Searching for an Anthropo(s)cene in the Uplands of Mid Wales

The issue of whether we have now exited the Holocene epoch and entered a new geological interval defined by the actions of humanity—the Anthropocene—is currently the subject of significant scientific debate. Whereas some argue that humans are now the dominant force shaping the surface of the earth, and that the changes we are creating will be preserved in future geological strata (Crutzen 2002; Waters et al. 2016), others are dubious of the justification, practicality, or value of the Anthropocene in a world in which action, rather than definitions, are required (Scourse 2016). The ethical, philosophical, and moral dimensions of this debate, however, have taken it beyond the sciences, arguably inspiring a shift in the arts, humanities, and social sciences (Lorimer 2012; Yusoff 2013; Johnson et al. 2014; Buck 2015). Matless's (2016) proposition of the "Anthroposcenic" foregrounded "the way in which landscape becomes emblematic of environmental transformation" (118). His proposition focused on how places, sites, and landscapes such as eroding coastlines or melting glacial snouts became "scenes through which processes interrogated under Anthropocene and climate change rubrics become evident" (Matless 2016, 118) and so provided "a stepping point for Anthroposcenic stories" (Matless 2017, 2), and "meeting points with science" (Matless 2016, 118). In so doing, he extended and enriched the Anthropocene concept and offered a new opportunity to creatively explore places and landscapes influenced by human activity.

This article records the responses of four writers to the landscapes of the upper River Ystwyth and Cwm Elan (Elan Valley) in the Cambrian Mountains, mid Wales. Our aims were to engage with the concept of the Anthropocene in a landscape that could be emblematic of the proposed new geological interval. Through poems and prose inspired by these landscapes, the physical, social, cultural, and political processes shaping them are explored. The pieces have a strong sense of place, and touch on themes of pollution of the environment by heavy metals, geomorphological impacts of dams, and the human stories associated with those places. These pieces were written especially for performance at the "Strata: Art and Science Collaborations in the Anthropocene" symposium, held at Aberystwyth University in January 2016 (see http://cargocollective.com/artscienceclimatechange/Strata-Art-and-Science-Collaborations-in-the-Anthropocene). At the "Strata" symposium, the pieces were performed and broader discussions were held about the value of science–art collaboration in engaging and educating the public about the Anthropocene and related concepts. Prior to the symposium, in December 2015 we had traveled from the mouth of the River Ystwyth at Aberystwyth to its upper reaches at Cwmystwyth, one of the most important historical lead mining sites in the United Kingdom (Figures 1 and 2A). We then traveled eastward across the drainage divide into Cwm Elan (Figure 2B), where a series of six large dams (Craig Goch, Pen-y-Garreg, Garreg Ddu, Caban Goch, Dôl-y-Mynach and Claerwen; see Figures 1 and 2C) were built between the end of the nineteenth and the middle of the twentieth century to provide drinking water for the English city of Birmingham, and later were engineered to produce hydropower. As a group of poets, writers, and geomorphologists, we observed, discussed, and mused on the landscapes that we traveled through and that surrounded us at regular stopping points along the route.

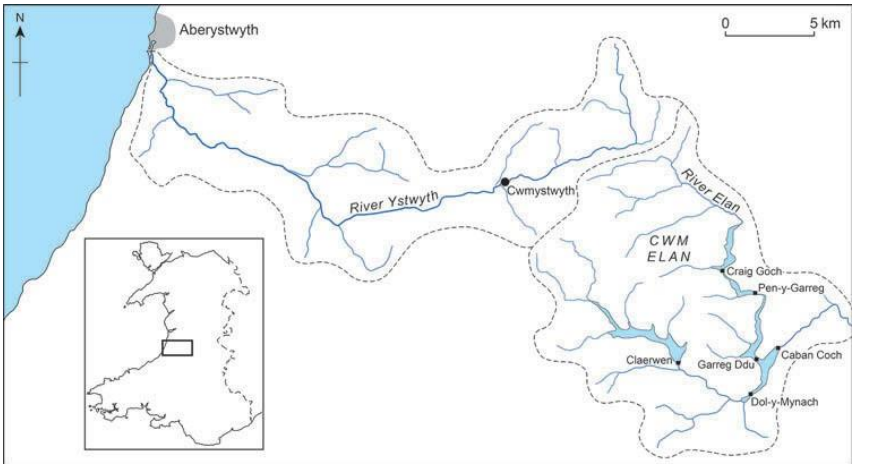

FIGURE 1 Map of mid Wales, showing the Ystwyth and Elan river catchments and the locations of Cwmystwyth and the dams.

Cwmystwyth (photograph by Hywel Griffiths). (B) Bedrock outcrop above Craig Goch dam, the uppermost dam in the Cwm Elan dam complex (photograph by Hywel Griffiths). (C) Claerwen dam (photograph by Hywel Griffiths). (D) An example of an information board in Cwm Elan (photograph by Stephen Tooth). (Color figure available online.)

Gavin Goodwin's and Hywel Griffiths's poems engage directly with the impacts of mining and dam construction on the physical landscape. Goodwin's eight evocative quatrains are strongly influenced by landforms and the processes operating on them. "We travel," he says, "enclosed by ice-carved hills" and rocks that are "seemingly still" but the rivers are clearly polluted with "poison" and "swimming with copper and lead." Standing near a bedrock outcrop over which the natural course of the River Elan flows before being dammed (Figure 2B), he sees the natural geomorphological processes—the "eddy and swirl of pebbles slowly/burrow down into the bedrock . . . with ever-refreshing force." There are human stories as well: The lead miners of Cwmystwyth are here, for example ("by thirty three those men were dead"), as are the laborers who built the dams in Cwm Elan, backs bent by years of building work ("Measure that

pick against that dam/and understand his stone stoop").

Hywel Griffiths's villanelle "Cwm Elan," presented here in Welsh with English translation in vers libre, responds to the direct impact of dam building on geomorphological processes and explicitly responds to the scientific context of the Anthropocene debate. The dams are traps for the river's sediment load, breaking the links between the sources of sediment on the upland slopes and the ultimate sinks in the estuaries and seas of south Wales. Where the river used to flow over dramatic, even sublime, waterfalls in "ribbon-like" currents, the water is now "stricken in surprise" and "it's quiet where the waterfall once roared." The repetition of lines and the form of the stanzas in the meter echo the buildup of layer upon layer of sediment at the bottom of the reservoirs. Again, in a poem that predominantly deals with changes to the physical landscape, a human element is also present; there are fewer signs now of the old farmers of Cwm Elan plowing the fields as they used to.

The profound social, cultural, and political impacts of the human activities that characterize the Anthropocene are addressed in greater complexity in both Tyler Keevil's acceptance speech by a head engineer at a fictional awards dinner and in Eurig Salisbury's satirical take on the text of Cwm Elan's tourist information boards. Keevil's speech is a debate on the advantages and disadvantages of large dams in evocative microcosm. Keevil portrays the long-lasting negative impacts of the dam in how the head engineer is haunted by the fate of the eleven-year-old "poor Jones lad," who falls to his death from a high plank at the construction site. The engineer cannot forget his guilt about the boy's death ("I think of him sometimes"), and sees himself saving the boy when he visits the dam. In this guilt, perhaps we have the collective guilt of humanity—the architects of climate change and the Anthropocene—about the impacts we continue to have on the environment. There is irony in the engineer's comment: "Many people . . . have no idea as to the true extent of the costs of these kind of projects."

In appropriating and covertly subverting sentences presented to the public on information boards (e.g., Figure 2D), Salisbury's poem challenges official attempts to portray Cwm Elan as "an unspoilt area where nature thrives/alongside human endeavour." The cultural cost of preserving this "unspoilt area" is presented in the otherness of "native" aspects; that is, the Welsh language, once the language of Cwm Elan communities but now displaced by water management and tourist centers catering to large numbers of English visitors. The few farms that remain are now kept in "an authentic state of disrepair" and the main cultural reference point is the poet Shelley, who visited Cwm Elan in 1811 and 1812. The seemingly pleasant and informative texts found on signboards at various points in the valley seek to portray the area in simple, virginal terms. The landscape is, in fact, full of humans—the park rangers, the retired "volunteers," and the tourists who are said facetiously to play a central role in the modified hydrological cycle—but the only unwelcome figure is that of the "native." Here the estrangement and severing of historical links between communities and landscapes as a result of human activity is clearly seen.

RIVER DAM QUATRAINS

Gavin Goodwin

We travel enclosed by ice-carved hills
these seemingly still Silurian rocks
the first scuttle and blossom of life
on land beside, beyond the water.

A land mined since caligae trod here.
By thirty-three those men were dead. We see
poison leak from the tailing. River
still swimming with copper and lead.

The wind-bowed valley trees,
follow the water back to its source.
Black peat, gravel and heather
bog origin – Ystwyth and Elan.

Iron-stained strata, rust-coloured cascade.
The eddy and swirl of pebbles slowly
burrow down into the bedrock,
burrow with ever-refreshing force.

Vertigo. Follow the rippling sheet
of cloud pouring down from the lake,
pouring in to the giant holding
tank from which a city will drink.

The cold's now set in my feet. No stamping
or rubbing it out. Hunger. Mist
floats up from the falls and a turbine spins
light from the force.

Measure that pick against that dam
and understand his stone stoop.
In green silence, his back turned
to the white force, the froth and thunder.

We travel back – light over Aber
last light of the short day. Ystwyth
pouring into the harbour
waves stones change in the dusk.

CWM ELAN

Hywel M. Griffiths

Mae'r ffrwd o'r ffridd a'r foryd yn pellhau,
ac yma yn yr haen o waddod du
ysgarwyd y ffynhonnau bach a'r bae.

Roedd egni nad oedd modd ei ganiatáu,
heb inni'i ddal, ac felly o bob tu
mae'r ffrwd o'r ffridd a'r foryd yn pellhau.

Mi wn y tynnwyd arad trwy y cae
ond wela' i mo hyn, cans man lle bu,
ysgarwyd y ffynhonnau bach a'r bae.

A lle bu Nant y Gro yn bywiocáu
dim ond y dŵr yn rhewi'n syfrdan sy',
mae'r ffrwd o'r ffridd a'r foryd yn pellhau.

Nid oes ceryntau fel rhubanau'n gwau,
mae'n ddistaw lle bu'r rhaeadr a'i ru,
ysgarwyd y ffynhonnau bach a'r bae.

Ar waelod oer y llynnoedd heno mae
haen arall eto'n disgyn oddi fry,
mae'r ffrwd o'r ffridd a'r foryd yn pellhau,
ysgarwyd y ffynhonnau bach a'r bae.

ELAN VALLEY

Hywel M. Griffiths

The hillside streams and estuaries estrange,
and down there in a layer of sediment
the sources and the sink are now divorced.

An energy that could not be allowed,
without a harness, and so, on either side
the hillside streams and estuaries estrange.

I know that ploughs were pulled by men in fields,
but I can't see them now, where they once were
the sources and the sink are now divorced.

And now, where Nant y Gro was energized
there's only water stricken in surprise,
the hillside streams and estuaries estrange.

There are no currents weaving, ribbon-like,
it's quiet where the waterfall once roared,
the sources and the sink are now divorced.

There sinks, tonight, to chilling floors of lakes
another layer, falling from above,
the hillside streams and estuaries estrange.
The sources and the sink are now divorced.

THE CHIEF ENGINEER'S ACCEPTANCE SPEECH

Tyler Keevil

Thank you, ladies and gentlemen, for having me here tonight. It is a great honour, to be recognized like this, for my achievements. But I cannot take to myself all of the credit. If I have had some success in my field it is because I was raised in a god-fearing household, and its influence has infused everything I have done. As a result I have worked hard, and steadily, and at the same time been honest and straightforward. That is the only credit due to me for the accomplishments I've engineered.

That was a joke, or a pun, albeit a poor one. But perhaps you were right not to laugh, or laugh so uneasily; engineering is, after all, a serious business—requiring an enormous investment of time, money, and manpower. I ought to know. Take, for example, one of my finest projects—the one that made my name, the one I'll be remembered for, the one (I might hazard) that has been instrumental in garnering me this award. I'm speaking, of course, of the Elan Valley dams. As you all know, I was resident engineer for the building of the dams and responsible for all work upon the watershed. I threw myself wholeheartedly into the project, and did not spend a single day outside of the valley for eight years. I trudged up and down the building sites for miles, instructing and directing, inspecting every stone, brick, and joint. I don't think it's going too far to say I built those dams, though not, of course, singlehandedly. The men were my hands. It was through them I wielded pick and shovel, stick and dynamite. It was through them that I realized my vision—if it doesn't seem too bold to call it that—like a sculptor working the landscape itself.

I had a great affection for those men, my navvies. They, too, devoted years of their life to my project. I saw that they were handsomely rewarded, of course. In a time when many were going hungry, they earned 4 pence an hour, which might not seem like much, but we provided the opportunity to work 60 hour weeks, so they made out very well indeed. They had enough to feed themselves, and their families, and enjoy themselves in the canteen—some of them a little too much, if you know what I mean. The work, generally, made them honest. But they required a firm hand, and at times I had to make an example. Like when that junior stonemason went to Rhayader to have a drink, and missed the start of his shift. He had to be let go. Or when the canteen keeper went away for two days, at Christmas no less, without permission. I saw that by the time he returned, he'd been replaced. Stern, yes, but fair. If I didn't take such a line, what was to stop other men from doing the same? They could be as unruly as boys. Some of them weren't much more than boys, really. Like that poor Jones lad . . .

But I was talking about the costs. Many people—even knowledgeable folk such as yourselves—have no idea as to the true extent of the costs of these kind of projects. Before we even started on the dams we had to build a railway, and an entire village to house our workers. The Ebbw Vale Steel & Iron Company made a complaint about fair payment, but I can assure you they made out like bandits. We paid five pounds five shillings per tonne for the straight rails, five pounds eight

shillings for the curved rails, and six pounds twelve shillings for fishplates. Then there were the 36 end tip wagons from Oldbury Carriage and Wagon works, at 361 pounds each, and 100 side-tip wagons, at 577 pounds, plus a bridge to the village (19 pounds) and the village buildings: school (154 pounds), mission room (112 pounds, 5 shillings), canteen (148 pounds 19 shillings), laundry (80 pounds), hospital (300 pounds), bath house (275 pounds), post office (180 pounds). All that before we could begin the real work. Dare I tell you about the actual construction costs? Perhaps suffice it to say that the total costs of the dam-building projects reached six million pounds. Six million.

Despite our best efforts, there were other costs, as well. Such an enterprise is not without its risks. We were waging a battle, against mother nature herself—reshaping her to suit our own ends. And as in every battle there were casualties. We had safety regulations, but the men could be lax. And in a project of such scale sheer chance dictates that things will occasionally go amiss. I remember their faces, if not their names. There was the lad from Abaty Cwmhir, killed by the train. His brother tried to call to him but it was lost, over the shrill of the whistle. In the Quarry, a man was putting a charge of gunpowder in when it went off. Then there was the Crusher Yard: the one caught by the shaft as he cleared the chute. In Dolau tunnel, a misfire charge shattered that fellow's skull, and a few weeks later, in the Crushing Yard again, one of the labourers was caught when the crusher broke away through an overload of stone.

There was that boy, too. Jones. His name has stayed with me. Maybe because I was on site that day, maybe because of his age. I remember seeing him before, thinking he looked too young. The foremen had a tendency to overlook these things, you see, if the family needed the money, couldn't afford the extra mouth to feed. I saw him fall, too. I was inspecting a mixture of cement when I heard the cry, and I turned to see his little body floating down through the air. All around him was a barrage of sand, glittering in the sun, as if he were a comet, trailing a tail of particles. Or an angel, descending to earth on a shower of light. He didn't land like an angel. The wheelbarrow fell atop of him. He'd been pushing it, full of sand, across a plank, fifty feet up. The plank was standard width—18 inches, very adequate—so he couldn't have lost his balance. We think it was heatstroke. He'd fainted. In the inquest, when his age came out, there was some disapproval. But you must understand that if his family told him to lie about his age, it is hard for our foremen to prove otherwise. Of course I wouldn't have accepted him, had I known. Had he been 14, then yes, that would be fine—that was common. 13 or 12, maybe. Depending on the boy's stature and physique. Many of these boys are quite strong. But 11? 11 was too young. I know that. Don't you think I know that? Still. Nothing to be done about it now.

Listen to me. Not striking a particularly celebratory note with my acceptance speech, am I? Some of you might be sitting there, thinking that these costs seem too great, that I have regrets. But I can assure you I don't. You see, you cannot think of each individual story. It helps to think of them as a resource, a commodity, an expense. Yes, lives were expended in the construction of the dams. But what about the other column: the lives we saved? Fresh drinking water, for Birmingham. 24 million gallons a day. All the cases of typhoid, of cholera, that it prevented. All the infants. Hundreds of lives, thousands. And on top of that, I created a monument in that valley that will last, and outlast: not just myself and the men who worked on it, my hands, but all of you seated here today. It was vital work, important work. My life's work. And I thank you for recognizing that work with this award. I hope I am deserving.

Still. I think of him sometimes. I think of them all, but the Jones boy in particular. I think of his long, endless fall . . . and when I visit the dam, which I do frequently, I fancy I see him in the water falling over the face of the dam. Silly, isn't it? I must be going daft, in my old age. I see him in the curtain of water, in the way it parts around the stonework, splitting into two veils, like the wings of a dove. I imagine I'm back there, watching it happen all over again, but this time, I react faster. I'm fast enough to cross the worksite, and get beneath him. When he lands in my arms he is always so small, so light; he smiles at me, grateful that there was somebody there to catch him.

ELAN VALLEY

Eurig Salisbury

Welcome
to the Elan Valley Estate,
72 square miles
of the Cambrian Mountains.

This is an unspoilt area where nature thrives
alongside human endeavour.

Elan is one of the most sparsely populated areas in the UK
and also one of the wettest.
This makes it one of the best places
to see a wide diversity of native flora and fauna.
This makes it one of the worst places
to hear a wide diversity of native phrases and sayings.

It also made Elan the choice of the Victorians
to create reservoirs to collect fresh water
to supply Birmingham and mid Wales.

This has now developed into a complete
hydrological cycle,
as the water being drunk in the Midlands
is returned to the land as runoff
from the thousands of incomers who kindly
piss it all back in our lay-bys and friendly visitor centre.

By protecting the water supply
and the catchment areas,
the scenery, tranquillity and wildlife have been mostly saved
from the ravages of the 20th century.

Walking, birdwatching, fly-fishing,
dogging and just taking in the fine views
and fresh air
are what visitors come to enjoy.
However, it is a fragile peace
in these times of rapid change.

Watch out for fragile pieces on the climbs
as rapids change.

The red kite has been allowed to prosper
to the extent that its population is now large enough
to hold its own devolved assembly.

The sheep, often thought to be livestock,
are in fact wild native sheep
that migrate seasonally across the uplands.
Keep an ear out
for their distinctive mating calls all year round!

The farm buildings
that stud the landscape
are in fact empty,
and are kept in an authentic state of disrepair
by a dedicated army of retired volunteers.

The peace
and unspoilt countryside
have attracted people to the area since
the poet Shelley's time.
Construction began on the reservoirs
in the year 82 P.S.
(Post Shelley).

The Elan has been kept for quiet enjoyment.
The Elan has been kept quiet for enjoyment.

The Countryside Ranger Service
leads many walks, birdwatching safaris,
wild boar hunting expeditions,
educational school visits
and other events
throughout the year.

Do nothing to pollute the water.
No swimming, boating or camping is allowed.
Take all your litter home.
If you happen upon a native, please leave well alone
and alert the proper authorities.
Leave all plants and animals
for others to enjoy.
If you are cycling, horse-riding or on a geography day trip,
please keep strictly to the signposted
rights of way.

Please enjoy your
visit.

DISCUSSION AND CONCLUSIONS

Matless's arguably negative definition of the "Anthroposcenic"—those places, sites, and landscapes that are emblematic of climate change and its impacts—has extended the concept of the Anthropocene. Our experiences in Cwm Elan suggest an alternative definition of the term, briefly outlined by Tooth (2016). Landscapes such as Cwm Elan are far from natural and are significantly modified in that the natural forest cover has been replaced by grazed grasslands, and the hydrological and sediment systems have been altered by a series of large dams. Nonetheless, these landscapes have come to be viewed as picturesque and scenic, landscapes to be enjoyed as natural and unspoiled. Anthroposcenic landscapes could, therefore, alternatively be defined as heavily modified landscapes, emblematic of the Anthropocene, but that might be positively valued, even revered, by society. Landscape is a term that cultural geographers argue inherently speaks of cultural, political, and social tensions and human intervention (the "scape") as well as natural characteristics (the "land"; Tarlo 2011), and which, by definition, is in some way modified. This does not, however, mean that a landscape cannot be anthroposcenic, as the term necessarily points to an extreme level of human impact beyond those tensions already recognized; on the palimpsest of the landscape (Tarlo 2011), we have now left many traces that cannot easily be erased, and in some instances, these traces might be preserved in future geological strata.

We are certainly not the first writers to engage with the dams of the Welsh uplands. As Griffiths (2014) described, many dams, most notably the Tryweryn dam in north Wales, have been the subject of largely negative portrayals since the middle of the twentieth century, most notably by R. S. Thomas in his poem "Reservoirs." Other visitors to Cwm Elan might argue that from a utilitarian perspective, the flooding of some sparsely populated valleys can be morally justified, as it has provided the people of a large city with clean water, whereas those currently farming and administrating the present tourist attractions might have more complex views on the changing landscape. Framing our practice in terms of the Anthropocene (regardless of whether or not it is officially adopted) and the anthroposcenic allows our contribution to examine anew the tensions in a landscape. In particular, we demonstrate how there can be opportunities for the creative writer to experience the close observation of the scientist and for the scientist to experience the speculation and astonishment more commonly associated with artistic practice (McKay 2008). As such, our contribution provides an example of the cross-disciplinary

collaboration required to "diagnose" the Anthropocene (Matless 2017). Magrane (2015) stated that "Poetry can do work for geography" (91), and McKay (2008) suggested that, as well as encouraging us to realize the impact that we have had on the landscape, using the term Anthropocene also gives creative writers a longer, geological, "deep time" perspective and a provocation to examine the physical, rather than social, cultural, and political impacts of dams. Our contribution shows that artistic creativity that harnesses the power of evocative landscapes for inspiration, imagery, and metaphor can be highly effective, particularly when these landscapes convey a strong sense of place. Despite widespread concerns around the direction and pace of change in an Anthropocene, a positive development might be that creative engagements such as those presented here offer a way of responding, and this could encourage society to take action or adapt to the climatic and environmental changes that we appear to have set in motion.

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HYWEL M. GRIFFITHS is a Senior Lecturer in the Department of Geography and Earth Sciences at Aberystwyth University, Aberystwyth, Ceredigion SY23 3DB, Wales, UK. E-mail: hmg@aber.ac.uk. His background is in fluvial geomorphology; in particular the rates, patterns and controls of river bed erosion. Alongside this interest he has developed research interests in a wide variety of fields, including the cultural geographies of rivers and floods. He is also a published poet.

GAVIN GOODWIN is a Lecturer in English and Creative Writing in the Department of English and Creative Writing at Aberystwyth University, Aberystwyth, Ceredigion SY23 3DB, Wales, UK. E-mail: gjg@aber.ac.uk. His research interests include literary representations of class and work, nature writing (and ecocriticism), and theories of creativity.

TYLER KEEVIL is a Senior Lecturer and the undergraduate Course Leader in Creative Writing at the University of Gloucestershire, Cheltenham, GL50 2RH, UK. E-mail: tkeevil@glos.ac.uk. He is the author of several books and his articles and short stories have appeared in a wide range of journals, magazines, and anthologies. He has received numerous awards for his work, including the Writers' Trust of Canada Journey Prize, and the Missouri Review Editors' Prize for Nonfiction.

EURIG SALISBURY is a Lecturer in Creative Writing in the Department of Welsh and Celtic Studies at Aberystwyth University, Aberystwyth, Ceredigion SY23 3DY, Wales, UK. E-mail: eis1@aber.ac.uk. He is also a researcher on the Cult of Saints in Wales project at the University of Wales Centre for Advanced Welsh and Celtic Studies. He has edited the work of a number of medieval Welsh poets and is also a published poet. Website: www.eurig.cymru.

STEPHEN TOOTH is a Professor in the Department of Geography and Earth Sciences at Aberystwyth University, Aberystwyth, Ceredigion SY23 3DB, Wales, UK. E-mail: set@aber.ac.uk. His research interests focus on geomorphology and sedimentology, especially in the drylands of Australia and southern Africa. He is also interested in environmental issues more generally, including current debates about global climate change and the Anthropocene, and in science education.

DEWI ROBERTS is an independent education consultant and enthusiastic geomorphologist. E-mail: dewi77@btinternet.com.