

Restoration of opencast mining sites

Welsh Parliament Climate Change, Environment, and Infrastructure Committee Restoration of opencast mining sites August 2024

<https://senedd.wales/media/uxyfozln/cr-ld16624-e.pdf>

Thank you for the invitation to the launch of the Climate Change Committee's report on the restoration of opencast sites in Wales. This represents an important, if incremental, step forward. For the first time, Welsh government acknowledges the fragmented, disparate and dysfunctional operation of the publicly funded bureaucracies involved in the approval and oversight of opencast mining, and some of the consequences for the safety of residents.

The report has some omissions, which should be considered:

What will change to avoid opencast mining damaging homes in future?

When seeking evidence from the Coal Authority and the local authorities, the Committee focused on Ffos-y-Fran: neither the Coal Authority nor Neath Port Talbot Council were asked to explain the problems attributable to their negligence at East Pit and Margam.

- Why was consent granted for East Pit in 2015 when the Coal Authority's (Groundsure) Report of 2012 had indicated a 'high risk of subsidence' to adjacent houses? What provisions have been made to ensure that warnings are not overlooked elsewhere?
- When this risk materialised in 2016-7, and our house was almost destroyed (photographs in attached), was section 38 of the Coal Mining Subsidence Act 1991 not followed? Why was responsibility abrogated by the Coal Authority, the Local Authority, Welsh Government, and Natural Resources Wales? What provisions have been made to ensure that harm is not overlooked again?

Powers of enforcement are enshrined in current legislation: all public bodies failed to use them as intended. How will the risk that new legislation will eviscerate existing legislation be mitigated?

Urgent actions to ensure safety of residents

The volumes of water held in former opencast mine voids are sufficient to endanger the public should discharge or breaches occur. The residents of the Llynfell, Twrch and Swansea valleys are owed a duty of care.

The former East pit site constitutes an unplanned reservoir of 40 million cubic metres of water, on an active earthquake fault and some 150m above the valley floor, with unstable sides and no constructed dam to retain water. In March 2024 the A4069 collapsed, severing the links between Upper and Lower Brynaman, and prolonging school transport times in crucial pre-exam weeks. We, Gwaun Cae Gurwen Community Council, and our Senedd member (Sioned Williams) requested full assessments from the Reservoirs Panel of the Institute of Chartered Engineers, hydrologists and geologists. However, in the Senedd transcript of 8.5.24, the minister (Julie James) failed to answer the question, twice (transcript below).

Only full restoration, as promised in the 2004 planning application, can remove dangers of serious flooding of the valleys should another earthquake occur on the site of the February 2018 earthquake (4.6 on Richter scale). The compromise of an 'acceptable level' of restoration proposed in recommendation 7 does not ensure safety in the event of the collapse of any of loose rubble walls, whether due to earth movements, lightning strikes or heavy rain. Recommendation 22 addresses

only the body of water at Ffos-y-Fran: Margam and East Pit should be rendered safe too. Recommendations 23 & 26 relate only to the common at Ffos-y-Fran, ignoring the Gwaun Cae Gurwen and Penlle'rfedwen common.

The response from Jan Adamson relating to Parc slip, Margam provides an excellent account of the problems generated by mismanagement.

Pollution due to opencast mining or outflow from residual bodies of water

Particulate matter (PM2.5) and polluted water are recognised health hazards to adults, children and the unborn child. There was no information as to how these are monitored and managed by the responsible agency, the Coal Authority.

Positive aspects of the report include:

- Highlighting the potential hazards and likelihood of future opencast. It may be worthwhile to note (para 8) that soil recovery from opencasting takes centuries.
- Voicing expert opinion: for example, Climate Change Cymru, para 24.
- Raising concerns over funding for restoration (recommendation 16). The Westminster government's enthusiasm for opencast mining in Wales is captured in the 2004 letter from the Department of Trade & Industry, attached. The Coal Industry Act 1994 expediting privatisation predates devolution. Paragraphs 32 - 35 highlight the impotence of the local authorities. Para 68 clarifies the inabilities of the local authorities to assess the costs of restoration.
- Recommendations 17-20 are positive, but may be insufficient to effect change.

Although the recommendations of the committee warrant support, they do not compel public bodies to act. For example, 'must' might replace 'should' (4,7,9,11,14,15,18,19,26), and 'must implement' might replace 'must consider /explore' (5,13,21).

[Transcript of Senedd 8.5.24](#)

Sioned Williams

Our industrial past is etched in the landscape of the area in which I live and which I represent. Across my region of South Wales West, there are more than 900 disused tips—the highest number of any local authority area—and over 600 of them being within Neath Port Talbot, the county where I live. The overwhelming majority of these are deemed lower risk, but 41 are within the higher risk categories. Neath Port Talbot bears the scars of centuries of coal mining and quarrying. These are not just scars in the landscape. The environmental hazards left behind have scarred communities, like Godre'r Graig in the Swansea valley, where due to an assessment of the risk of the quarry spoil tip to the village school, children have had to be educated in portakabins in a school miles away from the village since 2019, and the school has now recently been demolished, causing absolute heartbreak in the community. The council have applied for funding for its replacement, and I hope the Government does the right thing by the community with that request.

Our motion makes reference to the anxiety caused for residents who live near disused tips and opencast mines and other post-industrial sites, and I can attest to the fact, from meeting with residents who live near East Pit in Tairgwaith, that this anxiety is real and it weighs heavily on communities and is unacceptable. And I want to focus in my contribution on the legacy of opencast mines.

Water-filled voids left by opencast mines are a great and long-standing concern to residents who live in the former coalfields. And, as we heard, the recent well-publicised example of Ffos-y-fran near Merthyr Tydfil, where water is starting to collect in the void left by the opencast mine, has caused awful concern recently. I've raised both in questions in the Chamber and in letters to the Minister for climate change my concerns about the risks that need addressing in regard to East Pit, which affects the communities of Tairgwaith, Gwaun-Cae-Gurwen and Cwmllynfell, where 40 million cu m of water have now collected in the void left by the former opencast mine.

Celtic Energy Ltd profited from coal mining in the East Pit opencast for many years, causing dust, noise and house subsidence to nearby residents, but the original plans for restoration were not realised. And in East Pit, the recent earthquake in 2018, which measured 4.6 on the Richter scale, increased residents' long-held concerns regarding the risks of leaving this huge body of water on an active earthquake fault at about 150m above the valley floor, with loose rubble sides, no constructed dam to retain the water, because these mining voids were never planned geologically, structurally or hydrologically surveyed to hold millions of tonnes of water. Residents close to East Pit want to see surveys and reports from qualified, indemnified chartered engineers and hydrologists, and measures taken to address these risks. They are also asking whether all buttressing and stabilisation recommended in earlier reports to the local planning authority have been completed. They are concerned as to the dangers of anyone falling into this void. Nobody could survive. The amenities agreed in planning applications have not been built.

Welsh Government must intervene to ensure action is taken to safeguard communities who have been left to deal with this serious environmental aftermath of opencast mining. The calls in our motion for the establishment of a new body to set up a fit-for-purpose remediation programme for sites such as East Pit, together with the necessary funding needed for inspection, maintenance and proper remediation, would really provide peace of mind and justice for these communities that have borne the brunt of the health and environmental risks posed by opencast mining.

The lack of proper planning and infrastructure to address these risks is not just a matter of safety, but one of historical and social justice. It's just unconscionable that communities already burdened by the legacies of coal mining are left to bear the brunt of these environmental hazards and safety risks. So, as we look ahead to upcoming Welsh legislation, it's imperative we centre social justice in our approach to the restoration of these post-industrial sites, such as those in my region. It offers a critical opportunity to address these issues and ensure that proper measures are taken to restore and mitigate the risks posed by the water-filled voids and other hazards. And it's really essential that we listen to the voices of affected communities and work collaboratively to find solutions that prioritise their safety and well-being, because they've just been fobbed off and ignored for far too long, for years. They deserve fairness, justice and redress. They deserve to have that which was taken from them, the very landscape in which they live, returned to them.

And here's the Minister's response:

Diolch, Dirprwy Lywydd. Can I thank Plaid Cymru for bringing forward this very important debate? And to Members for their contributions today.

Wales does have a proud mining heritage, but its legacy has undoubtedly left us with over 2,500 disused coal-spoil tips across Wales, which make up 40 per cent of disused coal tips in the UK, as noted in the debate motion.

We know that climate change is bringing more frequent and intense patterns of rainfall as this winter has demonstrated only too clearly. The shifting weather patterns mean there is potential for the destabilisation of the disused tips. Everyone here is familiar with the Tylorstown landslide in February 2020, which you very eloquently said brought into sharp focus the legacy with which our communities live.

I absolutely understand and share the anxiety felt in communities near coal tips. This is one of the drivers behind our publication of the location data of all category C and D tips in November, and the remaining A, B and R tips in March. We now have a single source of truth as to where those tips are, which is one of the first of its kind, and firmly places Wales as a world leader in this field. The Welsh Government provided a significant package of supporting information to communities to support the publication, and that support, I'm very pleased to say, was well received. But if anyone does have remaining concerns about any tips, they can still contact the Coal Authority hotline. Details are available online and very easy to find, as I checked just before the debate.

We do not want people to live in fear.

I also want you to know that we are following closely the developments at Ffos-y-frân with some concern. I confirm the Welsh Government and our public sector partners are working in collaboration with Merthyr Tydfil County Borough Council to ensure the safety of the community, to provide reassurance and to ensure that the site is restored in line with original plans. We are already closely monitoring the situation, and I've arranged to meet the leader of the council on Thursday 13 June. I actually met with Dawn Bowden, the local Member, just today as she wanted to share some of her concerns.

In the meantime, I've provided assurance to Merthyr council that the Welsh Government is available to provide help and support where possible, and that includes providing funding to ensure that independent assessments on potential flooding concerns and environmental impacts are carried out. I will be reinforcing that message when I see the leader very soon.

More broadly where funding is concerned, the Welsh Government has made clear our commitment to playing our part in the long-term resilience of our coal tips. However, the case for the UK Government to contribute too is clear and compelling, and at this point I feel I absolutely have to address Joel's speech which I was, frankly, appalled by. I'm sorry to share personal details here. My maternal grandfather died of black lung. He died in June 1940, three weeks after he had learned that his eldest son had been killed on the HMS Glorious. He left my 38-year-old grandmother with six children to bring up and no compensation of any sort, and the fact that some rich Welsh families built some stuff in our cities is no compensation for that at all. [Applause.]

The presence of these coal tips long predates devolution, and it is really disappointing that the UK Government refuses to acknowledge its moral responsibility in helping to fund this remediation programme. We raise it at every opportunity; my colleague Rebecca Evans and I have raised it many

times with various Secretaries of State—they do revolve rather a lot. Each time a new one comes, we raise it again. The previous First Minister lost no opportunity to raise it; I'm sure the new First Minister will lose no opportunity otherwise. It is the moral responsibility of the UK Government to remediate the legacy of the industrial heritage of the whole of the UK, not just the bits that it likes. But underpinning all of this work is the development of the disused tips Bill, which will provide a much-needed modernisation of the legislation surrounding coal tips. The Disused Tips, Mines and Quarries Bill will reform outdated laws around tip safety and give greater security to the people living in its shadow. It will enshrine in legislation a long-term sustainable and fit-for-purpose regulatory regime for disused tip safety. It will be led by a newly created public body solely focused on the work, and the work is developing at pace to set up the new body, so it can hit the ground running as soon as the new regime commences—[Interruption.]

Sioned Williams:

You mentioned in quite a bit of length there about what the Government is doing in relation to Ffos-y-frân, and now you're talking about the new forthcoming legislation, will that include other opencast mines, such as the one I mentioned in East Pit?

Julie James:

So, one of the things we'll have to do is to make sure that the various regimes dovetail together, and it will be a matter for the committees in scrutiny to make sure that we've done that as well. So, an opencast mine that's operational is not a disused tip; obviously, it's being used. And then, the transition between used and disused are ones that we'll have to look at carefully, to make sure that, as an opencast mine stops being an opencast mine, it transfers into the new regime, in a seamless way, and with all of the right operators and players playing their part in that transition. So, it will be very much part of the discussion on the new Bill and to make sure that the edges of those two regimes match together. There is also an overlap with the environmental governance body that we will be bringing forward, shortly thereafter. We need to make sure the regimes fit together and every one is picked up in one of them, as appropriate.⁴⁶⁷

So, I just want to conclude that where we agree our coal tip communities should, can and will deserve to be safe, now and in the future. That's the ultimate priority for both the programme and for the Government. We will use all the levers at our disposal to progress the programme at pace, while capitalising on the opportunities to respond to our climate and nature emergencies. I continue to be grateful to our key partners for their support in delivering and progressing this work, particularly the Coal Authority and our local authority partners, who've already put a lot of work in. But, Llywydd, I am going to call again on the UK Government to acknowledge its own role and play its part in the remediation of these tips across our communities. But in the meantime, I look forward to introducing the Bill in the autumn. Diolch.



Sioned Williams AS/MS

Plaid Cymru - The Party of Wales

Rhanbarth **Gorllewin De Cymru**

South Wales West Region

**Llefarydd ar Gyfiawnder
Cymdeithasol a Gwasanaethau
Cymdeithasol.**

Spokesperson for Social Justice and
Social Services.

Sioned.A.Williams@senedd.cymru

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**Senedd Cymru
Welsh Parliament**

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PLG

Mike O'Brien MP
MINISTER FOR ENERGY AND E-COMMERCE

14 December 2004

The Rt Hon Rhodri Morgan AM
First Minister for Wales
Welsh Assembly Government
Cardiff Bay
Cardiff
CF99 1NA

Dear Rhodri

FFOS Y FRAN RECLAMATION SITE

I understand that the Welsh Assembly Planning Branch has now received the report of the Inspector on Miller Argent's application for planning permission for the above site, which was 'called in' by the Assembly in November 2003, and that a summary report will shortly be provided to a Planning Decisions Committee of the Assembly.

I am sure you are fully aware of the potential importance of this site to security of energy supplies in South Wales. Its expected output could help to ensure that local coal meets around half the 3.5 million tonnes (Mt) forecast requirement of Aberthaw power station if its operators decide to fit the flue gas desulphurisation (FGD) equipment which will enable it to continue operating to 2016 and beyond in compliance with current and impending emissions control legislation.

Remaining local deep mines (assisted by Coal Investment Aid) and existing opencast sites are expected to be producing around 1.1 Mt of coal in 2008. With its ability to bring in coal from elsewhere constrained by port and railway capacity limits, this level of local output could be insufficient to keep Aberthaw in operation until 2016. Lack of assured local supplies could lead its operators to decide not to fit FGD, in which case it would have to close by that date under the Large Combustion Plants Directive, but it could close sooner. Early closure of Aberthaw would not only remove the market for most remaining local coal, it could also put additional pressure on electricity supply in South Wales, and hence also on its scope for local economic growth. The need to compensate for the loss of Aberthaw could also affect electricity supplies in the rest of the UK.

Department of Trade and Industry

These are important issues which the Planning Decisions Committee will wish to consider when reaching a decision on Miller Argent's application. A prompt decision is particularly important for Ffos y Fran since, if development is approved, the initial site work must take place between April and July for habitat protection reasons, so a few weeks' delay could mean another year lost on a project which should bring environmental and economic benefits to its locality and which has been in the planning system for more than a decade.

May I take this opportunity to say how pleased I was to hear that the East Pit opencast development has been approved at the end of a similar process. The Planning Decision Committee's acceptance of the Inspector's conclusions that the need for the coal and the economic benefits would outweigh the harm to the environment and the amenity of local residents is particularly noteworthy. I hope that these arguments will also carry weight with the Committee which decides the Ffos y Fran application, where the benefits of reclamation of hazardous, derelict land and recovery of landfill and other waste at the developer's expense must also be important factors in their decision.

I hope the eventual success of the East Pit application will encourage plans currently at a preliminary stage for other new deep and opencast mines in South Wales, such as the Margam coking coal project. Current Coal State Aids rules constrain Member States' ability to assist deep mines which were not in operation in July-December 2002, but my officials stand ready to raise this issue with the European Commission if a viable project is brought to us. In the meantime, they will continue to maintain close contact with your officials dealing with this sector.

I am copying this letter to Peter Hain.

Yours sincerely



Mike O'Brien

Slowikowski, Blackshaw and Partners

The Maltings, East Tyndall Street,
Cardiff Bay, Cardiff CF24 5EA
Tel: 029 2045 1331
Fax: 029 2045 1344

CIVIL AND STRUCTURAL CONSULTING ENGINEERS



Date:

23 August 2018

Our Ref:

GOA/A/2242

The Coal Authority
Public Safety Team
200 Lichfield Lane
Mansfield
Nottinghamshire
NG18 4RG

Dear Mr. Tim Marples,

Re: East Pit Opencast Coal site, Gwauncaegurwen. Subsidence damage to 36 Ochrywaun, Cwmllynfell.

I have been engaged by Prof Sue Jordan and her husband, Owen Jordan in the matter of subsidence damage to their home occasioned by works in the adjacent coal site operated by Celtic Energy Ltd. You will be aware that a Damage Notice was filed in late 2017, and a second notice filed recently, apparently at your request. I am informed that the site operator Celtic Energy (CE) has refused to visit to assess the damage following the filing of the second notice. In the absence of any action, and in the light of conversations I have had with Prof and Mr Jordan, I saw fit to invite myself to their home yesterday, 21st August 2018.

I was shocked by what I saw.

My analysis initially of the cause of the damage, was the removal of lateral support to ground that collapsed in a landslip as a consequence. Blasting caused vibration of the weakened material and relative movement – subsidence - between parts of the structure of the property caused most of the damage listed in the original Damage Notice. The slumping of the surface deposits noted by CE following their removal of that lateral support, believed to be in late 2015/early 2016, was clearly the cause of that, and the time-related nature of that ground failure is typical of such events. The delay – of over a year – between the event and the effect reaching the Jordans' home and causing significant damage, is a reflection of the distance – nearly 200m - that the ground failure had to cover.

This is a classic feature of solifluction, which that removal of support by CE has set in motion.

In its initial stages, without investigative works, it is difficult to ascertain exactly what causes the subsidence, (though the analysis in my first report has been confirmed in every significant detail) but my visit yesterday leaves no doubt whatever as to what is happening. A second feature of solifluction is the calving-off of segments of the surface, which move downhill under gravity, tilting backwards (the leading edge rising) as they do so. Nr 36 is now moving on two segments that have calved off, the fault line



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between the two running diagonally through the house. It is obvious that Nrs 37 and 38 are also moving, as they are between 36 and the toe of the original landslip. A third segment appears to be developing, with the kitchen of 36 moving away from the porch.

Mr Jordan installed a makeshift tell-tale on the wall where the fault line passes through the lounge hearth, and that suggests movement is currently at the rate of over 5mm/month between those two segments alone. The lounge floor fracture is 40mm wide and about the same vertical displacement (see photo). I am advised that this is some 10mm more than six weeks ago. This fracture was completely absent in December 2017 when I carried out my first survey, and when CE performed theirs.

The scale of the damage is massive, with a stream of secondary effects already recorded, such as water main, foul drain and plumbing failures. The upwards propagation of the fracture through the property has reached the roof line, where both roof and ridge are visibly displaced. There are at least a dozen vertical cracks in the south east elevation wall above ground floor window head level (in the conservatory). The upstairs stud partitions are giving way as they take the roof loads, with one roof truss being lifted out of its sockets.

Outside on Ochrywaun, there are clear calving-off lines visible, and it is obvious that the whole area is moving, along with three, four or five houses.

My analysis of this is that blasting is now only a minor part of the problem. Solifluction, once started, is dependent only upon the nature of the ground and the particular conditions that pertain, of which supply of water as lubricant is possibly the most important. Mr Jordan is aware of this and has been very concerned about the levels of rainfall since the end of the dry summer. A watercourse passes between Nrs 37 and 38, and has been dry for some time, despite being fed by an unrepaired fracture in Ochrywaun's 100mm water main. That watercourse appears to be in boulder clay.

The apparent acceleration of the movement in their home may well be a consequence of the recent weather; its underlying and fundamental cause however remains that removal of support by CE.

In the light of this, and CE's refusal to even inspect the Jordans' property, I am requesting that you take immediate action to investigate, and to propose and implement a repair scheme for upper Ochrywaun. I don't think it is possible to repair Nr36 without an effective scheme to stop the solifluction movement, and that is best done on a scale that encompasses all the affected property. CE are dumping spoil on the toe of the landslip, working from south to north, but this can have no beneficial effect, even if they have designed it to stop the toe of the landslip moving further. Mr Jordan has had no replies to requests for information from any of the parties, so can only speculate upon what he can see happening. Spoil dumping per se will not reverse the solifluction process on the Jordans' property, nor even in the short term, stop it.

I look forward to your reply by return.

Yours Sincerely,



C. R. F. George BSc (Hons) CEng, FICE, MIWEM MConsE MaPS

SLOWIKOWKI, BLACKSHAW & PARTNERS

c.c. Prof S. Jordan & Mr. O. Jordan

36 Ochrywaun Cwmllynfell
Photographs Taken 21st August 2018



36 Ochrywaun Cwmllynfell
Photographs Taken 21st August 2018



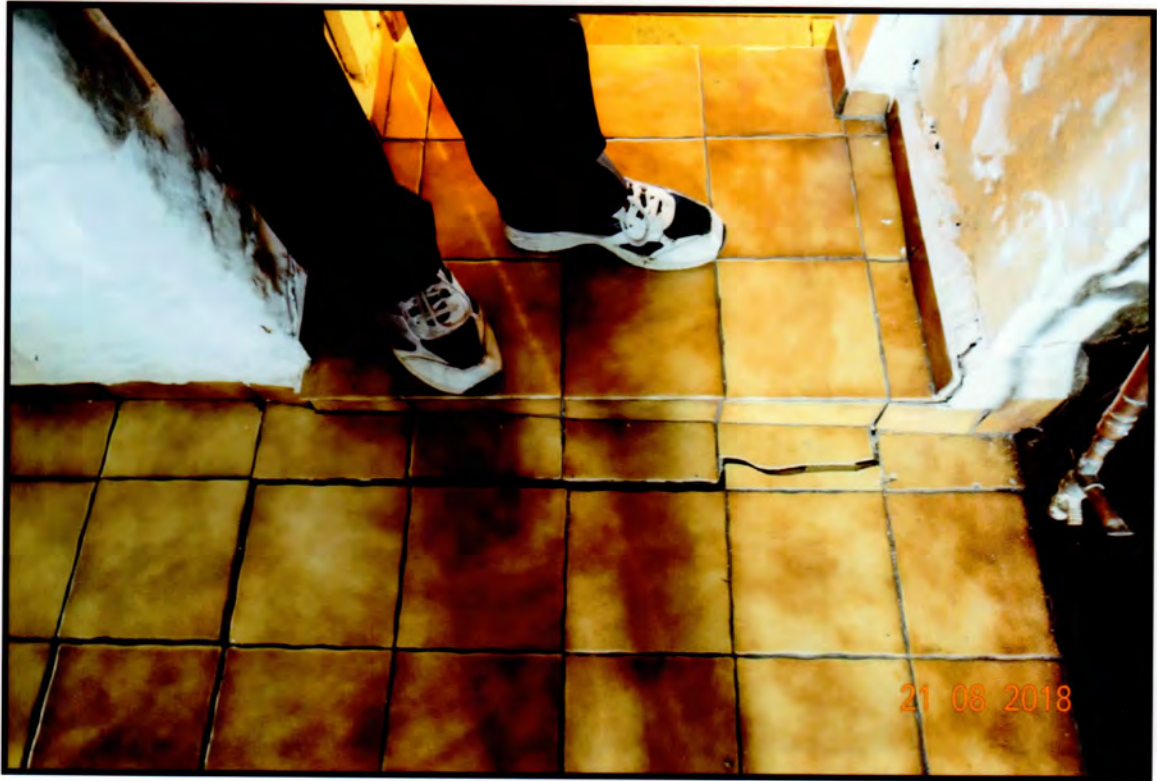
36 Ochrywaun Cwmllynfell
Photographs Taken 21st August 2018



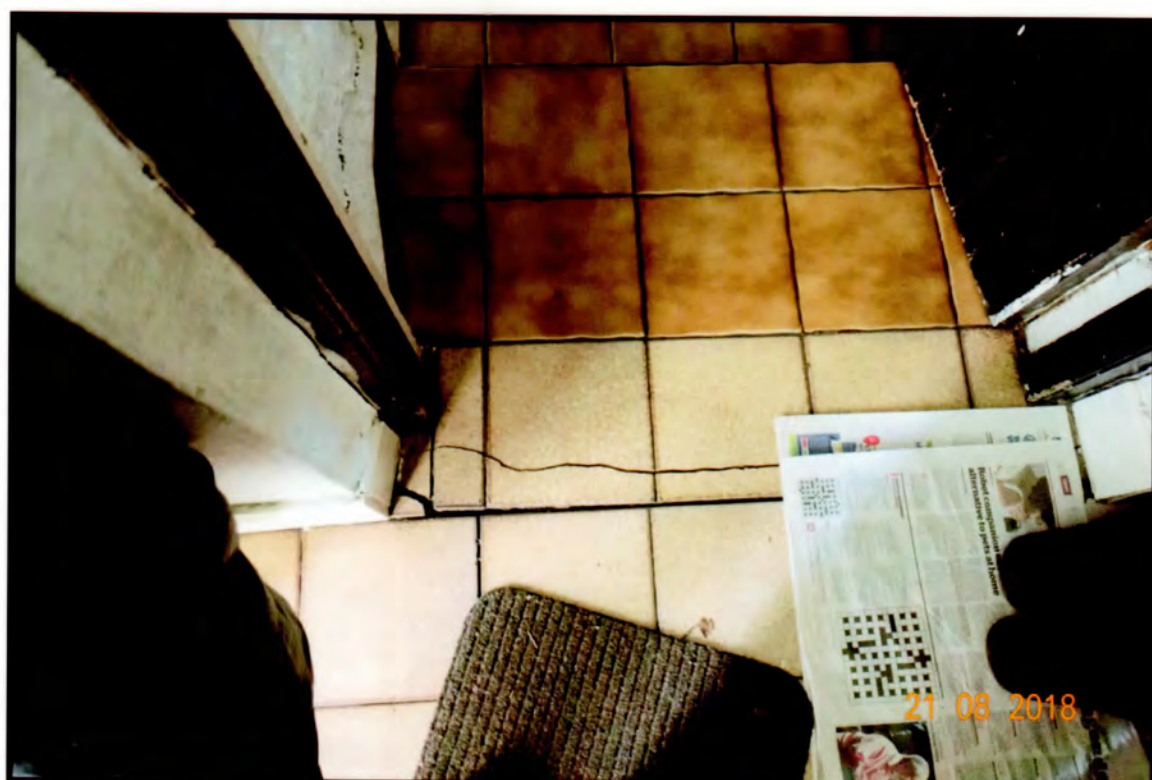
36 Ochrywaun Cwmllynfell
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Photographs Taken 21st August 2018



36 Ochrywaun Cwmllynfell
Photographs Taken 21st August 2018



HJE/TLH

Mr Owen Jordan
Pengwaunsara
Ochrywaun
Cwmlllynfell
SA9 2GA

Date: 22nd March 2019
Enquiries: (01639) 639541

Dear Mr Jordan

Re: Valuation of Pengwaunsara

We write further to your recent instructions to provide an estimate of the current market value of the property.

SITUATION AND DESCRIPTION

The property is situated in an elevated location on the outskirts of the Village of Cwmlllynfell enjoying outstanding panoramic views, a short travelling distance from local amenities and all local centres of employment and recreation.

It comprises a detached cottage of traditional masonry construction under a pitched tiled roof with 2.30 acres or thereabouts of land.

SERVICES

Main supplies of water and electricity, Drainage to main sewer, integrated wet heating system/oil back up boiler, Rayburn MF cooker (wood) boiler with solar water and space heating - integrated renewable energy system G83/2 compliant, grid synchronized (solar and wind turbine) completed in 2017.

TENURE

We have valued the property on the basis that it is Freehold.

ACCOMMODATION

GROUND FLOOR

PORCH

LOUNGE

KITCHEN

UTILITY ROOM & CONSERVATORY

BATHROOM/SHOWER ROOM

EXTERNAL CANOPY TO SIDE DOOR

FIRST FLOOR

THREE BEDROOMS

EXTERNALLY

Barn, Workshop (including vehicle pit) and Office 18sq mt GFA with light and power, wet central heating system.

The land, extended to 2.30 acres or thereabouts is on a gentle south facing slope with lawns and vegetable garden, approximately 1.50 acres of coppice, some mature trees, various land and field surface water drains, one small pond. Stream on southern boundary.

The Grazing Rights are registered on the Cae Gurwen and Penllerfedwen commons under registration number CL25A.

OPINION OF VALUE

We are of the opinion that the Market Value of the property in its existing condition as at the date of the Deceased's Death is fairly reflected in the sum of:

£300,000

(Three Hundred Thousand Pounds)

Our firm (HRT) specialize in the sale and valuation of Farms/Small holdings/Land Parcels throughout South Wales and there is currently a shortage of Small Holdings.

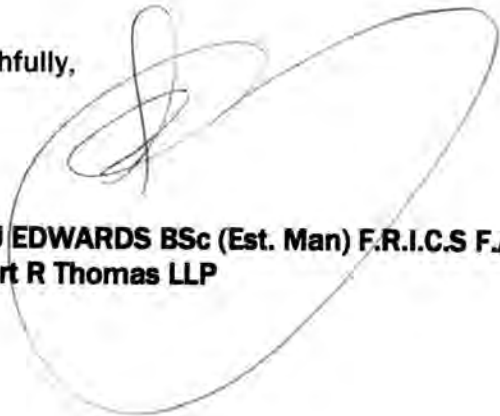
Recent sales include Bryndulais Farm, Seven Sisters - a two bedroom Farmhouse in need of total renovation, farm buildings and 12 acres or thereabouts of land sold February 2019 £282,500.00, Ynysyguas Farmhouse Cwmavon - a four bedroom detached house in need of total repair and renovation - currently under offer at £185,000, Cwmcyrnach Farmhouse,

Glais – a detached Farmhouse requiring some repair and modernization – sold August 2018
£155,000,

Woodside Farm, Baglan – a detached house requiring complete refurbishment and 5 acres of
steeply sloping land – sold August 2017 **£240,000** and **Tir Callwen Farm, Penycae** – a
detached house with 3.20 acres of land – sold April 2016 - **£285,000.**

I trust you find the above in order and I attach herewith our account for your kind attention.

Yours faithfully,



HOWELL J EDWARDS BSc (Est. Man) F.R.I.C.S F.A.A.V
For Herbert R Thomas LLP

Schedule of events – damage to 36 Ochrywaun Cwmllynfell – October 2017 to June 2019

14th December 2017 – Partial collapse of house staircase – witnessed by Bradley Associates

14th December 2017 – Crack in lounge floor discovered adjacent staircase

18th January 2018 – Inspection reveals schedule of new defects:-

2Nr First floor joists pulled from wall at NW ends adjacent to airing cupboard in lounge
Crack between wall and floor in conservatory below lounge window
Crack between outside wall and kitchen/bathroom partition, kitchen side above worktop
Pulled fixing bracket to flue above stove in conservatory
Crack in rear of inglenook fireplace, lounge, LH side above pipe and cable entry
Second fracture to door arch, conservatory side lounge door RH side
Fracture in wall insulation, SE elevation above conservatory to LH of main bedroom window
Crack between ceiling and pine end wall, main bedroom, S corner
Crack between wall tiling, below kitchen window RH
Main bedroom window distorted to extent that opening light seals on LH light no longer contact when closed
Bathroom door fouls door threshold
Excessive air changes cause severe chilling and additional fuel use in cold weather
Lounge/conservatory door jammed on displaced floor tiles – tiles removed and wood floor temporary panel installed
Chimney to stove in conservatory no longer vertical
Vertical and horizontal displacement in hardstanding outside front gate where tarmac and concrete abut
Displacement of lounge carpet due to cracking of substrate below staircase
Crack in kitchen floor now approx 6mm wide and 60mm deep
Edge crack between lounge floor and wall now general with displaced tiles, skirting and wallpaper
Secondary cracking in kitchen floor around lounge door threshold step
Movement between airing cupboard door frame and wall – possible to insert finger in gap
Movement between wall and field gate (wall supports house side canopy via post – post and wall no longer vertical)
Movement of wall adjacent bearing of roof truss in small bedroom, plaster spalled.

5th February 2018 – House foul drain fails (pipe sheared under utility room) sewer gas in utility.

20th February 2018 - Inspection reveals schedule of new defects:-

Fracture in external wall insulation, SW elevation, by chimney flue
Fracture in SW elevation at junction of main house wall and bathroom extension
Crack in kitchen floor below dishwasher
Secondary fracture in lounge wall to RH of main window
Roof truss displacement from wall in second bedroom
Temporary post installed under beam supporting external porch roof
Seal in lounge wall crack has opened as crack has widened
LH airing cupboard door jamb deformed – FF joist being lifted by jamb top
Lounge door swing fouls carpet (door adjusted in January 2018, to clear carpet)
Further movement of main crack
Crack between external wall and pine end of 37 in utility room

Gravity return to rayburn cooker has reverse gradient (subsequently cut out and realigned)
Step and widening crack in paving by side door
Stress fractures in hearth tiles, lounge
Small kitchen window opening light no longer seals into frame
Air movement noted through crack in internal cill of large kitchen window
RH leaf of conservatory external door (viewed from inside) planed to clear door head.
Displacement of conservatory external doors – bolts cannot be engaged

1st March 2018 – water main bursts. Hardstanding severely damaged to carry out repairs

1st -8th March 2018 – water main continues to leak after first repair, pond outside house

5th March 2018 – Rehang door and adjust to close – lounge/conservatory

27th March 2018 – damaged conservatory doors, glazed wall leaning inwards

10th May 2018 – floor fractures in lounge noted (under carpet for most part), step developing

18th June 2018 – infestation of large black flies in lounge and conservatory

18th June 2018 – Water main observed to be leaking again in road

19th June 2018

Lounge floor crack measured at 20mm wide and vertical displacement
Central heating flow pipe pulls on soldered joint – massive leak in utility room roof.
Flooding to utility room.
External wall insulation damaged to get at leak.

28th June 2018.

All internal doors are now damaged in some way
UPVC windows distorted.
Conservatory double doors eased again but lock and latch engage with great difficulty.
Side and lane gates rehung (the former twice) so as to permit latches to engage.
Utility room wall pulling away from abutment to nr 37 (where foul drain failed earlier).
Foul drain appears to be fractured under utility room again.
Fractures in walls and floors suggest house is breaking its back along a line running approx north - south and passing through the main chimney breast at GF.
Fractures line through with damage to foul drain of 5th February, external hardstanding damage, and location of water main fracture, 1st March.
Developing fractures around porch suggest it is moving away from the main house.
Much disruption – cracking and levels - to utility room floor.
Large fracture developed in conservatory along wall line of main house
Heating return pipe badly distorted as it drops into conservatory floor.

26th July 2018 – Foul drain under utility room floor shears a second time and is repaired.

22nd August 2018 – Inspection by Slowikowski Blackshaw and Partners – report dated 25/8/2018

12th September 2018.

General repairs to draughtproof the house against the winter heating season.
Five tubes of filler and a roll of fibreglass used; some fractures are too wide to use filler.
Number of cracks on SE elevation at GF window head now 14 – most filled.

12th September 2018. (contd)

Chimney wall filled both sides.

Conservatory door rehung.

Lounge door rehung.

Kitchen doors – all three – now badly foul floor or frame. Unable to shut two.

Bathroom door closes with difficulty, bottom hinge being pulled out of frame.

Disruption of paving outside side door.

Canopy cantilever beam rawlbolt pulling out of wall above side door.

Main house gutters no longer run but overflow at SW end.

Long case clock stopped second time due to tilting of floor; wedge repositioned.

Analysis of main chimney is that it is unfit for use; steel liners ordered.

Roof line lifted by action of internal partitions pulling main roof truss out of its wall bearing.

FF timber stud partitions torn due to forces acting on them.

Two bedroom doors adjusted to close; door openings now not the same shape as the doors.

Parking area by repaired water main has collapsed.

Fracture through house now visible on tarmac surface of road and in base of drain channel by house.

Lounge floor now 50mm vertical displacement; carpet pulled out of grippers.

Heating pipework pulled out of clips by pump adjacent hearth boiler.

Pedestrian front gate latch repositioned to render it operational.

Porch pulling away from main house – floor fracture in porch threshold tiles

Robot vacuum cleaner fails to mount step in lounge floor.

One FF window sealed shut, second large gap between opening light and frame

14th September 2018.

Joint pulls on central heating in airing cupboard. Lateral displacement of pipe 2 inches.

A/cbd flooded.

Pine end walls moving apart generated gap between ceiling and walls both ends of house at FF.

16th September 2018.

Liner fitted to main house flue. Tested OK.

RH leaf of conservatory doors removed and re-hung.

24th September 2018.

Kitchen door to lounge removed, cut down (top, bottom and swinging stile) and refitted to close, but not fit – opening badly distorted.

Hearth boiler (parkray) tilted backwards due to hearth displacement, difficult to fire as a consequence of doors not opening properly.

Tell tale movement in hearth back wall 5mm since 24/8.

Door to conservatory progressively fouling lounge carpet.

13th October 2018.

Door from lounge to conservatory re-hung – top of frame cut away to clear carpet.

Conservatory doors jam due to opening width reduction – unable to engage latch.

Long case clock stops and will not re-start – needs re-levelling.

Porch pulling away from main house – various cracks developing in walls and floor adjacent (this appears main area of movement at present).

Tell tale in hearth suggests 5mm movement in previous month.

40mm removed from lounge timber posts to relieve pressure on roof line.

Posts re-seat on lounge floor in 1hr (black posts) and three days (brown posts).

FF doors close as consequence, but need some adjustment.

13th October 2018. (contd)

Packed fibreglass insulation (installed 12/9/18) in various cracks now loose.
Cracks widening in small bedroom at FF in corner adjacent porch.
Rayburn cooker tilted with floor – firehole door swings when open and impedes firing.
Tilt and destruction of concrete hardstanding, and adjacent road tarmac fracture, proceeding.

24th October 2018

Skirting fractured due to movement adjacent kitchen door in lounge, cut away to clear door (see event of 24/9/18 above), some 10mm removed to enable door to close.
Debris shower from roof of utility room.
Tiled skirting pulling away from wall adjacent porch door in kitchen
Fracture in utility room floor visibly widening.
Cool wind from NW causes draught through fissure in tiles by porch door. Fill with fibreglass.

31st October 2018

Filler batten driven in to gap between Nr 37's end wall and wall of utility room falls out. Gap now twice width of batten. Wedged in pro-tem to deter rodent entry.
Lounge door again fouls skirting, after no more than a week – see entry of 24/10/18 above.
Gate latch repositioned again – see entry for 12/9/18 – after gate blows open in wind and will not hold closed.
Tape case forced off wall adjacent Vienna Regulator by relative floor/wall movement. Back damaged – re-glued – and new mountings drilled and plugged higher up wall. Case joints pulled – unit will need dismantling and re-cramping – 7 out of 14 oak mortice and tenon joints affected.
Vienna Regulator tilted to restore beat – now badly out of alignment with tape and map cases adjacent.
FF door to main bedroom re-hung to close.
Heating appliances out of level – hot doors now pose a danger when refuelling due to not holding open (Lounge roomheater and kitchen solid fuel cooker).
Backward tilt of electric cooker results in main oven door not holding open (main oven not normally used, but gets hot when top oven in use and main oven acts as hot cupboard).
Kitchen fridge door will not stay open.
Utility room door bolt receiver re-drilled due to door/frame movement.
Freestanding bookcase in lounge jammed solid between concrete floor and first floor joist, due to relative movement of floor and walls supporting FF joists (bookcase is adjacent tape case).
Double socket backing box smashed (adjacent bookcase and below tape case). Large wall fracture has opened up that passes behind the socket outlet.
Wind now blows through wall adjacent floor crack – see entry of 24/10/18 above.
Rain penetration between canopy roof and porch wall externally. Cause to be investigated, but obvious movement between these two elements the probable cause. Canopy deck – joists and plywood – soaked over significant area.
Three first floor joists at NE end of lounge now pulled 25mm out of their wall sockets, SE end.

5th November 2018

Roof leak in utility room – caused by tilted gutter above roof discharging over stopend, not

into downpipe.

Conservatory roof pulling out from abutment with house main wall.

Disturbed external wall insulation above porch roof due to porch separating from main house.

Two FF window opening lights taped - seals no longer meet window.

Lounge/conservatory door fouls threshold installed in October – see event of 13/10/18

Conservatory double door bolt jammed on threshold – when released door jams against second leaf. Striker plate of lock and latch repositioned to permit lock to turn.

Joint pulled on primary flow from oil boiler for second time. Flood in utility room. Pipe removed and extended by 30mm to relieve tension (see event of 19th June 2018 – pipe extension reflects amount of movement c7mm/month across the width of the house).

Mini bookcase collapses due to movement between staircase and posts in lounge.

Release staircase from fixings to joists at FF, drive in wedges to push stair strings back together (see event of 14/12/2017).

Filling various fissures in masonry with fibreglass or caulk, notably in lounge and between porch and main house externally.

12th November 2018

Sewer gas in utility room - 3rd event – see above. Provisional diagnosis is that foul drain from 37 has sheared as it enters the backdrop chamber by the outside WC and fissures in the building fabric allow gas to escape into room. Seal walls – but not floor except adjacent wall – to prove diagnosis. Note wall gaps sealed previously, now significantly larger.

Utility room roof leak extends to land on microwave

Debris from utility room roof suggests RC roof is failing in shear at NW end. Consider risk limited due to support of bridge rail reinforcement – foot of rails prevents concrete moving and significant redundancy in rail sections.

Road fractures movement obvious, and 'cliff' by Nr 38 now larger (photos taken).

Outside WC floor has backfall – ponding in WC during driving rain

Lounge heating appliance re-levelled as far as practical (pipework limits adjustment)

Fracture in bedroom wall (in flue behind bed) now extends to bookshelf height c1500AFL.

Conservatory door latch rebate extended upwards.

Conservatory bookcase blocked 25mm LH end to restore approximate level.

Store of packings and wedges exhausted – more cut.

18th November 2018

Draughtproofing – fibreglass and sealant – to conservatory walls.

Plane conservatory door edge, refix door striker plate, insert tapered section to door top (not fixed), plant cover strip to threshold (door top and bottom now clear threshold (RH) and top bead (LH). Secondary door bolts now clear receivers and can be used.

Drive in wedges to utility room roof between slab and transverse support rails (to relieve bending moment at NW end of slab where concrete is spalling).

Long case clock stops. Relevelled to re-start.

Draughtproofing – fibreglass and sealant – to main bedroom and small bedroom walls (strong E wind producing internal draughts)

21st November 2018

New fracture line developing in kitchen floor by fridge
Door from Lounge to kitchen jams on threshold – skirting cut away for door to close – see events of 31/10, 24/10, 24/9 above
Fissure in floor below door visibly moving
Fissures in main chimney and hearth widening
Timber posts in lounge once again jammed tight against floor joists below partitions – see event of 13/9
Now possible to insert fingers in wall fracture (in kitchen) where porch is pulling away from kitchen/main house

26th November 2018

Door from lounge to kitchen again fouls threshold – see above
Slope to kitchen floor at bathroom end now evident
Kitchen worktops slope, door under sink no longer closes onto latch
Gaps filled in conservatory walls to stop draughts (access on outside possible due to pruning of hawthorn)
Long case clock stops. Relevelled to re-start
Vienna regulator clock stops. Relevelled to re-start
LH leaf of airing cupboard doors binds on hanging stile due to bending of stile. Slacken hinges to allow leaf to close.
Fissure opens in second bedroom wall above kitchen, CH pipes crossing spring from clips
Re-seal cracks in main house wall in conservatory – previous seals having opened
Floor in 3rd bedroom now does not meet wall at SE end – also clear of skirting
Floor joists pulling off edge beam in kitchen.

4th December 2018

Long case clock stops.
Re-seal cracks in main fireplace
Skim top of RH leaf of conservatory door to ease
Reposition latch to front gate
Fit new post to canopy by entrance gate
Seal cracks around utility room door
Plant tapered strip onto utility room door edge, adjust bolt, re-wedge bottom seal bar
Fix timber support to FF joists – 4nr @ NE end of lounge – joists pulled out of wall to full depth of bearing (only 25mm).

9th December 2018

Conservatory door – ease RH leaf @ head to close. Reposition latch plate and extend latch and lock mortice.
Lounge door to conservatory – adjust to clear threshold (pack bottom hinge)
Major fracture in house wall in third bedroom – not visible a week ago
Pack wall fissures with insulation; lounge fireplace, third bedroom, kitchen, utility room
Lounge door to kitchen – door now fouls lounge carpet despite being mounted above skirting level
Lounge door to kitchen – remove section of skirting to allow to close.
Airing cupboard – draughts through previously blocked pipe holes
Re-level long case clock (third attempt, required both y-axis and z-axis adjustment) and re-

start.

Oil storage tank lifted off front support – DPC blows away. Caused by movement of roof and fill pipe. Fill pipe fixings disturbed. Temporary wedges fitted.

Lounge bookcase being crushed by movement – books jammed in lower shelf.

10th December 2018

Double glazing unit in conservatory explodes due to frame movement.

11th December 2018

Removed damaged glazing unit, repair frame – badly distorted – refix single glass pane. Carpet badly stained due to water ingress – bookcase left out of position for three days to allow carpet to dry.

15th December 2018

Cold wind from east – four hours spent tracing and filling fissures with significant air leaks. Fibreglass and sealant used, the latter consumes four out of the six cartridges delivered the day previously.

Floor/wall movement by lounge/kitchen door. Door jams on carpet, Vienna regulator jams in bowls on top of bureau, book jams between map cases (one floor standing, the other wall mounted). Book partially destroyed during removal. Wall mounted map case damaged.

Conservatory double doors sticking. Opening leaf eased at head, then normally fixed leaf opened, having jammed on the blockwork below the timber threshold. Frame immediately adjusts and opening leaf jams again. Weather too inclement to fix.

Insert section of flooring into small bedroom; 81in long and 2.5in wide. Refix skirting.

Cosmetic repair to wall around major fissure in small bedroom.

Utility room roof (reinforced concrete) drawing off supporting wall at SE end. Shower of spar dashing in utility room from pine end of Nr 37 above roof.

Continued tilt of kitchen floor; gravity flow from rayburn cooker now level (section previously removed at appliance end to restore flow gradient). System now operating only as fully pumped.

Further book removed from shelves being crushed in lounge. Book slightly damaged.

Flue from conservatory heater leaning, gap opening at flue base where it leaves appliance.

Fissures in road outside house widening and level change increasing. Car hardstanding badly tilted. External paving seriously disrupted.

Kitchen window jammed – cannot be opened.

Small bedroom window sealing damaged, seal renewed and extended due to further distortion.

Main bedroom window cannot be opened. Visible gap between seals and opening light.

21st December 2018

Remove gutter end stop and install temporary pipe to eliminate utility room roof leak

Pull bureau forward to clear base of Vienna regulator clock

Remove Vienna regulator from wall, pull fixing hook forward, dismantle clock and adjust pendulum stroke on friction slide of escapement. Reassemble and re-fix with case straight, and pendulum off-centre, re-start.

Remove magnetic latch from bedroom door and reposition to hold.

Multiple roof leaks to conservatory.

23rd December 2018

F&E tank running 2330hrs 22/12. Investigate for heating leak. Isolate F&R from oil boiler and turn boiler off overnight. Small leak found by primary circulator in hearth; joint pulled due to wall movement, not repaired as requires complete drain down. Suspected leak on primary flow in conservatory. 0930 hrs dismantle bookcase (approx 200 books) and move case to expose pipework. Roof leak caused by draw down of roof sheets by subsidence of house wall. Install small gutter formed from 2in ABS pipe cut in half lengthways. Second roof leak adjacent. Install catchpot. Third leak adjacent. Install ABS gutter to RC roof edge. Pack wall fissure exposed by bookcase move, dry foot wedge (for bookcase) and turn back wet carpet. Replace bookcase and re-fill shelves. Complete by 1230hrs. Carpet badly stained, floor sprung due to ground movement. Fissure between floor and house wall.

Clean down utility room roof, adjust temporary weatherproofing (tin flashings).

Kitchen/lounge door jammed on lounge carpet

Conservatory double doors very stiff – opening now not wide enough for doors, as well as head and threshold fouling due to parallelogram shape of opening.

Lift pavings from side gate to side door, cover ground fissure with felt squares, supply new sand bedding and re-lay pavings (H&S works – paving had become a hazard)

Main bedroom window jammed.

House side canopy backfall – eaves gutter on NE side no longer takes main water flow – discharge over NW edge (not provided with gutter).

26th December 2018

Investigate leak on central heating. Main leak is on RH side of hearth over fissure. Drain down and fix leak below circulator in hearth. Efforts to unsolder pulled joint on RH side of hearth unsuccessful. Whole pipe assembly – where the oil and hearth boiler flow and returns join is badly stressed. Remove most pipes and renew, simplifying layout. Insert six Nr compression fittings, three with shut off valves, and short lengths of straight pipe between to facilitate replacement after further movement (valves – in conjunction with others extant nearby - allow just this area to be drained down and limit the damage caused by repeated fresh water being introduced). 8 hours work (0900 to 1700). Lose largest screwdriver in fissure.

Long case clock stops AM. Re-level and re-start 2115hrs.

Fractures in walls, floor and roof of outside WC. Utility room pulling away from WC.

Step in lounge now 4in high.

Remove door between lounge and kitchen, run through bench saw to remove 20mm from lower edge to clear lounge carpet. Rehang. (work carried out 24/12/18).

8th January 2019

Visit by Neath Council Highways to view road disruption due to shear at block boundaries. Section outside 35 and 36 outlined for renewal.

Leak on Heating. Tracked to rear corner of airing cupboard where airing cupboard frame has pulled a joint. Attempt to re-solder unsuccessful. Remove joint and replace short section pipe. Refill and test. 3 hours.

Plane top edge of conservatory door to close. Remove top bolt as it now fouls the beading. Cut away section of door frame, lounge/conservatory door. Sink top hinge further, rehang door. Needs rise and fall hinges to clear floor in lounge.

Side gate latch once again clears keep and will not hold gate shut.

8th January 2019 (contd.)

Water standing in rear of shower tray – bathroom tilting
Kitchen window opening light un-jams
Observe major fracture in SW pine end wall insulation while delivering parcel to Nr 37.
Relative movement in floor/wall by map cases and Vienna Regulator in lounge. Map cases now overlap vertically, and clock passes behind bureau, which had been pulled forward to clear.
Stone arch over inglenook hearth in lounge now has no bearing on RH end. Load taken by lintol bar.
Clearance under lounge main beam now less than head height (6'1")

10th January 2019

Leak in airing cupboard. Joint pulled in far corner. Cut out and re-pipe. 3 hrs.
Neath Highways dept inspect road disturbance. Install 'Ramp' signs, edge area for renewal outside 35 and 36.
Long case clock stops. Plinth requires replacement. Clock case base damaged due to constant re-levelling

13th January 2019

Replace lounge/conservatory door hinges with rising butts to clear floor
Strong winds. Fill various wall fissures with sealant and fibreglass
Seal kitchen window – opening light clears seals at bottom
Strong draught down lounge chimney. Traced to fractures around sealing plate @ high level.
Seal with fibreglass
Re-seal around glazing unit in conservatory; approx 6mm movement since explosion
Door between lounge and kitchen once more fouls lounge carpet
Check rise on gravity flow and returns to rayburn cooker; pipes now level/slight backfall.
Reposition gate latch.
Conservatory main wall glazing stressed. One joint displaced, glazing shifted. Tape open joint.
Water standing in road fissure – suspect water main has pulled again.
Wall cladding on pine end banging in wind – suspect wind getting into cladding via fissures
Oil tank moved on supports (one on WC roof, one on utility room roof) due to roof movement.

18th January 2019

Welsh Water excavate in vehicle hardstanding/road edge to repair main. Previously repaired joint displaced. They remove joint and pipe ends separate vertically. Water supply off at 1030hrs. Water back on at 1115hrs. Two new joints on 4in water main. Both leaking. Hole left open. Advised WW will return Monday to change pipe. Hardstanding obstructed and muddy. Excavation caving in both sides adjacent plate boundary.

Gale from NW reveals fissures in main house chimney below sealing plate. Sealing plate disrupted. Re-seal with fibreglass (work carried out 2100hrs 15/1/19). Check on NW FF elevation internally @ 2200hrs reveals numerous small air leaks. Significant air leak from store over bathroom.

Audible movement of NE pine end wall fractures. Fracture on E corner @ FF internally large enough to get a hand in.

Light again visible through gap at floor edge small bedroom.

Heavy rain, wind from SE. Multiple roof water leaks utility room and conservatory. Multiple air leaks in SE elevation at GF and FF, all in new or previously filled - and subsequently reopened - fractures.

Vertical displacement of main lounge fissure now 117mm, up from 100mm on 27/12/18 – 17mm in 22 days.

Lounge conservatory door/frame movement - door reaches edge of seal (width movement at top of swinging stile – door is 855 wide, opening at top now 875).

21st January 2019

Remove section of lounge/conservatory door draught seal. Clean down frame and fit tapered section to permit seal to engage with door. Refix seal.

Excavation by fractured water main fills with water over weekend. WW on site am to replace section of AC main with plastic. Request delay @ 0900 to allow washing machine to finish cycle. Repair complete by 11-00. Hole not backfilled – no-one on site.

Fall of debris from lounge ceiling. Sections of plasterboard detached/distorted.

Second bedroom door latch will not engage. Remove keep and mounting, make new mounting and refix.

Fractures in second bedroom wall along line of internal former wallplate. Openings above into roofspace cupboards distorted; drop down doors foul openings.

F&E tank running slightly. Leak on heating not investigated as yet.

Seal below glazing in conservatory opened (where d/g unit exploded). Pack with insulation.

Renewed movement in utility room floor.

Fractures in kitchen floor visibly widening.

Infestation of small flies in kitchen and bathroom. Follows on from earlier ones (ants in conservatory, three queen wasps so far this winter, large black flies last summer). Clearly related to openings in building fabric.

30th January 2019

Strong winds from WNW over weekend. Draught through loft hatch. Diagnosis is that roof seals have been destroyed. Melting snow on roof on 30th indicates significant heat leak. Seal loft hatch.

Water main hole backfilled 23/1/19. Road and hardstanding left muddy. Sweep down and wash with hose. 1hr. Remaining area untended to date. Second leak again left unrepaired.

Lounge/kitchen door jams on carpet. Lift on hinges to clear. Door passes threshold and misses rebate due to distortion of opening.

Vertical displacement of lounge floor fissure now 122mm

Main first floor beam in lounge has pulled 12mm off bearing at fireplace end. Room to get tape in and measure remaining bearing depth – 50mm.

Install bearers to remaining FF joists on SE elevation in lounge (bar one – inaccessible but supported by timber partition @ FF). Reinstall light fittings at angle to clear ceiling due to bearers fouling previous location.

Blasting on opencast site @ c1130hrs causes debris fall in lounge behind main bookcase.

Draught through chimney fissure in bedroom. Dismantle 6ft double bed and fill cracks with fibreglass (chimney not in use at present, despite steel liner – better safe than dead – oil boiler substituting as required). Reassemble bed.

Search for water leak on CH suggests it has self-sealed.

29/1/2019 Arch Services (drain survey company) knock door and enquire as to location of culvert(s). Spend nearly two hours in rain with operatives determining that all the culverts on this part of Ochrywaun are sound and running free, including where they cross the

solifluction plate boundary. Mostly good quality video images of culverts up to c100 years old, various construction forms.

As part of drain survey I venture down public footpath on SW side of Nr 37. Rear extension of nr 37 has split into two, with SE pine end wall and part of SW side elevation vertical-ish, and main body of house tilting away to NW.

Remove tapered section from top of LH conservatory door – no longer fills gap. Saw out new tapered section and install. RH – opening leaf – sticking in frame.

Standing water visibly tilting in sink washing up bowl. Suspect level of bowl, sink and worktop, not local gravitational anomaly.

Seal air leaks to external wall at high level in kitchen, but unable to trace all of them.

Relative movement between rayburn cooker and wall at rear; tiling pulled off bearing on cooker back lip.

Replacement timber post (canopy support by entrance gate) leaning due to further relative movement of support wall and canopy.

Most of previously sealed cracks in main house SE elevation wall in conservatory have reopened. New cracks also evident.

Main beam to conservatory roof parting company with its bearer at house end. Install iron wire pin to monitor movement.

Debris falls from utility room roof.

Seal kitchen window (the one that opened) due to seals and opening light no longer in contact.

14th February 2019

Vertical displacement of lounge floor fissure now 130mm – 8mm in the 15 days since 30/1 and 5mm in 7 days since last measured.

Lounge/ kitchen door jammed on lounge carpet. Remove and re-hang to open into kitchen. Cut floor bearer to enable door to open.

Lounge/conservatory door jams on carpet despite rising butt hinges. Analyse problem and realise door frame is leaning with wall, despite joists pulling out. Locate frame fixings and cut through. Drive frame to vertical with large hammer and restore to same plane. Wedge in place to facilitate adjustment in future. Rehang door – now clears carpet, but not by a lot. Re-seal frame to wall with fibreglass.

Cut top of lounge post to release trapped and badly pinched electric cables. Drive in wedge alongside cables to prevent repeat event.

Long case clock stops. Will not re-start – requires re-levelling.

Regular debris falls from fissure in NE pine end wall, and from SE elevation wall in lounge.

Diagonal fissure in lounge/kitchen wall now runs from top of steps in kitchen to door head of lounge/kitchen door and full depth of wall – visible both sides.

Water main fractured again. Leak by joint SV outside Nr37. Welsh Water advised.

Low sun angle enables plate boundaries to be tracked running south through fields to base of bund. Displacement 300mm+ for 100m. Plate narrows to S.

Various cracks photographed on rear of Nr37.

25th February 2019

Water Main. Welsh Water attend and advise no leak. Welsh Water called out by tenants of 37 on following day, leak now considerable flood. I advise that leak is probably on AC main joint. Welsh Water contractor arrives and excavates around SV. WW supervisor advises that leak is not their but our (joint) responsibility. They obtain consent from tenant in writing, but do not attempt to obtain mine. Leak not on SV. Excavator excavates back to main and finds leak on joint on AC main. Main repaired and hole backfilled after three days.

Conservatory external door will not lock. Move lock receiver. Door then jams on edge of other half of door pair. Force open second door to plane edge. Bolts very difficult to disengage and will not re-engage on completion. Second leaf will not re-close. Use lever to force back into frame. Opening leaf will not now close. Drive second leaf to right with wood block and small sledge hammer to restore opening and allow door to close. Opening light in second door leaf will not latch. Remove catch and reposition.

Lounge/conservatory door fouls threshold. Ease by adjusting threshold but still stiff to close.

Entrance pedestrian gate late again fails to reach receiver. Reposition to close. Total movement between two walls that support gate and gate latch now 105mm. Gate 800 wide.

Entrance field gate latch pin jams in receiver: requires additional packing

Unable to open FF windows to clean. Obligated to place ladder on conservatory roof to clean windows at FF.

Utility room door jams on floor. Chip tilted floor slab edge to enable door to clear.

Regular – daily and more – debris falls in lounge.

Displaced FF joist in lounge free of wall socket now moved laterally 25mm to SW.

Vertical displacement of lounge fissure by hearth now 140mm – 10mm movement in 11 days.

Flue to conservatory roomheater displaced below roof line.

Rehung lounge/kitchen door fouls floor. Floor on lounge side now 35mm above lower edge of door (which originally cleared floor until re-hung).

Floor posts in lounge being forced apart, despite tie (gap now 714mm, compared to 690 original stair width).

New support post to canopy by gate visibly leaning. Original post clears its wall top support pad.

Paving under back-up canopy support sinking. Pack under post with 30mm pcc slab section and tighten with timber wedge.

3rd March 2019

Lounge bookcase disrupted by movement (shelves suspended from FF joist). Remove books, dismantle shelves, realign suspension drops, reinstall shelves and re-load books. 4 hrs.

Lounge/conservatory door jams on threshold and fouls swinging stile of frame. Remove bolt receiver and threshold, cut back carpet underlays both sides, realign floor section with wedges, reduce timber floor width to fit door opening, leave operational.

Leaks in utility room. Fit additional felt squares on roof and upstand to no effect. Conclude leak is from previously installed gutter to conservatory roof (roof has pulled clear of wall abutment adjacent to leak)

Postman has fall on disrupted pavings outside pedestrian gate (scrunched and dirty letter has note written upon it explaining reason for condition)

Vertical displacement in lounge fissure by hearth now 144mm

Disrupted flashing to utility room roof at abutment to pine end of Nr 37

Tilt of Nrs 36 and 37 means roofs are approaching each other at high level on W corner of 36 and will touch or oversail in due course

Utility room roof pulling off supporting walls – light visible through joint above CHB

Utility room and outside WC parting company – fracture along wall joints in WC

Conservatory external door fouls frame again.

Dislocation of oil filler pipe over utility room roof – tank cover displaced as a consequence

Loud bang from FF in lounge as this is written. Suspect fracture of joist over intermediate beam, but no crack visible

Re-level and re-start long case clock.

Vienna Regulator base touches top of bureau. Pull bureau forward to clear that and tape

case, where 3in of earlier adjustment is now down to about 2mm clearance.

Unable to use lounge hearth to propagate seeds for garden; hearth badly disrupted and no heat as unable to use appliance. Obligated to use cill of lounge window, which will take fewer trays.

Pack wedges under FF joints to lounge ceiling – SE end of joists are being lifted due to the downwarping of the NW ends still fixed in wall and rotating about centre beam support.

General distress to conservatory glazing – panels moved and various openings observed between glass and framing.

Fracture between kitchen and porch extending upwards from floor by tearing of linings.

15th March 2019

Departure of CE's tenants from 37 reveals they have been using – by cutting our washing machine connection to the foul drain – our drain for disposal of their motorhome foul waste. The resulting open drain being below our oil filler, gets a small quantity of oil when the delivery lorry arrived yesterday. When I returned home the house was filled with the smell of 28sec heating oil, due to high winds producing a back pressure of over 3in water gauge in the foul drain and breaking the bath and shower water seals.

Lounge/conservatory door badly fouling carpet again.

Conservatory door badly fouls frame. Drive in wedges over (now) fixed leaf to free off door.

Fissure in lounge now 150mm displacement.

Vertical displacement between porch and kitchen at both threshold and steps; active movement taking place.

Fracture in outside WC wall between WC and utility room – horizontal half way up wall.

Drive wedges in below joists in kitchen to retain bearing on wallplate.

Jammed bookcase in lounge continues to be crushed by joist above; more books moved to prevent them being further damaged.

Regular – daily – falls of plaster and lime mortar debris in lounge, together with various unhealthy noises from moving/breaking timber.

Hearth relieving beam now pulled 40mm (of total bearing c60mm) off RH bearing.

Pipework to CH moved away c50mm from adjacent beam @ NE end of lounge.

25th March 2019

Turning head at top of Ochrywaun treated with road planings to ameliorate road level change at plate boundary.

Rapidly growing contaminated minewater discharge in our field

Lounge fracture vertical displacement now 154mm

First floor partition pulling apart alongside staircase

Distortion of FF partition and door opening restricting swing of main bedroom door, which is jammed into carpet.

Utility room floor disintegrating as plate boundary develops

Soffit of verge on NE corner pulled apart

Collapsed paving revealed under house wood store (concealed by wood until today)

Utility room door grounds on floor a second time

Major disruption of conservatory SW elevation; roof lifted and fixing pulled, glazing openings distorted.

Conservatory SE (main) elevation tilting badly in addition to distortion along its length.

Previously filled fractures in main house SE elevation opening rapidly above GF window head; associated with movement on NE corner.

Vertical fracture between porch and main house showing signs of rotation – widening towards the top.

Side canopy roof support being pulled off wall top (previous support now free and clear of wall). Temporary intermediate prop now loadbearing.

Side canopy cantilever bracket distorted @ SE end of canopy; canopy being lifted as NE pine end wall rotates towards SW. Wood store side frames being lifted off floor and distorted.

Soffit of porch canopy being pulled apart (this is structurally not part of the adjacent side canopy, but the movement may be as a consequence of the undersailing side canopy intermediate cantilever bracket being pulled out of its inner rawlbolt fixing).

Onions and tomatoes roll freely down kitchen work surface due to house tilt.

Relative movement of utility room roof and party wall (with 37) 75mm vertically and 50mm horizontally, tapering to NW – road – end of utility room. Suggests Nr 37 is rotating about a vertical fracture developing in its NE pine end, a fracture that runs through the whole of Nr 37, emerging (as a much larger fracture) on the SW side by the kitchen window, the movement being both in the vertical plane and horizontal, with Nr 37 moving away from Nr 36.

Disruption of vehicle hardstanding outside house severe; import loose fill to re-grade break in previously single concrete slab (now broken into a number of sections and badly tilting, but not all in the same plane) to prevent cars grounding.

Lose valve cap down fissure in paving under side canopy while pumping up folding bike tyres.

16th April 2019

Noise in bathroom. Investigation reveals water service leaking between main in road and stop tap. Report to Welsh Water, who confirm they will attend 17/4/19.

Vertical displacement at fissure in lounge 154mm (no change since cessation of blasting on opencast mine site).

Flow and returns from Rayburn cooker distorted, leak on return elbow by appliance.

Ten days of chill E to NE winds reveal extent of severe adventitious ventilation through house wall fractures. Comfort levels sink to near-zero in lounge, despite 3-4kW of renewables from the wind turbine and solar being added to the conventional heating.

24th June 2019

Welsh Water do not attend until late May, when their contractor is observed digging in the wrong place. Redirected to leak, which is then repaired. File formal complaint against Welsh Water for their handling of the water main fractures.

Vertical displacement of lounge fissure now 160mm, having been static at 154mm until 30/5/19, when it was recorded at 156mm.

Relative movement of kitchen floor and wall, vertically and across the line of the fissure, particularly noticeable at back of Rayburn cooker.

Remove conservatory double door and frame. Prop roof. Reposition frame and adjust facade to allow doors to open. Movement c100mm forward, 50mm along line of facade. Make and install colourcoat steel flashing to protect frame which now projects beyond roof.

Remove kitchen/porch door. Lever frame out of wall and re-set to enable door to close.

Reposition lounge/conservatory doorframe – due to continued tilt of wall.

Kitchen/porch steps and adjacent tile upstand coming apart – horizontal fissure developing between upper two steps.

Both long case and vienna regulator cocks lose over 3min in one week.

Small but continuous – daily – fall of debris onto lounge carpet from ceiling/wall join SE side

Significant movement of disrupted concrete floor sections in utility room.

Development of third fissure in inglenook chimney back wall – to c15mm wide in no more than five days. Fissure is staggered, tapers to the bottom @ floor level, and follows rough parallel line of previous two fissures.

Continued movement of Nr 37 relative to 36 means roofs of the two properties are now close at N eaves/verge of 37 and S verge of 36.

Development of stepped fracture in NW wall of utility room.

Remove spalled section of utility room roof soffit where water enters during rain.

Relative movement of utility roof and external WC wall continues with cracks in WC walls opening further. Both sliding and rotation in evidence.

Apparent development of hinge in SE main house wall at window head, with roof and upper wall section moving to the NW. Bowing of conservatory facade is a consequence of this.

Tilt of posts in lounge noticeable, with tilt to NW and space between increasing despite cross brace.

Owen Jordan

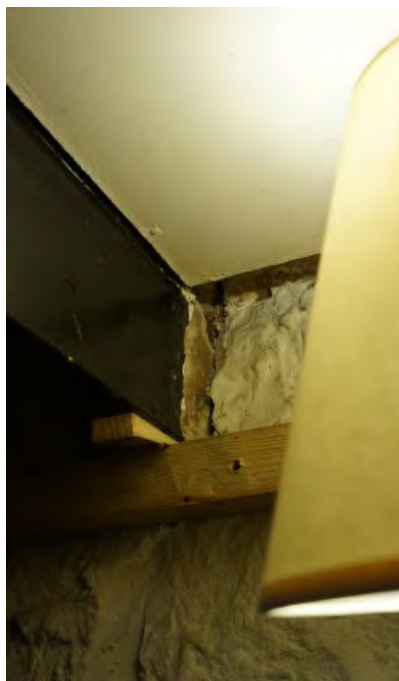
[This document describes the damage - 21st January 2020 - in stark terms, but it by no means describes the process of how that damage developed over the period 2017 to 2020. Nor does it in any way cover the true extent - just the easily photographed bits.]

December 2018.

The second (of three that will develop) fracture in the fireplace back wall, has reopened after being filled



One joist end is out of its socket and supported on a temporary bearer



The fireplace arch and relieving beam are coming off their bearings



The kitchen floor is coming apart



The porch/kitchen floor joint is shearing as the house moves



August 2019

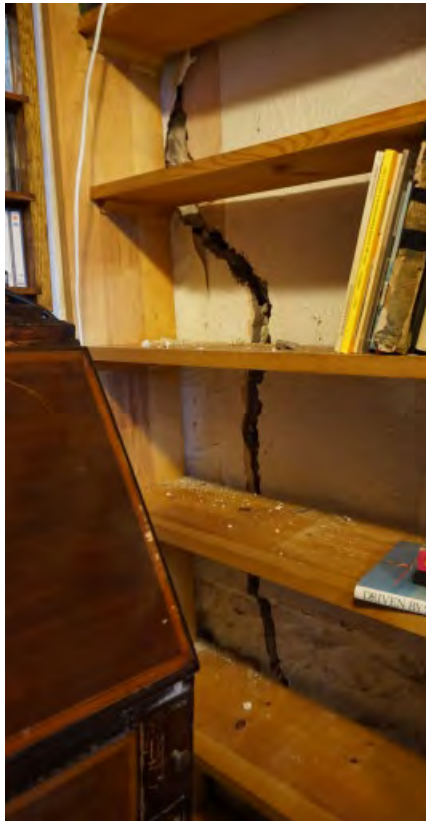
The roof truss has destroyed the wall as it pulls off its bearing



A shear plane develops in the kitchen wall



And the quoin is isolated by a second shear plane in the NE pine end



The SE house wall fractures for a third time over the window head



The chimney has pulled over and opened the flashings to let the rain in



The NE and SE external walls part company at eaves



The first floor joist is fully off its wall bearing



The hearth is destroyed



The heating pipework pulled apart

