

Application Number 34C40Z/EIA/ECON

Peboc, Llangefni

Biomass Energy Development (consisting of a wood pelleting plant, a biomass combined heat and power plant, a wood storage yard and a debarking and chipping plant.

From:

Biofuelwatch

info@biofuelwatch.org.uk

Ian Lander, 22nd August, 2011

Dear Mr Williams,

Biofuelwatch wish to object to EcoPellets Ltd planning application for a Biomass Energy Development (consisting of a wood pelleting plant, a 30MW (17 MW biomass & 14 MW bioliquid) biomass combined heat and power plant, a wood storage yard and a debarking and chipping plant) on the existing industrial lands of the former Eastman Peboc site at the Llangefni Industrial estate on the Isle of Anglesey in North Wales.

We object to the application on the following grounds:

1. Health & Safety
2. Air Quality
3. Transport
4. Location
5. Previous use of site/land
6. Noise
7. Sustainability issues of fuel source
8. Greenhouse gas emissions and climate change
9. EcoPellets Planning Application, Volume 1, Volume 4
10. EcoPellets Design and Access Statement
11. EcoPellets Energy from Nature, Q & A
12. EcoPellets Sourcing Statement
13. EcoPellets Transport Assessment

1. Health & Safety

Public Health Wales, Isle of Anglesey County Council and the Environment Agency commissioned the Welsh Health Impact Assessment Support Unit to undertake a Rapid Health Impact Assessment. This concluded that the development poses no threats to local peoples' health other than imagined ones and that instead there will be a positive impact of health through providing physical jobs and fostering 'community pride'. We are shocked by these findings. The EIA states: "It is expected that the operation of the proposed Biomass Energy Development is unlikely to pose a significant risk to the health of the local population living in Llangefni and surrounding area."

Biofuelwatch feels that such a review does not constitute an adequate H & S or Health Impact Assessment and feel this is grounds to reject the application until the applicant has produced one.

We deal with the serious issue of spontaneous dust explosion later on in our objection. We also draw your attention to HSE comments in our comments against EcoPellets application made elsewhere in our objection.

2, 3, 4, 5, 6, 7 & 8 are dealt with below in our review of **9, 10, 11, 12 & 13**

NB: Please note that **7** includes the complex issues of food security, food sovereignty, human rights issues, biodiversity & habitat loss, degradation of soil & water, which are not covered by DECC, Ofgem or EU RED or any other sustainability criteria or certification scheme.

(Text in black is from the application. Our comments are in blue.)

Planning Application

VOLUME 1

Planning Statement

1.5 The Biomass Energy Development will produce about 100,000 tpa of wood pellets for use in a wide range of combustion appliances from domestic to power station scale. The wood pellets will be manufactured from timber sourced from sustainable woodland and forestry management practices in the north of Wales and England, and will as such provide a renewable, carbon neutral replacement fuel for the above mentioned markets. **We dispute references to local sourcing and carbon neutral.**

1.6 The plant will utilise renewable biomass fuels, which will be predominantly recycled and forest wood, tallow and recovered vegetable oils. The Biomass Energy Development as a whole is expected to result in savings of about 270,000 tonnes of carbon dioxide annually based upon the use of the wood pellets and the displacement of about 248,000 MWh of electricity currently generated by the burning of fossil fuels. **We would dispute this figure and suggest that this needs validating. Does it include carbon emissions from land use change (LUC) & indirect land use change (ILUC), farming, transport, processing? Does it include carbon debt?**

1.11 The proposed development is prescribed for control under the Pollution Prevention and Control (Wales) Regulations 2003, The PPC Regulations require that processes achieve Best Available Technique (BAT) to prevent or minimize pollution – the BAT standards are defined in European and UK guidance. **We can't find any proposed abatement, such as SCR or SNCR. In which case, the bioliquids burning alone would have high NO₂ emissions, probably 7-8 times more than a bioliquid power station designed by Blue NG's in Southall. The Planning Statement says they will have to use Best Available Technique. We are unsure whether BAT requirements only apply to plants 50 MW and above? Or do they apply to Waste Incineration below that? In any case, they don't say what this would be.**

1.13 The solid biomass CHP plant will burn recycled wood and is designed in accordance with the European Union Waste Incineration Directive. This sets limits for permitted emissions to the atmosphere and specifies the requirements for controlling feedstocks, combustion and residues. The Biomass Energy Development will treat about 160 ktpa of recycled wood, recovered from Commercial and Industrial (C&I) waste recovery operations, as fuel in the solid biomass CHP plant. **We question whether the existing design has sufficient abatement measures to comply with this. There's very little AQ monitoring going on in Anglesey. There are only three automatic monitoring sites of NO₂ but none is close to Llangefni. However, one of them, right next to the Llanfair bypass, AQ Objectives are being exceeded, and increasingly so.**

1.14 A detailed scientific assessment has been undertaken to assess the significance of the environmental impact of Biomass Energy Development, which in all respects has demonstrated that the operation of the facility is likely to have an insignificant impact on the environment as a whole. EcoPellets recognises that the operation of the Biomass Energy Development must comply fully with relevant environmental standards and will implement an Environmental Management System to ensure that all operational staff are fully aware of the significance of their actions, and how they may impact on the quality of the local and regional environment. **Biofuelwatch would welcome the opportunity to see this scientific assessment which in all respects shows how the feed chain will have no environmental impact on UK and global wildlife/ecosystems and soil, air & water. It would also be interesting to see how it has no impact on climate from greenhouse gas emissions and black soot which is affecting the albedo of the Arctic and thus increasing global warming.**

Assessment of Need

1.16 An essential part of any development is an assessment of the need for the development. What is the justification for the development? Are there other options available? Are there other facilities operating locally that may be able to process the residual materials? Are there other locations that may be more suitable than that proposed? Answering these questions is an essential part of the assessment for a development such as this. **Anglesey is an island that may be better suited to on-shore & off-shore wind, wave and tidal stream. Most biofuel/biomass power stations are sited next to ports to receive imported feedstock, which this development may well do.**

1.17 The most obvious alternative to the proposed Development is the continuation of the current procedure of burning fossil fuels to generate power. This option would maintain the status quo and may be considered as doing the “do-nothing” option. However, this does not address key policy areas that require reductions in greenhouse gas emissions from fossil fuel burning and is a continuation of the utilization of a fuel source with a finite lifetime. **We would suggest that the most obvious alternative is true renewables that do not produce carbon emissions or pollution or have any other wider environmental impact.**

1.18 Clean biomass burning is gaining in popularity in the UK as the drive for carbon neutral power generation increases. There are substantial quantities of timber unmanaged, or poorly managed, woodlands and forests that are currently left on the ground and allowed to decompose over time. This decomposition process may be beneficial to some extent in terms of returning nutrients to the ground... **We assert that biomass is neither clean or carbon neutral but would agree that forests need to be left in entirety to form humus and maintain soil health.**

1.19 The utilisation of forestry residues as a feedstock for the preparation of clean wood pellet fuels offers a significant environmental improvement in the way in which these materials are currently managed. **We disagree.** Please see: www.globalforestcoalition.org/wp-content/uploads/2010/10/briefing-paper-bioenergy_final_1.pdf

1.25 The Biomass Energy Development in Llangefni aims to provide a substantial source of clean wood pellets for combustion applications, based upon locally sourced timber products. Accordingly, there are currently no similar facilities serving these markets in Wales. **We wonder if this is indeed the case, with the Vogen Bulk Drying and Pelleting Facility at Newport that recently received planning permission.**

1.27 The Biomass Energy Development incorporates two biomass CHP facilities; a solid biomass CHP plant that will burn recycled wood sourced locally, and a liquid biomass CHP plant that will burn recovered waste oils and fats. **We feel that this is somewhat mis-leading, given the admission about sourcing from Scotland and Nova Scotia.**

1.28 Potential suppliers have been identified for provision of the waste vegetable oil and fats that will be required to fuel the liquid biomass CHP plant. This scrupulously fails to mention rapeseed and other virgin oils that could be used. **We feel that it is inconsistent to provide information on some suppliers and then quote commercial sensitivity regarding those that are associated with sustainability issues such as: food issues, (such as food security, food sovereignty, malnutrition & starvation), human rights, rainforest destruction, etc. We also feel it is unreasonable regarding sustainability assurances and actual air pollution, that the developer conveyed this to the council – ‘The final contracts for raw material supply are normally concluded after the issue of planning permit’. Shouldn’t it be the other way round?**

Site History

2.3 The site itself consists of 16 acres (6.7 ha) of industrial lands to the rear and south of the former Eastman Peboc Chemical Works at the Bryn Cefni Industrial Estate in Llangefni as illustrated in Figures 1.1 and 1.2. It is a greenfield site located within the town’s Industrial Development Boundary and the plant is to be built on Zoned Employment Land within the industrial estate. The site vegetation consists mainly of improved grassland... **locals will no doubt prefer a greenfield site to a polluting plant.**

Site Selection

2.4 **Fuel Availability:** where sufficient long term fuel supply needs to be available for the renewable energy biomass plant, ideally within 100 miles of the plant. There is sufficient forest wood (200,000 tonnes), recycled wood and composted biomass (150,000 tonnes) and liquid biofuel (22,500 tonnes) available within this area, mainly in Mid Wales, North Wales and the North West England. **We dispute that this is the case. The power station would compete with the proposed biomass stations at Holyhead and Port Talbot and that this amount of bioliquid is available without even considering competition for food, RED & the RTFO.**

Road and Rail Access: ...To the west of the site is the currently disused Bangor- Holyhead- Amlwch railway line which is just 2 km from the junction with the operating Bangor to Holyhead mainline rail service. This railway line spur if reopened could serve the Biomass Energy Development with both raw material supply and wood pellet product export. **We are unsure why the applicant implies that the line may re-open, when elsewhere in the application they quote the ‘Environment Agency has indicated that this proposed site is in a flood plain and any application to develop on these lands would have to be refused on these grounds’.**

3.9 The liquid biomass CHP plant will burn fuels such as tallow, recovered vegetable oil (RVO) and vegetable oils in a large diesel engine. As with the solid biomass fuels, the tallow and RVO will be sourced locally, within a 100 mile radius of the development site. **In recent correspondence with the council, Ecopellets say that the ‘tallow is the only liquid fuel used’.** 3.9 states that RVO and vegetable oils will be burnt and says that tallow and RVO will be sourced locally. It fails to give any such assurance for ‘vegetable oils’.

3.18 The bottom ash is expected to be non-hazardous, and will have soil conditioning and fertilising properties that may be exploited subject to an appraisal of quality acceptance criteria. **Such ash is normally deemed to be toxic waste and dealt with accordingly.**

BENEFITS OF & NEED FOR THE DEVELOPMENT

Need for the Development

5.1 There is an overwhelming consensus among the world’s leading climate scientists that global warming is being caused mainly by carbon dioxide and greenhouse gases emitted by human activities. Tackling climate change is one of the most important tasks facing governments today. **This development would be responsible for creating nitrous oxide emissions from farming and carbon emissions from farming, transport, process, LUC & ILUC and carbon debt.**

5.9 The impact of the Large Combustion Plant Directive (LCPD) (Directive 2001/80/EC) will further compound the UK electricity supply problem as it will force coal and oil power plants to fit additional equipment to reduce emissions of sulphur dioxide (SO₂) and oxides of nitrogen (NO_x). Removing carbon from electricity production is key to

reducing power sector emissions, which need to be reduced by 50% by 2020. Achieving decarbonisation will involve moving away from the use of conventional coal and gas fired power to increasingly using electricity generated from other sources by 2020. This plant will produce SO₂, NO_x and not remove carbon from electricity.

Reliance on Fuel Imports

5.12 As a result, the UK is likely to be dependent on fuel imports for approximately 75% of its energy requirements by 2020. Consequently the UK will require protection against the risk of supply interruptions and excessive costs of raw fuel which will have an impact on UK competitiveness. Diversification of the UK's fuel mix, sources and suppliers will be needed. The UK already imports approximately 90% of our current timber use – this is before targets for biomass are met. Most UK bioliquids (biofuels) are imported and this is the case in Europe where bioliquids for electricity generation is far larger than in the UK.

Regional Need for the Development

5.17 One of the main themes of the Wales Spatial Plan is Valuing our Environment.

"Safeguarding and protecting our natural and historic assets, and enhancing resilience to address the challenges of climate change, will enable us to attract people to our communities and provide the wellbeing and quality of life to encourage them to stay and preserve the foundations for the future". This development is contra to this aim from both climate, environment and air quality point of view.

Benefits of the Development

5.20 The benefits of the proposed Biomass Energy Development include the following:

5.21 Environmental Benefits

① **Reducing carbon emissions:** in the long term, reduced carbon emissions are expected to contribute to a deceleration in the rate of global climate change; the development will increase long term carbon emission by creating a carbon debt. For bioliquids, this can be as high as 840 years for oil palm plantations grown on rainforested peatlands. For biomass it can be up to a couple of centuries.

② **Air quality improvements:** renewable energy proposals have indirect benefits in this regard through the contribution to reduced fossil fuel emissions; like fossil fuels, burning biomass and bioliquids produces carbon and black soot. It also has an adverse affect on air quality rather than improving it.

5.22 Economic Benefits

① **Increased security and reliability of supply:** through more distributed generation closer to the point of use, less power wastage in transmission over long distances, more diverse sources and technology types, domestically available fuels; This will not be the case with imported feedstock and it is difficult to see how less power will be wasted in transmission if this plant is connected to the national grid.

② **Possibilities of indirect benefit through marketing** of the local area as forward looking and 'green' (e.g. inward investment by related technologies, or those attracted by improved image of area). It is debatable whether importing and burning rendered animal parts from slaughterhouses creating pollution and carbon emissions will be seen as particularly forward looking and 'green'.

5.23 Social Benefits

① **Community pride** around a new renewable energy proposal; Locals may well not agree

② **Educational opportunities**, potentially leading to a wider awareness of renewable energy, increased interest in environmental issues, and an increased sense of environmental stewardship among the local population; if the developer was being open about the environmental impacts of bioenergy then we suggest that this wider awareness would lead opposition to this plant

③ **Longer term health and quality of life** benefits and protection of properties through mitigation of the effects of climate change – this development is contra to this statement.

Peboc Power Plant

5.24 The Bryn Cefni Renewable Energy Plant has an electrical capacity of 31 MW and will directly produce over 250 GWh a year of renewable electricity at the site. A further 250 GWh of electricity can be generated from the wood pellets manufactured on site and used at coal fired power stations. As a result, the biomass energy plant at Peboc will provide a very significant 30% increase in the amount of renewable electricity currently generated in Wales and provide 7 % of the new renewable power capacity required to meet the 2020 government target for Wales. If these figures could be substantiated, there inclusion takes the effect of the plant far away from Llangefni in terms of exported wood pellets. For consistency the environmental impacts of the feedstock should therefore also be considered, from the Amazon to SE Asia to Africa to UK & EU habitats. If Ecopellets wish to quantify what happens outside of Peboc, they should also consider industrial bioenergy's adverse affect on human rights, food issues, climate, biodiversity, soil and water.

... as well as avoiding the importation of more than 35 million barrels of oil over it's 30 year lifetime. The total greenhouse gas emissions saved are over 7.5 million tonnes, over 250,000 tonnes each year in total (62,000 tonnes per year from the solid biomass plant, 55,000 tonnes per year from the liquid biomass plant and 142,000 tonnes a year from the wood pellet plant). (The CO₂ electricity exported savings are compared to the UK average generation

mix of 0.455 tonnes of CO₂ equivalent per MWh of electricity generated, wood pellets displacing coal at the coal fired power stations saving 0.896 tonnes of CO₂ equivalent per MWh). **These figures are highly questionable and we would ask for calculations.**

International Context

6.2 In 1988 the United Nations General Assembly adopted a resolution on the 'protection of the global climate for present and future generations of mankind' to address the effect that industrial society's emissions of greenhouse gases are having on the atmosphere and global climate. **The development is contra to this resolution.**

UK Renewable Energy Policy

6.10 The Government and the devolved administrations pursued this goal with a substantial programme of integrated policies and measures aiming to:

- ④ Improve business' use energy, stimulate investment and cut costs;
- ④ Stimulate new more efficient sources of power generation;
- ④ Cut emissions from the transport sector and agriculture;
- ④ Continue the fall in emissions from agriculture and **forestry bioliquid monocultures and biomass increase emissions from agriculture and forestry**

Energy Island Programme Anglesey

6.35 Anglesey County Council's Executive Committee launched in June 2010 the initiative 'Energy Island' for the island of Anglesey to be promoted as an "energy island" in an attempt to attract jobs and investment. The Authority hopes to turn Anglesey into a centre for excellence for energy generation.

The Energy Island concept will become a key priority for the County Council over the next few years, working closely with both the private sector and key stakeholders, as a means of protecting and developing the Island's economy.

We suggest that this development does not align with the notion as a centre of excellence. Numbers of local jobs are often exaggerated when it comes to bioenergy plants.

Chapter 4: Planning for Sustainability

6.40 PPW states that tackling climate change is a fundamental part of delivering sustainable development.... The Assembly Government has set out to achieve annual carbon reduction-equivalent emissions reductions of 3% per year by 2011 in areas of devolved competence. **Due to stack carbon emissions, full lifecycle emissions and carbon debt, this development is contra to this aim.**

6.41 Planning to minimize the causes of climate change means taking decisive action to move towards a low carbon economy by proactively reducing the demand for energy, facilitating the delivery of new and more sustainable forms of energy provision at all scales and minimizing the emissions of greenhouse gases to the atmosphere. **The application is at odds with this aim.**

6.42 Planning policies and proposals should :

- ④ Contribute to the protection and improvement of the environment, so as to improve the quality of life, and protect local and global ecosystems. In particular, planning should seek to ensure that development does not produce irreversible harmful effects on the natural environment and support measures that allow the natural heritage to adapt to the effects of climate change. **The development is at odds with this policy.**

6.43 Preference for the re-use of land: many previously developed sites in built-up areas may be considered suitable for development because their re-use will promote sustainability objectives. This includes sites in and around existing settlements where there is vacant or under-used land. **We would argue that the land is now greenfield which is more sustainable than a polluting plant.**

6.44 Promoting sustainability through good design: design must go beyond aesthetics and include the social, environmental and economic aspects of the development, including construction, operation and management, and its relationship to its surroundings. **This development will have an adverse affect on social, environmental and economic aspects.**

6.46 Good design should promote the efficient use of resources, seek to maximize energy efficiency and minimize the generation of waste and pollution. **We contend that burning biomass is not an efficient use of resources and actually creates waste and pollution.**

6.47 PPW demonstrates the Assembly Government's objectives for the conservation and improvement of the natural heritage as:

- ④ To promote the conservation of landscape and biodiversity, in particular the conservation of native wildlife and habitats; **this development would lead to the destruction of landscape and biodiversity.**
- ④ Ensure that action in Wales contributes to meeting international responsibilities and obligations for the natural environment; **this development would be at odds with this aim.**

6.49 When considering any development proposal, local planning authorities should consider environmental impact, so as to avoid wherever possible, adverse environmental effects. Where other material considerations outweigh the potential adverse environmental effects, authorities should seek to minimize those effects and should, where possible, retain and, where practicable, enhance features of conservation importance. **The environmental impacts of this development are global as well as local.**

Chapter 7: Supporting the Economy

6.54 The Assembly Government's objectives for supporting the economy are to:

④ Ensure that development for enterprise and employment uses is in line with sustainability principles and respects the environment in its location, scale and design, especially so as to address climate change. **The plant will create climate change.**

6.57 In determining planning applications for industrial and commercial uses, local planning authorities should have regard to:

④ The impact of the development on the environment and local amenity (in terms of, for example, the scale and design, use of materials and natural resources, impact on landscape and wildlife and its contribution to the generation of traffic and waste, noise and odour, emissions to air, water and soil, and its impacts on community safety and health); **The plant will directly or indirectly have an adverse affect on all of these issues.**

④ Ways to avoid, mitigate or compensate for negative environmental impacts, including the impacts of climate change; **The application is contra to this.**

④ Accessibility by a range of different transport modes; **site can only be accessed by road.**

④ Proximity to, and compatibility (in terms of nature and scale) with, residential areas; **within 530m**

④ Compatibility with existing industrial and commercial activities; **Rocpowers power station at Wakefield is regularly shutdown due to complaints from the adjacent industrial estate**

the intensification of industrial / commercial use is appropriate. **It is now a greenfield site**

Chapter 8: Transport

6.58 Land use planning can help to achieve the Assembly Government's objectives for transport through:

④ Reducing the need to travel, especially by private car, by locating development where there is good access by public transport, walking and cycling;
④ Locating development near other related uses to encourage multipurpose trips and reduce length of journeys;
④ Support traffic management measures;
④ Promoting sustainable transport options for freight and commerce.

We can see precious little evidence that any of the above has been addressed in the application.

6.59 When determining a planning application for development that has transport implications, local planning authorities should take into account:

④ The impacts of the proposed development on travel demand;
④ The level and nature of public transport provision;
④ Accessibility by a range of different transport modes;
④ The willingness of a developer to promote travel by public transport, walking or cycling, or to provide infrastructure or measures to manage traffic, to overcome transport objections to the proposed development;
④ The environmental impact of both transport infrastructure and the traffic generated (with a particular emphasis on minimizing the causes of climate change associated with transport); and
④ The effects on the safety and convenience of other users of the transport network.

We can see precious little evidence that any of the above has been addressed in the application.

Chapter 12: Infrastructure and Services

6.61 Assembly Government aims to secure environmental and telecommunications infrastructure. The objectives are:

④ To promote the generation and use of energy from renewable and low carbon energy sources at all scales and promote energy efficiency as a means to secure zero or low carbon developments and to tackle the causes of climate change; **The plant would be a cause of climate change**

6.64 The Assembly Government is committed to:

④ Achieving its specific target for renewable energy (electricity) production;

④ Maximising the opportunities for renewable energy (heat);

④ Where possible combining the two in combined heat and power systems;

We challenge the idea that providing heat for process is CHP and that maximizing the opportunities for renewable energy (heat) would be to connect the plant to district heating.

6.68 The potential for pollution affecting the use of land will be a material consideration in deciding whether to grant planning permission. Material considerations in determining applications for potentially polluting development are likely to include;

- ④ Location, taking into account such considerations as the reasons for selecting the chosen site itself;
- ④ Impact on health and amenity;
- ④ The risk and potential pollution from the development, insofar as this might have an effect on the use of other land and the surrounding environment;
- ④ Prevention of nuisance;
- ④ Impact on road and other transport networks, and in particular on traffic generation;

We contend that developer's application does not allay concerns on these issues.

6.69 Noise and light pollution: noise can be a material planning consideration and in some circumstance it may be necessary to provide a technical noise assessment. **It must be cause for concern that this plant affectively operates 24/7.**

Ministerial Interim Planning Policy Statement on Planning for Renewable Energy (2004)

6.70 This Statement amends sections 12.8 to 12.10 of Planning Policy Wales (PPW) 2002 and thereby replaces these sections of the original PPW. These changes state that renewable energy projects should generally be supported by Local Planning Authorities provided that environmental impacts are avoided or minimised, and nationally and internationally designated areas are not compromised. **Environmental impacts can not be avoided. The council will have no control over how they can be minimized due to limitations of Ofgem.**

Ministerial Planning Policy Statement on Good Design (MIPPS) 2008

6.73 This guidance requires that the design process promotes the efficient use of resources, including land. It states that design should seek to maximize energy efficiency and the efficient use of other resources, minimise the use of non-renewable resources and minimise the generation of waste and pollution. **The design process does not constitute an efficient use of resources and does not minimise the generation of waste and pollution.**

Technical Advice Note 5: Nature Conservation and Planning (2009)

6.75 TAN 5 provides advice about how the land use planning system should contribute to protecting and enhancing biodiversity and geological conservation. **The plant will have an adverse affect on biodiversity, rather than contribute to protecting or enhancing it.**

6.76 When deciding planning application that may affect nature conservation, planning authorities should:

- ④ Pay particular attention to the principles of sustainable development, including respect for environmental limits, applying the precautionary principle, using scientific knowledge to aid decision making and taking account of the full range of costs and benefits in a long term perspective.
- ④ Contribute to the protection and improvement of the environment, so as to improve the quality of life and protect local and global ecosystems, seeking to avoid irreversible harmful effects on the natural environment.
- ④ Protect wildlife and natural features in the wider environment, with appropriate weight attached to priority habitats and species in Biodiversity Action Plans.
- ④ Ensure that all material considerations are taken into account and decisions are informed by adequate information about the potential effects of development on nature conservation.
- ④ Ensure that the range and population of protected species is sustained.

We contend that the application does not take the above into account and is contra to them.

6.77 TAN 5 advises on the importance of nature conservation in the preparation of planning applications. It recommends that all applications are carefully prepared with all relevant information included and all material considerations addressed in the layout, design and related access, drainage and infrastructure. Landscaping proposals should be included together with any measures designed to avoid, mitigate or compensate for potential adverse effects on nature conservation. **This does not set geographical limits and we contend that the application does not include 'carefully prepared with all relevant information' regarding nature conservation.**

Technical Advice Note 12: Design (2009)

6.93 Environmental Sustainability: achieving efficient use and protection of natural resources, enhancing biodiversity and designing for change. These objectives are achieved through considering the landscape setting; biodiversity and the local environment; energy demand reduction through energy efficiency; use of sustainable materials; water and waste management; climate resilience and sustainable building standards. **We suggest that the development causes problems regarding this advice.**

Technical Advice Note 21 (TAN 21): Waste (2001)

6.101 One of the main principles of the TAN is the Proximity Principle *that waste should be treated and or disposed of as near to the source of origin as possible ... however this depends on the quantities and types of arising on the local and regional level.* **We question whether this is the case with the ash.**

6.102 TAN 21 refers to the Waste Hierarchy:
Energy - Penultimate least preferred option

6.103 The utilization of recycled wood as a fuel for the solid biomass CHP plant will raise the management of this waste material up the Waste Hierarchy, from "Disposal" to "Energy Recovery" with associated environmental benefits.

We contend that 6.103 should be viewed in terms of 6.102.

6.104 TAN 21 also refers to Health Impact Assessment, whereby the health of the population positive and/or negative are taken into account as part of the Environmental Impact Assessment process. We question whether this has been actioned.

Gwynedd Structure Plan (1993)12

6.114 Policy C6: Proposals for conventional thermal power generation will be acceptable only if the project incorporates the best available technology to minimise the discharge of harmful waste gases and includes acceptable proposals for the disposal of solid and liquid waste products. We suggest that the best available technology to minimise the discharge of harmful waste gases is not included. We wonder if waste disposal methods are acceptable.

6.116 Policy D4: Careful location, siting and design will be a material consideration in the determination of all applications for development in order to minimize any adverse impact on the environment. Where appropriate planning applications should be accompanied by a comprehensive environmental statement in accordance with the relevant legislation. This application will have an adverse affect on the environment.

6.117 Policy D10: To ensure that the County's heritage of wild flora and fauna and geological and physiographic features are safeguarded, particularly NNRs, SSSIs, RSPB reserves, wetlands, Ramsar sites, Special Protection Areas (under EC Bird Directive 74/409), local nature reserves and other areas of high nature conservation interest. The application will have an affect on Malltraeth Marsh & Talwrn fields SSSI. The critical ammonia load is being exceeded at the nearby Maltraeth Marsh SSSI.

6.119 Policy D20: There will be a presumption against development which will discharge effluent in a manner which is likely to impair the quality of coastal, river, inland or ground water; increase levels of air and odour pollution; and introduce major noise or vibration nuisance. This development will increase levels of air and odour pollution – Rocpower opened their first biofuel plant in Wakefield in late 2009. It is similar to the one proposed here and attracted complaints about smoke from its neighbours almost as soon as the first engine was switched on. Flue gas treatment equipment was subsequently added. Unfortunately, the particulate filters rapidly blocked up with particulates, resulting in the generators shutting down. We understand that the treatment equipment has now been disconnected. Rocpower are now only able to avoid action under the Clean Air Act by switching the entire plant off when the wind is blowing in the direction of the complainants. Here is an account of someone who visited the Wakefield plant: "When visiting the Rocpower Common Side Lane site near Featherstone on the 14th June, 2010 - I was shocked to see rusty coloured smoke gushing out of one of its 4 chimneys. Also the air smelt of sulphur." (tinyurl.com/32mp69u)

6.121 Key planning issues include:

④ Wider environmental considerations: the excessive use of fossil fuels is damaging the environment. The plant will have far reaching environmental impacts that actually exceed those of fossil fuels.

6.122 The Council's Strategy has a need to protect the physical environment and the area's resources. It states (par 2.10) that *The Council will try to ensure the highest standards of air and water quality, pollution control and treatment of waste. The development will add to the Council's work on this matter.*

6.129 Policy 33: the Council will refuse to permit any development that will unacceptably affect either directly or indirectly, any notified or proposed Site of Scientific Interest (SSSI), Local Nature Reserve (LNR), or Marine Nature Reserve (MNR). There are issues regarding the Malltraeth Marsh and Talwrn fields SSSIs.

6.135 Policy 45: Renewable energy projects will be permitted where it can be clearly demonstrated that there will not be any unacceptable impact on:

- ④ Landscape character;
- ④ Sites of international, national or local importance for nature conservation;
- ④ Species which are of nature conservation importance;
- ④ The standard of amenity enjoyed by the resident and tourist population;

We contend that the above can not be demonstrated.

Part One Policies

6.138 Part One Policy 4: Integrated Transport and the Location of Development

Development will be required to locate in places that provide opportunities to encourage access by foot, cycle, bus, train, sea and air in order to reduce the dependence on private car usage and reduce journey lengths. **We question whether this has been taken into account.**

6.140 Part One Policy 8: Environment

Development which causes significant harm to the natural and historic environment will not be permitted. **We contend that the application will cause significant harm to the natural environment.**

6.141 Part One Policy 8b: Energy Developments

Applications for development of renewable and non-renewable energy resources will be permitted where it can be demonstrated that there will not be an unacceptable adverse impact upon the environment. **We contend that it can not be demonstrated that that there will not be an unacceptable adverse impact upon the environment – as impacts are global and myriad.**

6.144 Environment Policy EN5 International Sites:

Development will not be permitted where it would cause unacceptable harm, either directly or indirectly, to sites or proposed sites of European importance for nature conservation, including Special Protection Areas, Special Areas of Conservation, and Ramsar Sites, including potential or candidate sites awaiting designation. **There should be concern and further investigation regarding the Talwrn fields & Malltraeth Marsh SSSIs.**

6.145 Environment Policy EN6 National Sites:

Development will not be permitted where it would cause unacceptable harm to designated Site of Special Scientific Interest **There should be concern and further investigation regarding the Talwrn fields & Malltraeth Marsh SSSIs.**

6.148 Environment Policy EP18 Renewable Energy

Renewable energy projects will be permitted where it can be clearly demonstrated that there will not be any unacceptable harm on:

- Landscape character including sites of archaeological interest and the historic environment and/or;
- Sites of international, national, or local importance for nature conservation and/or;
- Species which are of nature conservation importance and/or;
- The standard of amenity enjoyed by the resident and tourist population and or;

We contend that the above can not be demonstrated.

6.155 Infrastructure Policy SG8 Air Quality

Development that would pose an unacceptable adverse risk to air quality will not be permitted. **The development will have an adverse affect on AQ.**

ENVIRONMENTAL IMPACT ASSESSMENT SUMMARY FINDINGS

Air Quality and Pollution

7.2 The conclusions from the air quality assessment were that emissions from the various processes associated with the Biomass Energy Development were unlikely to cause an exceedence of an air quality standard, and in most cases were likely to have an insignificant impact on local air quality. **We suggest that this rather vague wording would not assure local residents. There is no AQMA in Anglesey. The nearest monitoring station for PM10 is at Llynfaes. Daily mean hourly PM10 limits were breached at least twice in the last three months and at least seven times in the first 11 months of 2010, but this is a long way off breaching the NAQ objective not breaching them on more than 35 days a year. Annual mean PM10 concentrations at Llynfaes were 22 $\mu\text{g}/\text{m}^3$ in 2007/08. NO2 is being monitored at the Llanfair PG Bypass and at Menai Bridge, neither site being close to Llangfanen. NO2 levels were exceeded at the kerbside of the A55 at Llanfair P.G.(44.9 $\mu\text{g}/\text{m}$) in 2007/08, but the nearest houses are 30m from the carriageway. The 1-hour NO3 objective is unlikely to be exceeded even at Llanfair. NO2 concentrations at Llanfair are on an upwards trajectory.**

7.3 The impact on air quality at nearby residential properties is expected to be small and unlikely to adversely affect the health of people living there. Resultant concentrations were likely to be such that any “*Effects are unlikely to be noticed even by individuals who know they are sensitive to air pollutants*”. **We suggest that this assurance needs to be challenged to review its scientific validity.**

7.4 Issues associated with dust and odour generation were assessed as insignificant due to controls that will be put in place during the construction and operation of the Biomass Energy Development, and the low-odour potential of the materials to be processed. **We suggest that current design abatement is not enough to provide this assurance.**

7.5 The impact of emissions from vehicles travelling to and from the Biomass Energy Development site were assessed as insignificant due to the relatively low numbers, and the traffic management procedures that will be implemented. **We challenge this assertion within our objection below.**

Transportation

7.17 A transportation assessment for the proposed development at the Bryn Cefni industrial park was undertaken to assess the various aspects of transportation to and from the proposed development including road traffic. The

assessment suggests that the proposals will result in a slight increase in the number of car and heavy goods vehicles locally around the industrial estate.

7.18 On average there will be 66 truck movements to and from the plant per day. The main increase will occur on roads and junctions between the A55 and the Bryn Cefni industrial estate, including the A5114 and the Bryn Cefni industrial estate distributor road. With 24 hour operation of the facility, traffic movements are spread throughout the day, which will result in trip levels having a negligible effect on the operation of the highway network.

There will be 80 daily vehicle movements for staff, 99 for pellet deliveries and transport, 39 for the solid biomass plant and 5 for the bioliquid plant. Those will be 38% cars, 62% HGVs.

The A5114 northbound has an average of 5577 car journeys and 222 HGV journeys daily. Southbound, it has 11,139 car journeys and 779 HGV journeys daily.

The Supply and Source of Biomass Fuel

7.37 A report commissioned by the Welsh Assembly Government in 2008 as to the feasibility of renewable energy in North Wales considered the availability of liquid biomass and wood-related biomass materials within a 100 mile area of Anglesey. Within that area likely sources of fuel would include:

- End of life consumables (furniture, etc, through civic amenity (CA) sites and bulky waste collections);
- Construction and demolition (C&D) waste recovery and recycling;
- Commercial and industrial wood waste (wood processing, furniture, packaging etc,) recovery and recycling;
- Forest Wood and Short Rotation Coppice; and;
- Tallow, Recovered Vegetable Oils and Rape Seed Oils.

We question the robustness of this sourcing policy and validity of the 100 mile radius assurance when this includes ports that import biofuels such as rapeseed, soy and palm oil. We also question it, when it seems to include Scotland and Nova Scotia. We also question availability, given the preponderance of other biofuel and biomass plants in the North West and in Wales. We also question why 'vegetable oils' are not listed here, when they are elsewhere in the application.

7.39 The electricity networks are suitable and the raw materials for both projects are locally available in North Wales and can be augmented with importation from Merseyside and West Yorkshire if required. This includes port, but does include Scotland or Nova Scotia. We would point out that so far biomass and biofuel power stations approved in the UK have been approved without any sourcing restrictions in the planning conditions. Companies are not bound by claims they make about 'planning intentions'. Last year, DECC approved MGT Power's application to build a 295 MW biomass power station at Teesside Port. MGT claimed that all or most of the wood would come from North America where there was no 'net deforestation' (even though significant recent losses of forest cover in North America have been well documented) (tinyurl.com/37upmz5 and tinyurl.com/36t3s36). Shortly after winning planning consent they signed a Memorandum of Understanding with Suzano Papel e Celulose for most of the wood to come from Brazilian eucalyptus plantations (tinyurl.com/3yukqn7).

7.40 Current projections suggest that the availability of forest and recycled wood will continue to grow, and a developed market for wood waste would probably attract additional material if competitive and offering a steady demand. Increases in landfill tax will continue to encourage the development of alternative options to landfill and thus stimulate segregation of waste in all quarters. What proposals suggest that waste will increase as society tries to reduce it?

8.2 The generating capacity of the two biomass CHP plants is sufficient to provide the needs of approximately 70,000 homes, and the Biomass Energy Development as a whole is expected to result in savings of at least 250,000 tonnes of carbon dioxide annually. The biomass CHP plants will utilize renewable biomass fuels which would otherwise be sent to landfill, or incinerated. We must dispute these figures as no calculations were included with the application. Isn't burning biomass incineration?

8.3 The Environmental Statement that accompanies this application demonstrates that the potential environmental impact of the Biomass Energy Development is acceptable and where potentially significant impacts have been identified, appropriate mitigation measures have been proposed. The development site is considered to be suitable for the proposed use by the Biomass Energy Development. The Environmental Statement is not acceptable as it fails to identify potentially significant impacts. What appropriate mitigation measures have been proposed for destruction of habitats around the world?

8.4 Local, regional and national planning policy is supportive of the Biomass Energy Development which will assist in addressing the important issues of climate change as well as assisting Wales to achieve its national targets of renewable energy generation. That is indeed the case, but unfortunately in the real world defined and constrained by chemistry and physics this is alas not the case.

4.2.5 Within the Bryn Cefni Parc Industrial Estate there is a mixture of manufacturing and processing industries as well as some light industrial units. Industries directly to the west of the proposed site include the former Eastman Peboc Chemical site, the Glanbia Cheese processing factory, the Vion Foods/Cymru Country Chickens Poultry processing plant and several other mixed industrial units. To the north of the site is a mixture of veterinary, car sales and component industries. To the east of the site is the Welsh Water Effluent Treatment Works. **We suggest that these organizations would be adversely affected by pollution.**

Site Selection

Fuel Availability: where sufficient long term fuel supply needs to be available for the renewable energy biomass plant, ideally within 100 miles of the plant. There is sufficient forest wood (200,000 tonnes), recycled wood and composted biomass (150,000 tonnes) and liquid biofuel (22,500 tonnes) available within this area, mainly in Mid Wales, North Wales and the North West of England. **Please see previous comments about fuel supply.**

Road and Rail Access: To the west of the site is the currently disused Bangor- Holyhead- Amlwch railway line which is just 2 km from the junction with the operating Bangor to Holyhead mainline rail service. This railway line spur if reopened could serve the Biomass Energy Development with both raw material supply and wood pellet product export. **This is mis-leading and superfluous as it could not be used as the application also says: 'However, the Environment Agency has indicated that this proposed site is in a flood plain and any application to develop on these lands would have to be refused on these grounds'.**

4.2.20 The Biomass Energy Development will be licensed for operation by the Environment Agency under the Environmental Permitting Regulations. Proven modern plant and systems have been incorporated into the design to minimise local emissions in line with the Best Practicable Environmental Options and the Best Available Techniques. As a significant renewable energy plant, the facility will save the emissions of large amounts of greenhouse gases – saving some 250,000 tonnes of carbon dioxide, the main greenhouse gas, every year. By producing 100,000 tonnes of wood pellets and 31 MWe of electrical power, the plant will contribute almost 10% percent to the Welsh Assembly's target of generating 7 Terawatt hours of renewable electricity for Wales by 2020. **We dispute the carbon saving figures as we doubt they are full cycle analysis. And once again if it is appropriate to take the supposed beneficial affect far away from Llangefni in terms of so-called renewable energy produced from wood pellets in power stations many miles away (some of which, the application says, may be exported) then for consistency the application should consider the full adverse global impacts of the development and its fuel feedstock.**

Energy Efficiency

4.2.23 More than 90% of the energy in the biomass fuel feedstocks will be available in the form of useful thermal and electrical energy for use on-site as well as off-site. This compares with a figure of about 26% for conventional coal-fired power stations, where about two-thirds of the available energy is dissipated into the atmosphere via the cooling towers and the chimneys. **We dispute this 90% figure.**

4.2.24 The Biomass Energy Development will qualify as good quality CHP under the CHP QA scheme operated by the Department for Energy and Climate Change (DECC), and as such will qualify for two ROCs, or Renewables Obligation Certificates. **Chapter 5 of CHPQA Guidance note 44 suggest that it not quite as clear cuts as that - 5.8 'Bearing in mind the work currently underway to identify how a separate incentive scheme to reward heat should work, we will need to assess the impact of this future incentive upon the RO. Before a scheme is introduced, we will need to re-evaluate the level of ROC support given to renewable CHP. This may include allowing CHP schemes to opt out of the RO in order to benefit from any incentive scheme for heat, or lowering the level of support within the RO banding mechanism'. And we understand that energy for waste is only eligible for ROCs with CHP.**

4.2.25 The raw materials for this proposed wood pelleting and biomass CHP plant at Llangefni will be forest wood (mainly in the form of small roundwood logs), co-products from local sawmills (such as woodchips, sawdust, off cuts and bark), recycled wood (such as composted wood), liquid biomass in the form of tallow(animal fat), rapeseed oils and other forms of vegetable oils (land based biomass traditionally used as additives in the pet food and pharmaceutical industries) for the production of electricity and heat on site and for the manufacture of wood pellets for sale for industrial, commercial and domestic use. No specific risk material will be used. **There is now a reference to other forms of vegetable oil. We would argue that all of these feedstock's have a prior use, so there is an issue of displacement to satisfy increased demand created by the proposed development.**

4.2.28 Whilst the main fuels for the boiler plant are expected to be clean wood fuels, the plant has been designed in accordance with Directive 2000/76/EC of the European Parliament and of the Council of 4 December 2000 on the incineration of waste (WID). The emissions and limits from the CHP stacks are in accordance with the WID directive. Proven plant and systems have been incorporated into the design to minimize emissions in line with the Best Available Techniques (BAT). **See previous comments about BAT.**

4.2.29 The 200,000 tonnes of small roundwood required will be sourced from locally managed forests mainly from Mid Wales. Of the 150,000 tonnes of recycled wood required for the CHP plant, the majority of this will be sourced from recycling companies mainly in the local North Wales, Mid Wales and Merseyside areas. Although the application speaks about sourcing 'local wood', it is very doubtful that this would be possible in view of the fast growing competitive demand bioenergy. All UK power station plans published by companies so far will require over 55 million tonnes of biomass, mainly wood a year yet total UK wood production is less than 9 million tonnes annually. In Anglesey, a decision on an application for a 300 million tonne biomass power station (Anglesey Aluminium, Holyhead) is currently pending. Across Wales, plans for biomass power stations which will, altogether, burn over 6.5 million tonnes of wood are pending or have been approved. There is thus a high chance that wood will be imported and the Planning Department have indeed been informed of plans to import some of it from Nova Scotia. Over 50 organisations in Nova Scotia have recently expressed their concerns that the states' domestic plans for bioenergy will lead to a dramatic increase in clearcutting of boreal forests. Industrial wood burning, especially of trees cut down for this purpose, has been shown to result in a carbon debt of decades or centuries, worsening climate change at a time when emissions must be drastically reduced.

4.2.30 It is anticipated that the wood pellet plant will utilise ~85,000 tpa of forest wood derived white chips and sawdust, and ~85,000 tpa of composted wood giving a total of ~170,000 tpa of timber. This material will be sourced predominantly from within an approximate 100 mile radius of the Peboc site. Please see comments elsewhere about the questionable sustainability criteria of composted wood.

4.2.32 Approximately 22,500 tonnes of liquid biomass will be required annually and will be sourced mainly from North Wales, Merseyside and the North West of England. Liquid biomass fuels in the form of tallow (animal fat), rapeseed oils and other forms of vegetable oils. Biofuels from rapeseed oil have been shown to result in higher overall greenhouse gases than burning an equivalent amount of mineral oil, due to emissions linked to nitrogen fertiliser use. Furthermore, as more and more rapeseed oil is burned for fuel, food and cosmetics companies are importing ever more palm oil, thus leading to more destruction of rainforests and peatlands and more communities in countries such as Indonesia or Cameroon being displaced and losing their livelihoods. The company has admitted that, if the biofuel power station was to be run 100% on rapeseed oil, it would use up 8% of the UK's entire rapeseed oil. This would require around 32,000 hectares of land that could otherwise be used to grow food. Burning tallow for biofuels has the same effect on oil palm expansion since it is otherwise used for soap and cosmetics, according to a report commissioned by the UK Government and the Renewable Fuels Agency. Used cooking oil is in short supply and large quantities are being imported for biofuels from other European countries which themselves burn palm and soya biofuels.

Size Reduction and Drying

4.2.35 The drying process will be optimised to ensure emissions are minimised of odour, dust and fine particulates. All appropriate control measures will be incorporated into the reception, storage and handling of the received wood in order to minimise the potential for fires, or the fugitive release of dust or odour.

We draw your attention to our concerns over spontaneous dust explosion: We cite this from an industrial journal - "Dust Hazard Considerations: Biomass can be very dusty when dry. This dust can be an explosion hazard every bit as bad as Powder River Basin (PRB) coal, if not worse. If water spray is used for dust control, it will raise the temperature of the stored biomass and may lead to spontaneous combustion."

<http://cenvironment.blogspot.com/2011/06/options-for-biomass-fuels-utilization.html>

EcoPellets want to use water spray (misting) for dust control and haven't even mentioned the risk of spontaneous combustion.

We also draw your attention to:

<http://www.forthenergy.co.uk/pdf/biomass-project-update-leith/06%20S36%20Supplementary%20Information/03%20Fire%20Prevention%20Method%20Statement%20-%20Leith.pdf>

<http://www.ecologyaction.ca/content/54-groups-across-n-s-call-better-forestry-and-oppose-large-scale-biomass-electricity>

<http://www.iesclean.com/dust-explosions>

Biomass Combustion

Energy Recovery and Electricity Generation

4.2.68 The steam turbine condenser will be water cooled from an evaporative cooling tower. The cooling tower will evaporate up to 30 tonnes / hr of water in summer and daytime, This would appear to be a large loss of heat.

Solid Waste Residues

4.2.71 The quantity of residue produced by the solid biomass CHP plant from the combustion process is low, with the ash content ranging from 2 to 4 percent by weight. The quantity of ash is mainly influenced by the bark content of the wood. Recycled wood also contains higher amounts of mineral and metallic impurities compared to soft wood due to manufacturing processes and the way it has been used prior to combustion. The exact ash composition

of the fuel also depends on the tree species available. All ash residues generated from the plant will be stored, handled and exported from the site within dedicated and fully enclosed systems.

4.2.72 The flyash/APC will be significantly different chemically due to the addition of chemicals to control emissions of acid gases and oxides of nitrogen, which may make its utilization less certain. Opportunities will be explored for utilisation of the flyash/APC residue stream with disposal to landfill as an unfavourable option.

We assert that there are no credible proposals for disposing of the toxic ash. Also, the Planning Statement lists initial consultation comments. The HSE stated: "The assessment indicates that the risk of harm to people at the proposed development is such that HSE's advice is that there are sufficient reasons, on safety grounds, for advising against the granting of planning permission in this case. If nevertheless you are minded to grant permission, your attention is drawn to paragraph A5 of the National Assembly for Wales Circular 20/01, or paragraph A5 of the DETR Circular 04/2000. These state that "where a local planning or hazardous substances authority is minded to grant planning permission or hazardous substances consent against HSE's advice, it should give HSE advance notice of that intention, and allow 21 days from that notice for HSE to give further consideration to the matter. During that period, HSE will consider whether or not to request the Assembly / Secretary of State for the Environment, Transport and the Regions to call in the application for (its/his) own determination".

4.2.73 Process effluent from the solid biomass CHP plant will be made up primarily of blow down water from the associated boiler. This will be treated for pH and temperature, prior to discharge to the foul sewer. There is no mention here of PM60 H & S Regulations or Mogden formulae that would ensure that this assurance was adhered to. There is also no mention of recovery and reuse of some of the heat energy from blowdown with inclusion of heat recovery system and flash vessel.

4.2.76 An Environmental Management System (EMS) will be implemented prior to the commencement of construction on site. The EMS will provide details on the procedures that will be implemented to minimise the environmental impact of the construction activities and will be developed to cover the operational phase of the Development. Why is there no EMS to minimize the environmental impact of the feedstock supply chain?

4.2.82 The liquid biomass combustion plant comprises the following key components:

□ Atmospheric emissions abatement systems – if required; We would suggest that it is required based upon Blungs and Rocpowers experience with burning biofuels.

4.2.83 The liquid biomass combustion process involves the following:

□ The design of the diesel engine will conform to the required Euro Standard for control of emissions of particulates and oxides of nitrogen and, if required, additional control techniques may be incorporated into the design. Ditto

□ Emissions from the liquid biomass CHP plant will be discharged to atmosphere via a dedicated chimney, 30 metres in height. The stack height was designed in line with the requirements of Environment Agency Guidance Note D1, and verified by detailed modelling using ADMS Version There are issues over dispersal with this stack height as well as visual implication for the local area.

4.2.84 The liquid biomass combustion plant will operate continuously, 24 hours per day with ~90% availability We contend that there may well be issues regarding noise, odour, plumes and flash steam

Emissions to Atmosphere

4.2.93 The inherently high concentration of oxides of nitrogen in the exhaust from the compression ignition engine will necessitate the incorporation of a selective non-catalytic reduction pollution control system, to enable compliance with regulatory emission limit values. This will involve the addition of ammonia into the exhaust gases, possibly in the presence of a catalyst, to convert the oxides of nitrogen to molecular nitrogen and water vapour, minimising the potential impact of emissions on ambient concentrations of nitrogen dioxide in the surrounding area. The critical ammonia load is being exceeded at the nearby Malltraeth Marsh SSSI.

Effluent

4.2.95 Process effluent from the liquid biomass CHP plant will be made up primarily of blow down water from the associated exhaust heat recovery boiler. This will be treated for pH and temperature prior to discharge to the foul sewer. There is no mention here of PM60 H & S Regulations or Mogden formulae that would ensure that this assurance was adhered to. There is also no mention of recovery and reuse of some of the heat energy from blowdown with inclusion of heat recovery system and flash vessel.

Process Regulation

How will the operation of the Biomass Energy Development be Regulated?

4.2.100 Consideration was given to whether the wood pelleting process was a scheduled activity under the Environmental Permitting (England and Wales) Regulations 2007. However, the specific process operations associated with the pelletisation process are not covered by the regulations, and emissions from the process will be minimised by adoption of industry best practice, and the requirements of conformance with the site's environmental management system. **We question if the plant operates to best practice and if the EMS is sufficient.**

Operational Workforce

4.2.123 The plant will be in operation on a 24/7 basis and directly employ a full time staff of some 60 people, mainly skilled local staff. **We would question the scale of these figures.**

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Air Quality and Atmospheric Dispersion Modelling

4.6.7 There are no predicted exceedences of any of the air quality objectives. The model predicted that Process Contributions for all WID pollutants would be below relevant objective limits defined within the Air Quality Regulations, or Environmental Assessment Levels from EPR H1. From Environment Agency guidelines the impact of plume visibility is considered insignificant as the plume length exceeds the site boundary for less than 5% of daylight hours during the year. **The AQ statement doesn't make it clear what assumptions about emissions from different feedstock they've used and thus what the stack emission figures are based on.**

4.6.11 Estimates were developed of nitrogen, sulphur and acidity deposition at ecologically sensitive receptors within 15km of the vicinity of the Biomass Energy Development site. The results showed that the current Critical Levels and site-specific Critical Load values are well below the objective limits at the receptor locations considered and the Process Contribution was typically <1% of the relevant Critical Load. On the basis of the assessment, the marginal increase attributable to the emissions from the Biomass Energy Development is small and the Critical Load levels will remain well below the

Higher Limits with no exceedance. Accordingly, it is concluded that emissions from the Biomass Energy Development are unlikely to have a significant impact on any of the nearby ecological receptors considered. **The application also predicts that at the nearest "relevant" site, additional NO₂ would be less than 1% of the national objective. That I can't believe, given what we know from Southall and that EcoPellets' technology may not be as efficient due to lack of equivalent abatement filtration. Also, table 6.14 shows that on the industrial estate, 120m from the site, there is a likelihood that NO₂ objectives will in fact be breached**

4.6.12 The overall conclusion from detailed modelling of emissions from the proposed Biomass Energy Development is that the potential impact on local air quality is likely to be small, and unlikely to result in significant increases in background pollutant concentrations at all but the nearest receptors. In view of the small Process Contributions to pollutant ground level concentrations, the introduction of the Biomass Energy Development is unlikely to restrict the implementation of the Anglesey County Council's Air Quality Management Plan. **We would dispute this.**

4.6.18 *The potential for pollution affecting the use of land will be a material consideration in deciding whether to grant planning permission.* **We concur.**

Local Development Plans

Gwynedd Structure Plan (1993)

4.6.19 Policy C6: *Proposals for conventional thermal power generation will be acceptable only if the project incorporates the best available technology to minimise the discharge of harmful waste gases and includes acceptable proposals for the disposal of solid and liquid waste products.* **We contend that it does not incorporate BAT, may not dispose of liquid waste acceptably and there is no proposal for solid waste.**

4.6.20 Policy D20: *There will be a presumption against development which will increase levels of air and odour pollution; and introduce major noise or vibration nuisance.* **We contend that the proposal increases levels of air and odour pollution.**

4.6.24 Correspondence received from the Countryside Council of Wales made reference to the following: *Our primary concern would be NO_x and SO₂ emissions. There needs to be an assessment of process contribution to sites within a 15km radius of the proposed development. The main potential impact would be nitrogen and ammonia deposition from the aerial emissions. The impact of sulphur oxides and particulate matter also need to be assessed.* **We would agree and are unconvinced this has happened.**

Sulphur Dioxide

4.6.61 Sulphur dioxide (SO₂) is released primarily by the combustion of fuels containing sulphur. Approximately two thirds of UK emissions are associated with emissions from coal-fired power stations, with much of the remainder associated with other combustion processes. Emissions of SO₂ have reduced by about three-quarters since 1970, due to the reduction in coal combustion and the switch to natural gas firing in the domestic, commercial and industrial sectors. **Burning biomass produces SO₂ as well as all pollution listed below by the applicant.**

oxides of Nitrogen (NOX);
④ Sulphur Dioxide (SO2);
④ Particulates;
④ Carbon Monoxide (CO);
④ Hydrogen Chloride (HCl);
④ Hydrogen Fluoride (HF);
④ Volatile Organic Compounds (VOCs);
④ Cadmium and Thallium and their compounds (Cd & Tl);
④ Mercury and its compounds (Hg);
④ Other Metals; and,
④ Dioxins and Furans.

Fugitive Dust Emissions from the Shredding and Handling of Biomass Materials

4.6.120 As a further control measure, EcoPellets intend to install a “Mist-Air” dust suppression system that will eliminate airborne dust from the wood processing areas. “Mist-Air” has the capability to produce high volumes of water aerosol, or mist, and can be used to treat several areas or buildings simultaneously from one base unit.

4.6.122 “Mist-Air” systems will be installed in the three main process buildings where there is the potential for airborne dust to be generated:

- ④ PEBOC 1 - Pelleting Plant;
- ④ PEBOC 3 - Solid Biomass CHP plant; and,
- ④ Wood Storage and Processing Area

Please see previous comments on dust and H & S.

4.6.205 The maximum annual average PM10 PC across the receptor grid was ~8.9 □ g m-3, or about 22% of the annual objective value. When the estimated background PM10 concentration of 12 □ g m-3 is taken into account, the maximum annual average PEC value is ~20.9 □ g m-3, or about 52% of the annual average AQS objective value. In terms of the NSCA impact descriptor this represents a **slight adverse** change.

Particles (PM2.5)

4.6.208 As referred to in Section 6-2, there is a new AQS for PM2.5 and consideration has been given to the impact of emissions from the two biomass CHP plants. Emissions of PM2.5 were based on 50% of those for the PM10 emissions in line with a procedure followed by the electricity supply industry¹⁷, which states that 50% of PM10 emitted from large combustion plant is in the form of PM2.5.

4.6.209 The maximum annual average PM2.5 PC across the receptor grid was ~4.5 □ g m-3, or about 18% of the annual objective value. When the estimated background PM2.5 concentration for 2008 of 7.1 □ g m-3 is taken into account, the maximum annual average PEC value is ~11.6 □ g m-3, or about 46% of the annual average AQS objective value. In terms of the NSCA impact descriptor this represents a **slight adverse** change.

We suggest that any adverse change is unwise as UK levels for PM 10 & PM 2.5 already exceed WHO safe limits.

DESIGN AND ACCESS STATEMENT

3.14 The proposed Biomass Energy Development is an industrial use and is therefore consistent the industrial character of this part of Llangefni. The site is located within an area of Llangefni that is a mixed use area with a substantial presence of industry, and the proposed use is consistent with development plan policies, the site and local character. **The proposed development is on a greenfield site.**

3.28 The most dominant and visible aspects of the Biomass Energy Development is the solid biomass CHP plant (PEBOC 3) and its associated 40m chimney. The height of the chimneys associated with the two biomass CHP plants is dictated by the requirement to disperse emissions effectively to meet relevant Air Quality Standards and to minimize the potential impact on local air quality in the Llangefni area, especially where Area Quality Management Areas have been declared. **We contend that the chimney stack will have a deleterious visual impact on the vicinity.**

Ecopellets Ltd Energy from Nature

Biomass Green Energy Development, Frequently Asked Questions & Answers

Q. What will be the impact of the development on local air quality in the Llangefni area?

A. The Air Quality Assessment indicates that although there will be a small increase in background pollutant concentrations, the resultant impact on air quality, and hence the health of local residents, will be so small that it will be undetectable, even by those who know that they are sensitive to air pollutants. **This somewhat subjective comment would appear to be at odds with their Air Quality Assessment.**

Q. What is a Biomass Energy Plant and what does it do?

A. The project is to build a 15 tonnes / hour, 100,000 tonnes / year wood pelleting plant to supply a carbon neutral fuel for domestic, commercial, industrial and power station markets. The raw material would be sourced within Wales, Shropshire & Merseyside and the pellets would be mainly sold within the UK but some would be available for export. Burning wood is not carbon neutral and the applicant has already admitted after questioning from the local authority that wood could come from Scotland and Nova Scotia.

Q. Why this location, why not a more remote area?

A. Many sites were considered but the availability of the Eastman Kodac site with good logistical connections to the motorway and other major routes throughout the region was important. Also the Eastman Kodac site is not contaminated by historical activities, and replacement of some of the existing, buildings with new purpose-designed structures will improve significantly the visual amenity of the area. It is difficult to accept that an industrial site with 30m & 40m stacks will improve significantly the visual amenity of the area.

Q. Will the development increase traffic?

A. All raw material and product deliveries will be restricted to off-peak times to avoid adding to congestion on the main routes into and out of the area. Vehicle movements into and out of the Biomass Energy Plant are expected to be no more than about five per hour, which will not add significantly to the current numbers of trucks and HGVs travelling into and out of the industrial estate. We contend that this is a significant increase in HGV and deliveries off and on site may be at anti-social hours to avoid congestion.

Q. The biomass plants are described as combined heat & power facilities, how efficient are they & what opportunities are there for supplying heat to local premises?

A. The CHP plant will generate electricity with at least double the efficiency of conventional central power generation. If there were adjoining premises requiring hot water at 80°C and 2 bar steam we could have available up to 10 MW of thermal energy for sale. We are not aware that there are any such adjoining premises with this requirement and also wonder how much efficiency is lost through the cooling towers.

Q. If these wood pellets are burnt as fuel what difference would it make from burning fossil fuel?

A. It is important to recognise that the wood pellets will be manufactured from renewable feedstocks and can therefore be regarded as carbon neutral. The virgin timber feedstocks will also be sourced from sustainable supplies. Therefore, the carbon dioxide released by the combustion of the wood pellets will be absorbed over a period of a few years by the new trees that will be grown to replace those felled to supply the pellet plant. The burning of fossil fuels on the other hand requires millions of years to replace the carbon that is released as carbon dioxide into the atmosphere. Renewable does not mean carbon neutral. The developer is relying upon 'someone' to re-plant trees. There is no way for the council to know if anyone is doing this. If they did the CO₂ that was released immediately upon burning may take years, decades or even centuries to be absorbed by a new tree.

Q. Where will the wood come from and how will you ensure it comes from sustainable sources?

A. The quantity of raw material required by the wood pelleting plant is 160,000 tonnes / year. The raw material is mainly forest wood, supported by sawmill co-products such as white chips and sawdust. The wood will come in the form of small round wood at under 30cm diameter and be sourced from forest thinnings, which is a reoccurring and sustainable source of material. The wood will be de-barked and shredded on-site prior to delivery to the Biomass Energy Plant. Brash removal is extremely damaging to soils and tree re-growth. See: GFC bioenergy report: www.globalforestcoalition.org/wp-content/uploads/2010/10/briefing-paper-bioenergy_final_1.pdf. The Euroforest website illustrates what industrial forestry looks like, with industrial vehicles clear-cutting woodland and compressing and ruining soil fertility under its tracks. The VTT Energy presentation, 'From Forest Residue to Wood Chip Fuel' confirms that logging 'residue consists of waste logs and underground stands' (which the soil needs for continued stability and fertility). The slideshow states that 'possible disadvantages of logging residue harvest are organic matter is removed from nutrient circulation, quantity of humus covering the soil is removed, nutrients are removed from ecosystem, risk of acidification & risk of losses in growth'.

The wood pellet product is carbon neutral, and can be used in solid fuel power stations and in other forms of solid fuel applications. Even if we Ecopellets ignore LUC & ILUC and the fact that trees may well not be re-planted (and the carbon debt involved in sequestering what has been emitted into the atmosphere) how can wood pellets be carbon neutral, if Ecopellets just confine themselves to process? Their application shows how much energy is involved in converting timber to pellets. To this, they should then add transport.

Q. You propose to burn Tallow and Recovered Vegetable Oils. Will you be using Specified Risk Material? Will there be any odours?

A. Recovered Vegetable Oils will be combusted efficiently and cleanly under the terms and conditions of an Environmental Permit to be issued by the Environment Agency.

No Tallow will be used on the site that has been produced from Special Risk Material. There will be no odours emitted from the plant. Odour is an issue at Wakefield leading to complaints and plant shutdown.

Ecopellets sourcing statement

The fuels will be locally sourced biomass, including forest wood, recycled wood, rapeseed oils and other forms of vegetable oils. The biofuel power station will burn around 24,000 tonnes of vegetable oil and, possibly, tallow a year. EcoPellets speaks about burning tallow and used cooking sourced locally, yet in the planning documents they state that they intend to buy biofuels including "rape seed oil and other natural oils" available from Halifax and Merseyside". This wording would allow them to burn any type of vegetable oil, even palm oil, with the UK's first palm oil refinery as well as one of the main ports for palm oil imports being in Merseyside. In Italy and Germany, large numbers of biofuel power stations and CHP plants are in operation and virtually all of them are run on palm oil since this is the cheapest vegetable oil. It is thus very doubtful whether running at power station of the size proposed by EcoPellets without palm oil would be economically viable, even with subsidies.

The Benefits of Biomass Energy

Produce 250 million kWh units of clean, climate friendly, electricity each year We dispute that biomass is clean or climate friendly.

Save the need to import almost 9 million barrels of oil worth over £300 million We wonder how this figure has been arrived at?

Save the emission of over 250,000 tonnes of carbon dioxide (the main greenhouse gas) every year We dispute this figure and would ask what it includes and how it has been arrived at.

Avoid over 300,000 tonnes of landfill slag/ash The plant could well be creating landfill.

Prevent the emission of 45,000 tonnes of sulphur dioxide (the main gas responsible for acid rain) Again we would ask for proof of this figure.

10 Facts about Biomass Energy

No carbon footprint, renewable and clean. This is mathematically incorrect, to say nothing of chemistry and biology.

Biomass energy reduces our over-reliance on imported fossil fuels. It does not reduce our reliance on imported biomass and bioliquids.

Biomass energy is ours and will provide clean, local renewable energy for our children and their children. Biomass also belongs to Nova Scotia and all the other places the UK imports biomass and bioliquids from. It is alarming that Ecopellets believe we can replace fossil fuels for the next two generations with the biosphere. Even DECC see biomass taking a lesser role after 2020.

Proposed Methods of Transport

4.9.20 An analysis of alternative methods of transport for delivering biomass fuel to the proposed plant has been undertaken, whereby waterway and rail delivery options were assessed, as an alternative to road. See 4.9.22 and 4.9.23 which illustrates the poor location of the plant.

4.9.21 Freight transport is a significant cost and in general terms the 'double handling' of fuel would make the fuel source more expensive. If the alternative means of transport to road haulage are to be practical and economic it means that both the Biomass Energy Development and biomass fuel providers' site need to be directly connected to the rail or waterway system. It is not.

Waterways

4.9.22 There is no navigable watercourse either surrounding the Biomass Energy Development or within close proximity to the development. The port of Holyhead is a short distance from the proposed development, however this is a passenger terminal and deemed unsuitable for the delivery of large containers. Regardless, the biomass fuel would need to be transported to the site by road and therefore offer no significant environmental advantages as there would be no reduction in HGV road traffic local to the proposed development site.

Rail

4.9.23 The proposed development is adjacent to the disused Amlwch rail line. It was initially proposed to set aside a portion of land for an off load facility. A sizeable area would be required next to the siding for discharging machinery to occupy and operate upon. However, the Environment Agency has indicated that this proposed site is in a flood plain and any application to develop on these lands would have to be refused on these grounds.