

## Planning Application Consultation Response

This assessment of public health implications associated with the proposed development has been undertaken by Public Health Wales, in consultation with PHE CRCE-Wales.

### 1. Planning Application Details

Application Date	12 <sup>th</sup> January 2015 (to Vale of Glamorgan)
Date Received	26 <sup>th</sup> February 2015
Consultation Deadline	19 <sup>th</sup> March 2015
Applicant Name	Sunrise Renewables (Barry) Ltd,
Application Address	David Davies Road, Woodham Road, Barry
Grid Reference	312610 167683
Application Status	Outline
Proposal	Outline application for a wood fired renewable energy plant
Planning Application Number	2015/00031/OUT (RL)
Application Site Size	N/A
Local Authority	Vale of Glamorgan
Health Board	Cardiff & Vale
Date Response sent /copied to Health Board	16 <sup>th</sup> March 2015

### 2. Position Statement

Advanced thermal treatment technologies for waste management (including pyrolysis) are relatively new; information on human health impacts from emissions is limited. However, emissions from such technologies must comply with limits specified in the EU Industrial Emissions Directive (2010/75/EU) in the same way as municipal waste incinerators.

Therefore, Public Health Wales concurs that the conclusions outlined in Public Health England's (PHE) position statement on Municipal Waste Incinerators are also applicable to thermal treatment technologies i.e. that modern, well managed incinerators make only a small contribution to local concentrations of air pollutants. It is possible that such small additions could have an impact on health but such effects, if they exist, are likely to be very small and not detectable.

This is presented in the Health Protection Agency's (HPA) (whose functions were transferred to PHE on 1st April 2013) position statement from September 2009, which is available here: <https://www.gov.uk/government/publications/municipal-waste-incinerator-emissions-to-air-impact-on-health>

PHE will review its advice in light of new substantial research on the health effects of incinerators published in peer reviewed journals. To date, PHE is not aware of any evidence that requires a change its position statement.

### **3. Local Public Health Context**

The vicinity of the proposed development includes some mixed areas of deprivation including some of the most deprived (see Appendix 1b), The population density is greater than the Wales average.

Selected measures of population health in the locality of the proposal (see Appendix 1A) are in line with the rest of the Local Authority, Health Board and Wales. Chronic obstructive pulmonary disease (COPD) emergency admissions are however higher than in the Local Authority area, Health Board area and Wales.

The proximity of sensitive receptors has been mapped (Appendix 1c).

Subject to our comments below, we do not consider the proposal to have a significant adverse health impact locally; including upon identified sensitive receptors, with regard to the above measures of deprivation and health.

### **4. Public Health Implications**

The key issues considered in this case are process emissions to air and process noise. Construction phase impacts have also been considered

Based upon the information provided by the applicant and the mitigation measures proposed, there is limited potential for risk to public health from the proposed process itself.

However, we would highlight the issue of cumulative impacts i.e. proximity of processes with similar emissions. We understand that other biomass installations have been approved within the air quality study area. It is not clear that the submitted air quality assessment has considered the additional contributions of relevant pollutants from these already approved sources.

The LPA will also need to be sure the air quality assessment considers the location of any sensitive receptors already subject to planning approval but may not yet be constructed – including their relative elevations to the proposed stack.

The applicant's noise impact assessment and predictions are based on background noise measurements and locations identified in a previous application. The LPA needs to be satisfied that the measured backgrounds levels are representative and that locations are inclusive of both current sensitive receptors and new sensitive locations, introduced by any interim planning approvals

Whilst the applicant's assessments of impacts from the proposed process generally appear to have addressed the public health risks, we would still offer recommendations (Section 5) for the Local Planning Authority (LPA) when considering the planning application.

## 5. Recommendations

### Operation Phase Air Quality

- That the LPA requires that the air quality assessment (AQA) considers the additional contributions of relevant pollutants from sources already approved (but may not as yet be operational). The AQA also considers any sensitive receptor locations subject to planning approval but yet to be constructed including their relative elevations to the proposed stack.

Reason: to confirm that the additional process contributions (PC) will not lead to any process environmental concentrations (PECs) breaching any relevant Environmental Assessment Levels (EALs) or local air quality objectives.

- That the source material (i.e. wood chip) can be properly, quality controlled to ensure the absence of copper/chrome/arsenic (CCA) and creosote treated wood.

Reason: To ensure predicted emissions including chrome VI can be achieved in-line with the submitted air quality assessment

### Operational Noise

- The LPA needs to be satisfied that the measured backgrounds levels are representative and that locations are inclusive of current sensitive receptors and new sensitive locations introduced by any interim planning permissions.
- LPA agree noise management plans to include initial noise / acoustic insulation measures for the buildings and on site activities

Reason: To avoid adverse health effects and nuisance from exposure to noise.

### Construction Phase

- That noise, vibration and dust be considered and mitigated within a Construction Environment Management Plan (CEMP) to be agreed with the LPA

## 6.Signed

The Permit application and supporting data used to provide an assessment of environmental public health implications has been agreed by the following.

Signed:



Huw Brunt.

Consultant in Environmental Health Protection, Public Health Wales, Health Protection Division.

Date: 18<sup>th</sup> March 2015

## Appendix 1a Local Public Health Context

Output table for MSOA W02000251 which is in USOA W03000057, The Vale of Glamorgan Local Authority and Cardiff & Vale University Health Board

Indicator (see footnotes for data sources and time periods)	MSOA*			Local authority (LA)			Health board (HB)			Wales rate
	value (95% CI)	Lowest MSOA*	Highest MSOA*	Lowest LA	LA of Output Area	Highest LA	Lowest HB	HB of Output Area	Highest HB	
1. Population Density	15.6 n/a	0.1	116.7	0.3	3.8	24.3	0.3	9.9	9.9	1.4
2. Low birthweight	5.6 (3.6 to 7.5)	1.8	9.8	4.3	4.7	6.8	4.8	5.3	6.6	5.6
3. All cause mortality	521 (465 to 581)	363	1,072	479	560	715	521	592	685	607
4. Asthma emergency admissions	109 (78 to 148)	23	365	85	150	192	85	123	163	133
5. COPD emergency admissions	236 (194 to 283)	17	646	85	166	362	111	183	294	200
6. Respiratory disease emergency admissions	1,389 (1,276 to 1,510)	576	2,429	833	1,299	2,008	907	1,270	1,730	1,327
7. Self reported respiratory illness*	17 (15 to 19)	8	20	11	13	16	11	13	16	14
8. Fair/poor health*	27 (24 to 30)	14	34	16	19	29	18	20	26	21
9. Limiting Long Term Illness (LLTI)*	29 (26 to 32)	22	37	23	26	33	25	26	31	28

1. Persons per hectare, Census 2001 (ONS), 2010; 2. Proportion of all live births weighing <2500g (singleton births only), ADBE, 2007-11; 3. EASRs per 100,000 population, ADDE & MYE (ONS), 2006-10; 4-6. EASRs per 100,000 population, PEDW (NWIS) & MYE (ONS), 2006-10; 7-9. Percentage of adults (age standardised) who reported respiratory illness, fair/poor health & LLTI, WHS (WG), 2003/04-2009. \*USOA for WHS data (indicators 7, 8 & 9)

## Appendix 1 b

WIMD fifth of deprivation for LSOAs within the selected MSOA, W02000251, which is in The Vale of Glamorgan Local Authority and Cardiff & Vale University Health Board

LSOANAME (LSOACODE) (see footnotes for data source and time period)	Local and national fifth of deprivation (1 least deprived 5 most deprived)		
	Local authority	Health board	Overall
<b>10. WIMD</b>			
The Vale of Glamorgan 015A (W01001059)	3	2	1
The Vale of Glamorgan 015B (W01001060)	1	1	1
The Vale of Glamorgan 015C (W01001061)	5	4	4
The Vale of Glamorgan 015D (W01001066)	4	4	4
The Vale of Glamorgan 015E (W01001073)	5	5	5
-	-	-	-
-	-	-	-

10. Local and national fifth of deprivation, 1 (least deprived) 5 (most deprived), WIMD 2008 (WG), 2008.

Please note that the number of LSOAs within MSOAs range from 3 to 7 so the number of complete rows in the above table will vary depending on the MSOA selected.



**DEMOGRAPHY:** Persons ages 16+ for WHS data, singleton (i.e. not twins) births with a weight of < 2500g (numerator) and all singleton live births (denominator) for low birthweight indicator, all Wales residents for the three emergency admissions indicators, all cause mortality indicator and the population density indicator.

**STATISTICS:** European age standardised rate includes 95% confidence intervals, super output area range, LA range, HB range, age-standardised percentage, national and local fifths of deprivation

**NOTES:** **Indicators included in the interactive spreadsheet:**

**Population Density** - This is calculated as persons per hectare for each area.

**Low birthweight** - Proportion of singleton live births with a birth weight less than 2500g. It is a legal requirement to register a birth and so the ADBE provides a reliable and complete data source. ADBE data were geocoded to MSOA of residence using the mother's postcode of residence at time of birth. Errors may occur where postcodes straddle the local authority boundaries. 95% confidence intervals were calculated using the normal approximation to the binominal distribution (see p.143 of Kirkwood & Sterne 2003).

**All cause mortality** - European age-standardised rate per 100,000 with 95% confidence intervals (intervals calculated using a method proposed by Dobson et al (1991)).

**Emergency admissions** - All emergency admitting episodes with a primary diagnosis of the condition between 2006 and 2010 were counted in the analysis. This means that individual patients could be admitted multiple times and each of these admissions would be counted. Emergency admissions were extracted where the admission method was between 21 and 29. This includes emergency transfers. European age-standardised rate per 100,000 with 95% confidence intervals (intervals calculated using a method proposed by Dobson et al (1991)). ICD 10 codes used were as follows: Asthma, J45-J46; COPD, J40-J44 & J47; Respiratory disease, J00-J99.

**Self reported respiratory illness, Limiting Long Term Illness (LLTI), Fair/poor health** - Percentage of adults (age standardised) who reported currently having the condition. Results are standardised using 2007 mid-year population estimates for Wales, to adjust for the effect of age in comparisons between areas.

**WIMD** - Local fifths within each local authority and health board area were produced by grouping all Lower Super Output Areas (LSOAs) within each area into fifths. The national fifths, local authority fifths and health board fifths area therefore different and specific to the area. The value for the fifths ranges from 1 (least deprived) to 5 (most deprived). Further information on local fifths can be found in the publication "Measuring inequalities: trends in mortality and life expectancy" and the accompanying technical guide, all available on:

[www.publichealthwalesobservatory.wales.nhs.uk/inequalities](http://www.publichealthwalesobservatory.wales.nhs.uk/inequalities)

Further information on MSOAs can be found in the publication "Guide to middle super output areas" which has been produced for each local authority area and is available on the website as follows:

<http://www.wales.nhs.uk/sitesplus/922/page/49851>

**REFERENCE:** Dobson A.J. et al (1991) Confidence intervals for weighted sums of Poisson parameters. **Stat Med** 10(3):457-462.

Kirkwood B.R. & Sterne J.A.C (2003) *Essential Medical Statistics*. Blackwell Science: Oxford.)



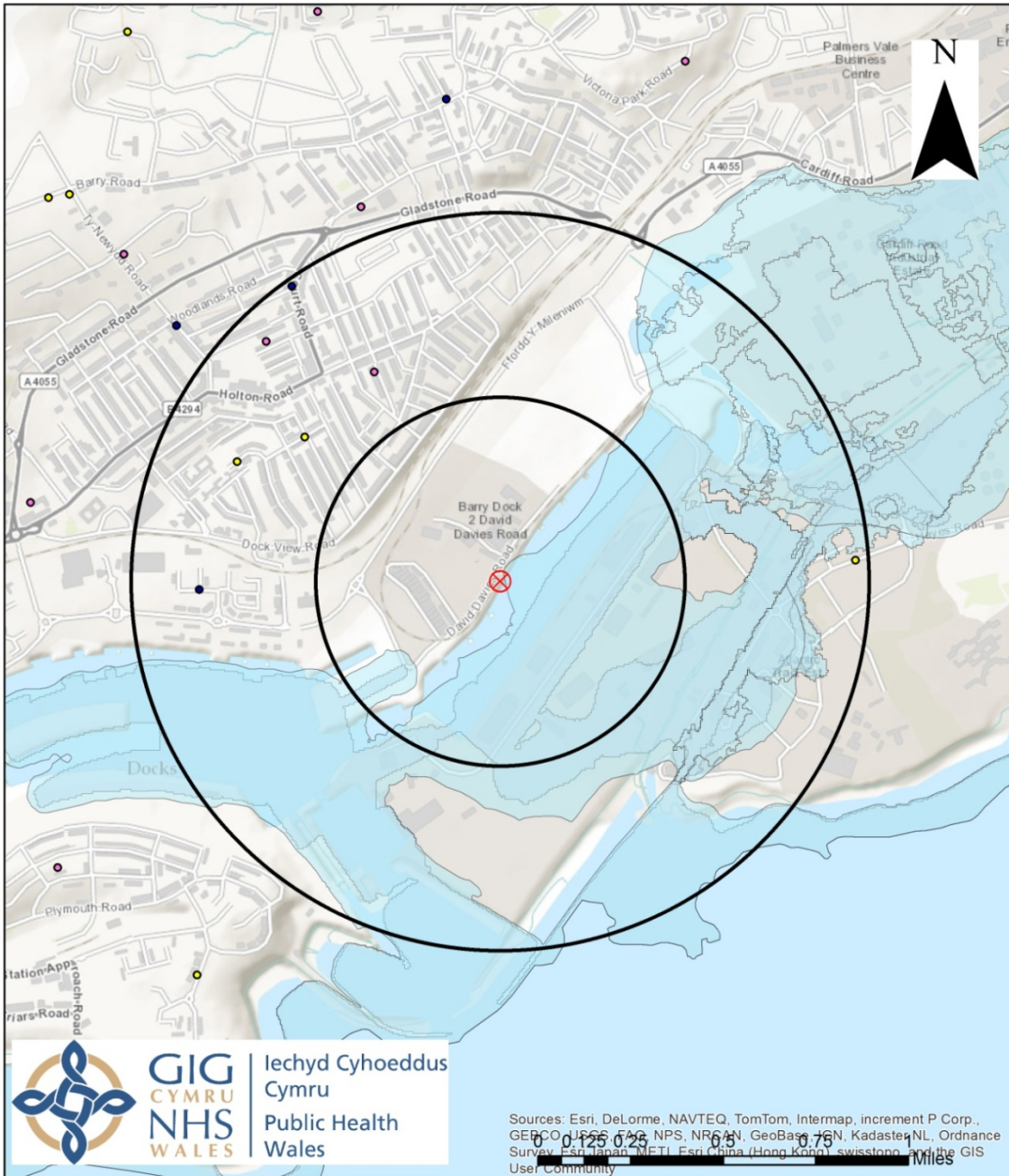
GIG  
CYMRU  
NHS  
WALES

Iechyd Cyhoeddus  
Cymru  
Public Health  
Wales

Appendix 1c

### Sunrise Renewables

Application Reference: 2015/00031/OUT (RL)



GIG  
CYMRU  
NHS  
WALES

Iechyd Cyhoeddus  
Cymru  
Public Health  
Wales

Sources: Esri, DeLorme, NAVTEQ, TomTom, Intermap, increment P Corp., GEBCO, JPSS, Fugro, NPS, NRCAN, GeoBasis, IGN, Kadaster, NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), Swisstopo, and the GIS User Community

#### Legend

- Sunrise Renewables
- Schools
- Care Homes
- Hospitals and Secondary Care Settings
- Pharmacies
- GPs
- National Flood Zone 2
- National Flood Zone 3
- AQMAS

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