

Vivian & Sons

The Cornish entrepreneur John Vivian opened the Hafod Copperworks in 1810. Vivian & Sons was established as a partnership between John Vivian and his two elder sons, John Henry Vivian and Richard Hussey Vivian.

The Hafod Copperworks was to become one of the largest and most innovative industrial enterprises in Europe. There were 24 furnaces in the 1810 works and by 1823 this had increased to 84. The different stages of roasting and smelting in reverberatory furnaces was known as the ‘Welsh Process’, this process was adopted worldwide and became the favoured method of smelting until it was replaced by newer technology towards the end of the nineteenth century.

By the 1840s Vivian & Sons were the largest exporters of finished copper in Britain.

In 1886 Vivian & Sons employed 3,000 people, of which 1,000 were employed at the Hafod Copperworks, but by that time it was proving to be more economical to smelt the copper ore at the mines in Chile and elsewhere around the

Vivian & Sons

Agorodd yr entrepreneur o Gernyw, John Vivian, Waith Copr yr Hafod ym 1810. Sefydlwyd Vivian & Sons fel partneriaeth rhwng John Vivian a’i ddau fab hŷn, John Henry Vivian a Richard Hussey Vivian.

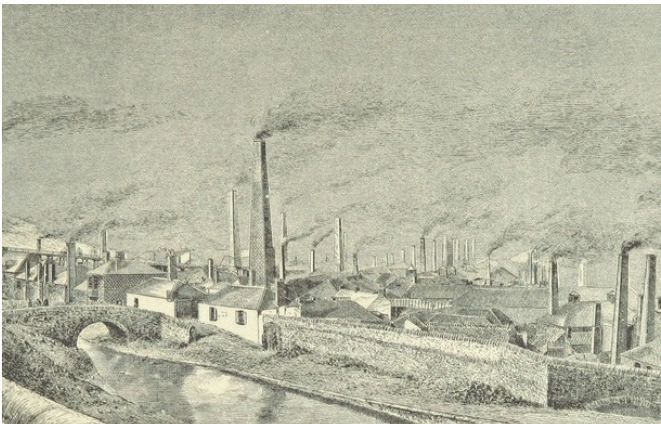
Byddai Gwaith Copr yr Hafod yn datblygu’n un o’r mentrau diwydiannol mwyaf a mwyaf arloesol yn Ewrop. Roedd 24 ffwrnais yn y gwaith ym 1810 ac erbyn 1823 roedd hyn wedi cynyddu i 84. Cyfeiriwyd at y gwahanol gamau yn ddull dethol ar gyfer mwyndoddi nes i’r broses gael ei disodli gan dechnoleg fwy newydd tua diwedd y bedwaredd ganrif ar bymtheg.

Erbyn y 1840au Vivian & Sons oedd yr allforwyr copr gorffenedig mwyaf ym Mhyrdain.

Ym 1886 roedd Vivian & Sons yn cyflogi 3,000 o bobl, yr roedd 1,000 ohonynt yn cael eu cyflogi yng Ngwaith Copr yr Hafod, ond erbyn hynny roedd yn profi’n fwy economaidd i fwyndoddi’r copr yn y pyllau glo yn Chile ac mewn mannau eraill ledled y

world. This eventually led to the end of copper smelting in the Lower Swansea Valley.

Vivian & Sons traded from 1810 to 1924. Various mergers eventually led to Yorkshire Imperial Metals owning the works in 1957. The works closed entirely in 1980.



View of the Hafod Copperworks (Engraving 1880)

byd. Arweiniodd hyn yn y pen draw at ddiwedd mwyndoddi copr yng Nghwm Tawe Isaf.

Bu Vivian & Sons yn masnachu rhwng 1810 a 1924. Yn y pen draw, ac ar ôl cyfuno cwmnïau amrywiol, daeth Yorkshire Imperial Metals yn berchnogion ar y gwaith ym 1957. Caeodd y gwaith yn gyfan gwbl ym 1980.

Golygfa o Waith Copr yr Hafod (Engraffiad 1880)



Entrance to Hafod works c.1850 © BY KIND PERMISSION OF SWANSEA MUSEUM

Mynedfa i waith yr Hafod o gwmpas 1850 © TRWY GAREDIGRWYDD AMGUEDDFA ABERTAWE



Inside the Musgrave Engine House 2020 © COPYRIGHT FRIENDS OF HAFOD MORFA COPPERWORKS

Y tu mewn i Dŷ Injan Musgrave © HAWLFRANT CYFELLION GWATH COPR YR HAFOD MORFA



Musgrave engine house and gantry crane 2018, before crane restoration. © SANDY JOHNS

Tŷ Injan Musgrave a’r craen nenbont, 2018, cyn i’r craen gael ei adnewyddu. © SANDY JOHNS

Hafod Morfa Copperworks

The process of smelting copper in the Swansea Valley first began in 1717 and it became so successful that, during the 1800s, Swansea was the centre of world copper production and acquired the nickname of Copperopolis.

Follow the trail to find out the story of Copperopolis and how important the Hafod and the Morfa Copperworks were in the development of the copper industry in Swansea.

Look out for the arrows and numbers along the trail and for the QR codes to find out more information about the Industrial Heritage Trail.

The Lower Swansea Valley was once the beating heart of the Industrial Revolution in Swansea. This area was at the centre of the world’s copper industry, and the valley floor and sides were covered with the buildings and the slag heaps created as a result of copper smelting and processing. The valley experienced high levels of pollution including the smoke and gases released into the air by the forest of chimneys, there was also a low copper cloud of poisonous gases hanging in the valley.

By 1850 there were 11 major copperworks in the valley. The very last copperworks to close was the Hafod Morfa Copperworks in 1980, all of the other copperworks had closed many years before.



Rolling copper, Hafod Works BY COURTESY OF WEST GLAMORGAN ARCHIVES Rholio copr, Gwaith Copr y Morfa TRWY GAREDIGRWYDD ARCHIFAU GORLLEWIN MORGANNWG

Gwaith Copr yr Hafod Morfa

Dechreuodd y broses mwyndoddi copr yng Nghwm Tawe gyntaf ym 1717 ac yn dilyn ei llwyddiant mawr, daeth Abertawe’n ganolbwynt cynhyrchu copr y byd yn ystod y 1800au, gan ennill y llysenw Copropolis .

Dilynwyh y llwybr i ddarganfod stori Copropolis a pha mor bwysig oedd Gwaith Copr yr Hafod a’r Morfa i ddatblygiad y diwydiant copr yn Abertawe.

Cadwch lygad am y saethau a’r rhifau ar hyd y llwybr ac am y codau QR i gael rhagor o wybodaeth am y Llwybr Treftadaeth Ddiwydiannol.

Cwm Tawe Isaf oedd calon y Chwyldro Diwydiannol yn Abertawe gynt. Roedd yr ardal hon yng nghanol diwydiant copr y byd, ac roedd llawr ac ochrau’r dyffryn wedi’u gorchuddio â’r adeiladau a’r tomenni sorod a grëwyd o ganlyniad i fwyndoddi a phrosesu copr. Mae’r dyffryn wedi profi lefelau uchel o lygredd gan gynnwys y mwg a’r nwyon a ryddhawyd i’r awyrg gan y goeddyd o simneiau. Roedd hefyd gwmwl copr isel o nwyon gwenwynig yn y cwm.

Erbyn 1850 roedd 11 o safleoedd gwaith copr mawr yn y cwm. Y gwaith copr olaf un i gau oedd Gwaith Copr yr Hafod Morfa ym 1980 - roedd yr holl safleoedd gwaith copr eraill wedi cau flynyddoedd lawer cyn hyn.



Flanging Gang, Morfa Works BY COURTESY OF WEST GLAMORGAN ARCHIVES Y criw morthwyllo, Gwaith Copr y Morfa TRWY GAREDIGRWYDD ARCHIFAU GORLLEWIN MORGANNWG



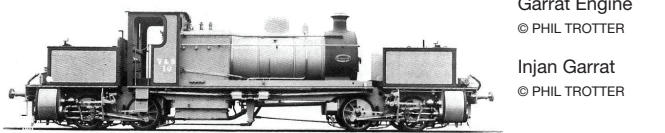
View of the lime kiln between the chimneys © SANDY JOHNS

Golygfa o’r odyn galch rhwng y simneiau © SANDY JOHNS



V&S Ltd No 1 Shed © PHIL TROTTER

Sled Rhif 1 V&S Ltd © PHIL TROTTER



Garrat Engine © PHIL TROTTER Injan Garrat © PHIL TROTTER



Feeder canal to Hafod Copperworks © CROWN COPYRIGHT: RCAHMW (WITH PERMISSION FROM STEPHEN HUGHES)

Y ffos gyflenwi i Waith Copr yr Hafod © HAWLFRANT Y GORON: RCAHMW (GYDA CHANIATAD GAN STEPHEN HUGHES)

Hafod Quay

Hafod Quay, built on the river Tawe in 1810, linked the copperworks with the port of Swansea and the rest of the world.

Four tons of coal were required to smelt one ton of copper ore. Initially the ore was brought into Swansea from Cornwall and Anglesey in wooden sailing barques, the ships then made the return journey with a cargo of coal.

By the 1830s Swansea’s copper industry had become global, ores were imported from Cuba, Australia and Chile. The copper barques became bigger to cope with the heavier cargos, longer distances, and the tougher conditions they encountered.

The round trip to Chile of 24,000Km (15,000 miles) took between six and nine months, it was especially treacherous and meant rounding Cape Horn, at the southern tip of South America. The sailors who made this journey were known around the world for their bravery and sailing skills and were called ‘Cape Horners’.

Cei’r Hafod

Roedd Cei’r Hafod, a adeiladwyd ar afon Tawe ym 1810, yn cysylltu’r gwaith copr â phorthladd Abertawe a gweddill y byd.

Roedd angen pedair tunnell o lo i fewndoddi un dunnell o fwyn copr. I ddechrau, daethpwyd â’r mwyn i Abertawe o Gernyw ac Ynys Môn mewn cychod hwylio pren, yna byddai’r cychod yn dychwelyd gyda llwyth o lo.

Erbyn y 1830au roedd diwydiant copr Abertawe wedi dod yn fyd-eang, a mewnforiwyd mwynau o Giwba, Awstralia a Chile. Daeth y cychod copr yn fwy er mwyn gallu ymdopi â’r llwythi trymach, y pellteroedd hirach a’r amodau anoddach a wynebwyd ganddynt.

Cymerodd y daith 24,000km (15,000 milltir) yn ôl a blaen i Chile rhwng chwech a naw mis, roedd yn arbennig o beryglus ac roedd yn golygu mynd o gwmpas yr Horn, ar ben deheuol De America. Roedd y morwyr a oedd yn ymgymryd â’r daith hon yn adnabyddus ledled y byd am eu dewdr a’u sgiliau hwylio ac fe’u gelwid yn ‘Forwyr yr Horn’.



The Copper Barque ‘Delta’ © NATIONAL MUSEUM WALES

Y Cwch Copr ‘Delta’ © AMGUEDDFA CYMRU



Trail Sculpture Cerflun ar y llwybr

Hafod Entrance 1983 © SANDY JOHNS

Mynedfa’r Hafod 1983 © SANDY JOHNS



Lowering the restored Gantry Crane into the Musgrave Engine House 2019 © FRIENDS OF HAFOD MORFA COPPERWORKS

Gollwng y craen nenbont adnewyddedig i Dŷ Injan Musgrave 2019 © CYFELLION GWATH COPR YR HAFOD MORFA

History Timeline Llinell Amser Hanes

Opening of Swansea Canal	1798	Agor Camlas Tawe
Hafod Copperworks opens	1810	Agor Gwaith Copr yr Hafod
Opening of Morfa Copperworks	1828	Agor Gwaith Copr Morfa
The Vivians start to build Trevivian (now known as Hafod)	1837	Vivian yn dechrau adeiladu Trevivian (yr Hafod erbyn hyn)
Vivian engine house built	1862	Adeiladu tŷ Injan Vivian
Hafod Copperworks was the largest in Europe	1890	Gwaith yr Hafod oedd y gwaith copr mwyaf yn Ewrop
Musgrave Engine House built and uniflow steam engine installed	1910	Adeiladu tŷ Injan Musgrave a gosod yr injan stêm Uniflow
Hafod and Morfa works amalgamated as British Copper Manufacturers and copper smelting ceases	1924	Uno gweithfeydd copr yr Hafod a’r Morfa i greu cwmni Briliŷh Copper Manufacturers a mwynoddi copr yn dod i ben
Yorkshire Imperial Metals take over running of the works	1957	Daeth Yorkshire Imperial Metals yn dod yr gyfrifol am redeg y gwaith
Hafod Morfa site closes permanently. Dereliction occurs for nearly 40 years	1980	Safle’r Hafod Morfa yn cau’n barhaol Fe’i gadawyd i ddaeffilio am bron 40 o flynyddoedd
Refurbishment of the Musgrave and Vivian Engine Houses & refurbished gantry crane is re-installed into the restored engine house	2019	Adnewyddu Tai Injan Musgrave a Vivian a gosod nenbont wedi’i hadnewyddu yn y tŷ injan sydd wedi’i adfer
Work begins on restoring the Morfa site for Penderyn distillery.	2019	Gwaith yn dechrau ar adfer safle’r Morfa ar gyfer distyllfa Penderyn.

Sut i gyrraedd yno

Gwaith Copr yr Hafod Morfa: Ffordd gyswllt Cross Valley, Glandŵr, Abertawe SA1 2JT.

Car: ychydig oddi ar yr A4067 ger maes parcio Parcio a Theithio Glandŵr, tua 1.5 milltir i’r gogledd o ganol y ddinas a 3 milltir o’r M4 [P+J](#). Gadewch yr M4 wrth gyffordd 45 (Ynysforgan), ewch tuag at Abertawe a dilynwyh yr arwyddion ar gyfer maes parcio Parcio a Theithio Glandŵr. Mae’r maes parcio ar agor rhwng 6.45am a 7.30pm, dydd Llun i ddydd Sadwrn. Y pris ar gyfer parcio yw £1.

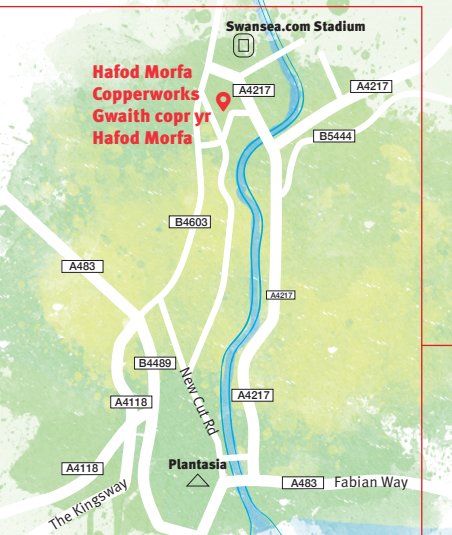
Bws: Mae bysbus gwasanaeth rhif 34 yn gadael y Cwadrant bob 15 munud ac yn mynd â chi i faes parcio Parcio a Theithio Glandŵr.

Ar feic: Mae Gwaith Copr yr Hafod Morfa oddi ar lwybr beicio 43.

Cyfleusterau: Mae amrywiaeth o siopau a mannau bwyta ym Mharc Manwerthu’r Morfa a’r ardal gyfagos. Mae Clwb Cymdeithasol Glandŵr ar y safle gwaith copr. Mae tref dreftadaeth Treforys, a adeiladwyd i letya’r glowyr a’r gweithwyr o rai o’r safleoedd gwaith copr cynharaf cyfagos, ddwy filltir i ffwrdd. Gellir dod o hyd i amrywiaeth o siopau a mannau bwyta yma hefyd.

Toileddau: mae’r toileddau cyhoeddus agosaf yn adeilad Parcio a Theithio Glandŵr, ar agor o ddydd Llun i ddydd Sadwrn tan 7.30pm.

Teithiau cerdded pellach: os gwnaethoch fwynhau’r tro hwn, cymerwch gip ar y rhai eraill sydd ar gael yn y gyfres hon: Parc Treforys a’r Garreg Wen.



How to Get There

Hafod Morfa Copperworks: Cross Valley Link Road, Landore, Swansea, SA1 2JT.

Car: situated just off the A4067 adjacent to Landore Park & Ride, approximately 1.5 miles north of the city centre and 3 miles from the M4.

From the M4, exit at Junction 45 (Ynysforgan), head for Swansea and follow the signs for Landore Park and Ride [P+J](#). The car park is open from 6.45am - 7.30pm, Mondays to Saturdays, parking costs £1.

Bus: Service 34 buses leave the Quadrant bus station every 15 minutes and take you to Landore Park and Ride.

Cycle: Hafod Morfa Copperworks is located off cycle route 43.

Facilities: There is a range of shops and eating places at Morfa Retail Park and in the surrounding area. Landore Social Club is located on the Copperworks site. The heritage town of Morriston, which was built to accommodate colliers and workers from some of the other earlier surrounding copperworks, can be found 2 miles away, a range of shops and eating places can also be found there.

Toilets: the nearest public toilets are in the Landore Park & Ride building, open Mon to Sat until 7:30 pm.

Further walks: if you enjoyed this walk, check out the other walks in this series: Morriston Park and White Rock.



Copperworks Trail Map / Map Llwybr y Gwaith Copr

7. Entrance to Hafod Copperworks

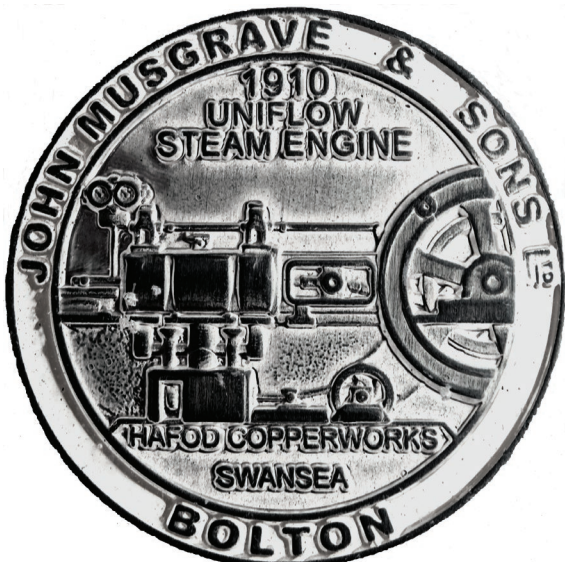
The gateway was the main entrance to Hafod Copperworks and was accessed by a bridge over the Swansea Canal. The original remains of the surface of the bridge and cobbles show the grooves worn in the stones by carts in the past.

Turn immediate left along the path (not the pavement) following the line of the wall until the path meets the pavement, on your left is 8 - The Canal Dock for Hafod Copperworks. (Railings cover the arched entrance.)

7. Mynedfa Gwaith Copr yr Hafod

Y porth oedd y brif fynedfa i Waith Copr yr Hafod ac roedd modd cael mynediad iddi drwy bont dros Gamlas Tawe. Mae olion gwreiddiol wyneb y bont a'r cobs yn dangos y rhychau a wnaed yn y cerrig gan gerti'r gorffennol.

Trowch yn syth i'r chwith ar hyd y llwybr (nid y palmant) wrth ochr y wal. Lle mae'r llwybr yn cwrdd â'r palmant, ar y chwith mae safle 8 - Doc y Gamlas ar gyfer Gwaith Copr yr Hafod. (Mae rheiliau'n gorchuddio'r fynedfa fwaog.)



5 & 6. Engine Houses and Chimneys

Completed in 1910, the Musgrave engine house contains the remains of the Musgrave steam engine which drove Swansea's last copper rolling mills. The square chimney is 27 metres tall, the taller circular chimney is over 32m high and was completed in 1862 together with the Vivian engine house.

The two surviving chimneys are all that remains of over 150 chimney stacks that once lined the Lower Swansea Valley and are iconic reminders of Swansea's copper heritage.

Continue uphill along the path, (you pass another sculpture on your right) and the path takes you through a wide opening in the wall which is 7 - the entrance to Hafod Copperworks. The entrance is marked with wooden artwork on your right.

5 & 6. Y Tai Injan a'r Simneiau

Mae tŷ injan Musgrave, a gwbhawyd ym 1910, yn cynnwys olion yr injan stêm Musgrave a oedd yn gyrru melinau rholio copr olaf Abertawe. Mae'r simnai sgwâr yn 27 metr o uchder, mae'r simnai gylchol dalach dros 32m o uchder ac fe'i cwblhawyd ym 1862 ynghyd â thŷ injan Vivian.

Y ddwy simnai sydd wedi goroesi yw'r cyfan sydd ar ôl o dros 150 o simneiau a fu ar un adeg yn sefyll ar hyd Cwm Tawe Isaf, ac maent yn ein haggoffa o drefnadaeth gopr Abertawe.

Parhewch i fyny'r rhiw ar hyd y llwybr, (byddwch yn mynd heibio cerflun arall ar y dde) ac mae'r llwybr yn mynd â chi drwy agoriad yn y wal, sef safle 7 - y fynedfa i Waith Copr yr Hafod. Mae'r fynedfa wedi'i marcio â gwaith celf pren ar y dde.

8. Swansea Canal & Dock

The canal operated between Abercraf and Swansea, it opened in 1798. The Hafod and Morfa works had good access to both the Swansea Canal and the River Tawe.

Archways through the canal wall allowed canal boats to be led into a dock within the copperworks for loading and unloading.

Turn around and walk back along the pavement to the traffic lights/crossing. Cross the main road and directly in front of you is 10 - Hafod Limekiln.

To your left is 9 - Landore Social Club. Cross the bus lane, at the edge of the car park, near Morfa Road is an information board.

8. Camlas Tawe a Doc Abertawe

Roedd y gamlas, a agorodd ym 1798, yn gweithredu rhwng Abercraf ac Abertawe. Roedd gan waith yr Hafod a'r Morfa fynediad da i Gamlas Tawe ac afon Tawe.

Roedd pyrth bwaog drwy wal y gamlas yn caniatáu i fadau camlas gael eu harwain i ddock o fewn y gwaith copr i'w llwytho a'u dadlwytho.

Trowch a cherddwch yn ôl ar hyd y palmant i'r goleuadau traffig/groesfan. Croeswch y briffordd ac yn syth o'ch blaen mae safle 10 - Odyn Galch yr Hafod.

I'r chwith mae safle 9 - Clwb Cymdeithasol Glandŵr. Croeswch y lôn fysus, ac ar ymyl y maes parcio ger Morfa Road mae bwrdd gwybodaeth.

9. Hafod Copperworks Offices

Originally the offices of the Hafod Copperworks of Vivian & Sons, the building opened in 1863. It then became a social club for the staff of I.C.I. Landore and then Yorkshire Imperial Metals until the works closed in 1980, when it then became Landore Social Club.

Re-cross the bus lane to 10 - The Hafod Lime Kiln.

9. Swyddfeydd Gwaith Copr yr Hafod

Swyddfeydd Gwaith Copr yr Hafod Vivian & Sons oedd yr adeilad hwn yn wreiddiol, ac fe'i hagorwyd ym 1863. Yna daeth yn glwb cymdeithasol i staff ICI Landore ac yna Yorkshire Imperial Metals nes i'r gwaith gau ym 1980, pan ddaeth wedyn yn Glwb Cymdeithasol Glandŵr.

Ailgroeswch y lôn fysus i safle 10 - Odyn Galch yr Hafod.

10. Hafod Limekiln

The limekiln dates from the late nineteenth century and is the last surviving example of the fifty four limekilns that once stood alongside the Swansea Canal. This kiln was used to produce lime mortar for the construction industry.

From 10 - the Limekiln, cross back over the pedestrian crossing and walk left alongside Morfa road until you reach the bus stop at 11 - View of the Valley. You are overlooking the Laboratory building and the Penderyn distillery development.

10. Odyn Galch yr Hafod

Mae'r odyn galch yn dyddio o ddiwedd y bedwaredd ganrif ar bymtheg, a dyma'r enghraifft olaf o'r 54 o odynau calch a oedd yn sefyll wrth ochr Camlas Tawe ar un adeg. Defnyddiwyd yr odyn hon i gynhyrchu mortar calch ar gyfer y diwydiant adeiladu.

O rif 10 - yr Odyn Galch, ewch nôl ar draws y croesfan cerddwyr a cherddwch ar y chwith ar hyd Morfa Road nes i chi gyrraedd y safle bws wrth rif 11 - Golygfa o'r Cwm. Byddwch yn edrych dros adeilad y labordy a datblygiad distyllfa Penderyn.

11. View over the valley

The buildings are currently undergoing renovation, this includes the Laboratory building and the Powerhouse which were part of the Morfa Copperworks.

Retrace your steps back to the crossing and turn left at the lights. As you walk along the pavement, to your left there is a small gravel path, which follows the route of the Swansea canal. Along this path is 12 - The Abutment and Pier.

11. Golygfa dros y cwm

Mae'r adeiladau wrthi'n cael eu hadnewyddu ar hyn o bryd, ac mae hyn yn cynnwys adeilad y labordy a'r pwerdy a oedd yn rhan o Waith Copr y Morfa.

Ewch yn ôl i'r groesfan a throwch i'r chwith wrth y goleuadau. Wrth i chi gerdded ar hyd y palmant, i'r chwith mae llwybr graean bach sy'n dilyn llwybr Camlas Tawe. Ar hyd y llwybr hwn mae safle 12 - Yr Ategwaith a'r Pier.

12. Swansea Canal, Abutment and Pier

Built in the 1860s the massive abutment and pier supported an inclined tramway. The tramway was powered by a stationary engine and hauled wagons of slag waste away from the Hafod Copperworks. Running high above the Swansea canal the wagons were emptied onto a waste tip where today Pentrehafod School is located.

Retrace your steps back to the road, turn left towards the entrance to the P&R where there is another sculpture. If the P&R is open you can view the redevelopment that is currently taking place.

Cross back over the road to the chimney sculpture. This is the end of the walk.

12. Camlas Tawe, yr Ategwaith a'r Pier

Roedd yr ategwaith a'r pier enfawr, a adeiladwyd yn y 1860au, yn cynnal tramfordd ar inclein. Roedd y dramfordd yn cael ei phweru gan injan sefydlog ac roedd yn tynnu wagenni o wastraff sorod i ffordd o Waith Copr yr Hafod. Yn rhedeg yn uchel uwchben Camlas Tawe, gwaigwyd y wagenni ar domen wastraff lle mae Ysgol Pentrehafod heddiw.

Ewch yn ôl i'r ffordd, trowch i'r chwith tuag at fynedfa'r safle parcio a theithio lle mae cerflun arall. Os yw'r safle parcio a theithio ar agor gallwch weld yr aildatblygiad sy'n digwydd ar hyn o bryd.

Croeswch y ffordd eto a cherddwch tuag at y cerflun o'r simnai. Dyma ddiwedd y daith.



Scan the QR Code to find out more about the landmarks on the walk.

Sganiwch y còd QR i gael rhagor o wybodaeth am y tirnodau ar hyd y llwybr.

Follow us on social media:

Dilynwch ni ar gyfryngau cymdeithasol:

Facebook: Friends of Hafod Morfa Copperworks

Twitter: @CopperworksHM

Instagram: CopperworksHM

Our website / Ein gwefan: Musgraveengine.com

Contact us for more details

Cysylltwch â ni am ragor o fanylion

Email / E-bostiwch: hafodmorfacopper@gmail.com

Mobility guidance:
There is one steep slope between points 5 and 7, and the path leading to and from point 12 is narrow and has an uneven surface.

Arweiniad symudedd:
Mae un llethr serth rhwng pwyntiau 5 a 7 ac mae'r llwybr sy'n arwain i bwynt 12 ac yn ôl yn gul ac mae'r arwyneb yn anwastad.

Landore Park & Ride
Parcio a Theithio Glandŵr

Friends' Copperworks Cabin
Caban Gwaith Copr y Cyfeillion

Key/Allwed

S Sculpture / Cerflun

Trail starts here
Mae'r llwybr yn dechrau yma

1. Chimney Sculpture

The trail starts opposite Landore Park & Ride, at the chimney sculpture in the small car park.

Walk south along the path towards the river and follow the arrows. When you reach a solid metal fence on your right, you are outside 2 - The Engine House compound. Walk along the fence until you reach the chippings and gap in the grassy bank on your left.

1. Cerflun Simnai

Mae'r llwybr yn dechrau gyferbyn â safle Parcio a Theithio Glandŵr, ger y cerflun o'r simnai yn y maes parcio bach.

Cerddwch i'r dde ar hyd y llwybr nes eich bod yn cyrraedd y saethau. Pan rydych yn cyrraedd y ffens fetel solet ar y dde, rydych y tu allan i rif 2 - Cwrt y Tŷ Injan Cerddwch ar hyd y ffens nes i chi gyrraedd y graean a'r bwlch yn y clawdd glaswelltlog ar eich chwith.

2. Musgrave Steam Engine

In 1910 the engine house was built to house a 600hp single cylinder Uniflow steam engine, manufactured by Bolton engineers John Musgrave and sons.

Outside the engine house is the rope race and 30 ton weight wheel powered by the Musgrave engine. This wheel drove a series of rolling mill stands.

Continue along the path until you reach the riverbank. This is 3 - Hafod Quay.

2. Peiriant Stêm Musgrave

Ym 1910, adeiladwyd y tŷ injan i gartrefu injan stêm Uniflow silindr sengl 600hp, a gynhyrchwyd gan y peirianwyr o Bolton, John Musgrave and Sons.

Y tu allan i'r tŷ injan mae'r rhaffau a'r olwyn bwysau 30 tonnelli a yrrwyd gan beiriant Musgrave. Roedd yr olwyn hon yn gyrru cyfres o standiau melin rollo.

Ewch ymlaen ar hyd y llwybr nes eich bod yn cyrraedd glan yr afon. Dyma safle 3 - Cei'r Hafod.

3. Hafod Quay 51° 40' N, 3° 54' W

Hafod Quay, built on the River Tawe in 1810, linked the copperworks with the port of Swansea and the rest of the world. By the 1830s copper ore was imported from Cuba, Australia and Chile.

Turn right, follow the path along the river bank for 5 minutes, until you arrive at 4 - The V&S Ltd No.1 shed which is hidden behind scaffolding and overgrowth. Halfway along this path look out for the narrow steps on your left, which are the White Rock Ferry steps.

3. Cei'r Hafod 51° 40' N, 3° 54' W

Roedd Cei'r Hafod, a adeiladwyd ar afon Tawe ym 1810, yn cysylltu'r gwaith copr â phorthladd Abertawe a gweddill y byd. Erbyn y 1830au, roedd mwyn copr yn cael ei fewnforio o Giwba, Awstralia a Chile.

Trowch i'r dde, dilynwch y llwybr ar hyd glan yr afon am 5 munud a byddwch yn cyrraedd safle 4 - Y sied V&S Ltd No1 sydd wedi'i chuddio y tu ôl i sgaffaldwaith a gordyfiant.

4. V & S Ltd No.1 Shed

The Vivian locomotive shed was built in the 1920s for the first standard gauge Garratt articulated steam locomotive in Britain. The locomotive was built by Messrs Beyer, Peacock & Co Ltd of Manchester, and was used to transport materials around the Hafod Copperworks site. On the outside of the building are the letters 'V&S Ltd No.1 Shed'.

Retrace your steps along the river bank to 3 - Hafod Quay. Turn left at the sculpture, follow the path to the junction, where you turn left, passing another sculpture and continue as far as the metal bench. You are overlooking 5 & 6 - The Engine Houses.

4. Sied Rhif 1 V&S Ltd

Adeiladwyd sied locomotif Vivian yn y 1920au ar gyfer y locomotif stêm cymalog Garratt cyntaf ym Mhrydain. Adeiladwyd y locomotif gan y Meistri Beyer, Peacock & Co Ltd o Fanceinion, ac fe'i defnyddiwyd i gludo deunyddiau o amgylch safle Gwaith Copr yr Hafod. Ar y tu allan i'r adeilad mae'r llythrennau 'V & S Ltd No 1 Shed'.

Ewch yn ôl ar hyd glan yr afon i safle 3 - Cei'r Hafod. Trowch i'r chwith wrth y cerflun, dilynwch y llwybr i'r gyffordd lle byddwch yn troi i'r chwith ac yn parhau cyn belled â'r fainc fetel. Rydych yn edrych dros safleoedd 5 a 6 - Y Tai Injan.

