



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Outline of Trip	<p>09.30 am Meet and greet (introductions)</p> <p>09.45 am Presentation</p> <p>10.15 am Site & plant tour</p> <p>12.15 Lunch</p> <p>13.00 Depart</p>
Geology	<p>Background</p> <p>The Hemerdon Tungsten-Tin Mine, formerly known as Drakelands Mine or the Hemerdon Ball or Hemerdon Bal Mine, was an operating tungsten and tin mine between August 2015 and October 2018 under previous operators Wolf Minerals (UK) Ltd. (Wolf). Hemerdon is amongst the world's largest CRIRSCO compliant tungsten resources</p> <p>The mine is located 7 miles NE of Plymouth, near the village of Plympton, in Devon, England, and has been categorised as a world class deposit due to the scale of the deposit within a global context.</p> <p>The mine site retains a partially developed open pit, a complete processing plant, an integrated mine waste facility, workshops, administration offices and all associated mine site infrastructure</p> <p>Tungsten is a metal that every consumer uses directly or indirectly.</p> <p>It's unique properties of being the hardest metal with the highest melting point mean it's used in many different sectors such as automotive, technology, energy and manufacturing. On the supply side, tungsten is one of three metals classified as a conflict mineral as it is mined by forced labour in certain parts of the globe. There is a significant risk that the EU and the US will not have sufficient access to tungsten concentrates in the near future, which is why its classified as a critical mineral.</p> <p>Geology</p> <p>The Hemerdon deposit is centered upon a sub vertical, NNE-SSW striking, 100+ m wide Early Permian granite dyke hosted by Devonian metasedimentary and metavolcanic rocks. Mineralisation is overwhelmingly associated with moderately to steeply NW-dipping greisen-bordered quartz-ferberite cassiterite sheeted veins. The resource size and dyke host are, to date, unique in SW England. The Hemerdon Ball granite is an outlying cupola intrusion surrounded by Devonian slates, known regionally as killas. Fractures in the granite and killas have been penetrated by mineralising fluids containing metallic ores in the area around the mine. Two types of vein are discernible with three different orientations. Quartz and quartz-feldspar veins form a stockwork with minor mineralisation, whilst greisen bordered veins are found in a sheeted vein system with ferberite and minor cassiterite mineralisation.</p> <p>The mineralisation begins at surface and extends to depths of at least 400 metres (1,300 ft). The vein system is hosted in a dyke like granite body, extending from the Hemerdon Ball towards the Crownhill Down granite. It is flanked by killas, formed by contact metamorphism, which also contains veins although wolframite and cassiterite is found as a lower percentage of the rock bulk. Kaolinisation occurs to depths of up to 50 metres (160 ft) in the granitic body.</p> <p>The locality is renowned for its high quality scorodite specimens, which are among the best in Europe. Pharmacosiderite, Cassiterite, Ferberite and Wolframite of specimen quality have also been recovered from the mine. Scorodite and Pharmacosiderite are secondary arsenate minerals, that form in the upper oxidation zones of ore bodies. They are formed from alteration of arsenopyrite, and are found in the weathered zone of the deposit. At depths beneath the existing pit it is likely they will become scarce. [Wikipedia source]</p>