

Interim Report of the Health Impact Assessment (HIA) of the Waste Incineration Development Planned in Trident Park, Splott, by Viridor Ltd



Further Information

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Summary of Suggested Mitigation Measures

Overall
<ul style="list-style-type: none"> The community in Splott, Viridor Ltd., Cardiff Council and the Environment Agency Wales (EAW) should actively pursue a Liaison Group along the lines of the successful Merthyr Community Liaison Group;
<ul style="list-style-type: none"> A Liaison Group, beyond its crucial role as an interface between key stakeholders in the community and Viridor’s facility, should also be committed to informing the wider community about the broader issues that surround waste management.
<ul style="list-style-type: none"> Viridor should consider funding a community Liaison Worker at least part-time to run a visitor centre (this individual could also manage the suggested Liaison Group).
Economic Issues
<ul style="list-style-type: none"> More information should be provided to the community on the skill levels required for posts at the planned facility (ideally via a Liaison Group);
<ul style="list-style-type: none"> This information should include details of any apprenticeships and training plus how community members can negotiate for these opportunities locally;
<ul style="list-style-type: none"> A solid commitment from Viridor to Combined Heat & Power (CHP) with the community would offer a tangible benefit to community members from the planned facility;
<ul style="list-style-type: none"> CHP with the community would help to address high levels of fuel poverty in Splott (and would be a significant boost to public health in the immediate area).

Continued / ...

Summary of Suggested Mitigation Measures (cont.)

Environmental Issues
<ul style="list-style-type: none"> The community, Viridor, Cardiff Council and the EAW need to engage and make information about the plant's performance accessible to the whole community, i.e. produced in plain English and possibly a few other languages;
<ul style="list-style-type: none"> The EAW needs to successfully establish with the community what the timing and nature of its monitoring efforts are that ensure that Viridor's facility operates within the guidelines laid down in the EAW's operating licence;
<ul style="list-style-type: none"> Protocols should be in place between Viridor, the emergency services and the community in Splott in case the nominated routes for HGV traffic going to and from the plant cannot bypass the smaller roads in the community;
<ul style="list-style-type: none"> Viridor and Cardiff Council should agree a commitment with the community in Splott in terms of the quality and safety standards of the roads that the company's HGVs intend to use regularly;
<ul style="list-style-type: none"> Viridor and Cardiff Council should engage with the communities in Splott on creative ways to mitigate the visual impact of the planned facility (ideally an issue for a Liaison Group);
<ul style="list-style-type: none"> More information on the original site selection process and the reasoning behind the potential acceptance of waste from other authorities should be provided to the community (via the proposed Liaison Group) as some felt excluded from any such discussions.

Executive Summary

When Viridor Ltd announced a second planned waste development for Trident Park in Splott in February, 2010 (ref: 10/0149/E), community members in the Splott area of Cardiff expressed concerns about the possible health impacts to Communities First staff members of the Splott and Tremorfa Local Partnership Group (S&TLPG).

The Cardiff Local Public Health Team (LPHT), Public Health Wales (PHW) and the Wales Health Impact Assessment Support Unit (WHIASU) were then asked by S&TCFP to investigate in more detail local attitudes into the potential health and wellbeing impacts of Viridor's development plans (see Appendix A for a description of WHIASU's work). This has involved producing a Health Impact Assessment (HIA) Report that will be made available to all stakeholders, community members and the relevant decision-makers (which includes Cardiff Council's Planning Committee and the Planning Inspectorate (Wales), the decision-making bodies on Viridor's two sets of development plans).

As its name suggests, an Interim HIA Report represents work on an HIA that is still underway. The results, analysis and conclusions presented here are therefore not final. However, there is a high level of confidence that the mitigation measures reported here and the interim conclusions will match up with the latest interview data that is still emerging from further qualitative research with the community which is not reported here.

Three main sources of data are described. Firstly, the results and analysis of a wide range of views expressed at a Rapid HIA workshop held on Tuesday 20th April, 2010, in the offices of the S&TLPG. There is also a desktop health profile of Splott ward as a whole and a desktop review of the academic literature covering the current state of scientific research into health and wellbeing impacts of waste incineration.

The first of these, a three-hour Stakeholder workshop brought together fifteen stakeholders in the local community.¹ The discussion and debate centred on the likely positive and negative health and wellbeing impacts of Viridor's proposed waste incineration development. Positive suggestions that might help boost the positive impacts and mitigate the negative ones were also discussed and put forward as a series of recommendations.

The purpose of the Rapid HIA workshop was thus to identify local community attitudes on:

- how Viridor's plans might impact, both positively and negatively, on the health and wellbeing of the local population, and in particular, on a range of vulnerable groups identified by stakeholders; and
- what further work might be required to maximise the positive impacts and minimise the negative impacts.

To summarise, the Rapid HIA Workshop involved three sessions:

1) The Potential Impact on Vulnerable Groups - participants identified who they felt are the most vulnerable groups within Splott's overall population. Collated into categories, the results of this were:

- All Local Residents;

¹ See Appendix B for a full list of attendees, Appendix C for the invitation letter and Appendix D for a copy of the agenda

- Children and Young People;
- People on Low Incomes;
- The Gypsy Traveller Community;
- People with Respiratory Diseases;
- Black Minority Ethnic (BME) Communities;
- People with Mental Ill Health;
- People with Learning Difficulties;
- The Elderly;
- The Disabled;
- People with Existing Ill Health;
- People with Limited Literacy;
- Transient Individuals and Groups.

Workshop participants were asked to keep these groups in mind for the screening and mitigation sessions that followed.

2) The Screening of Viridor's Plans - participants discussed Viridor's development plans in terms of their potentially negative and potentially positive impacts on the health and wellbeing of the local population. The themes that emerged were divided into potentially positive and potentially negative impacts:

a) Potentially Positive Impacts;

i) Economic;

- ii) Environmental;
- iii) Engaging the Community.

b) Potentially Negative Impacts;

- i) Economy;
- ii) Environmental;

3) Boosting Positive Impacts and Mitigating Negative Impacts - participants identified what would maximise the positive impacts and minimise the negative impacts that were identified in the previous session. The results were the wide range of recommendations which are provided at the front of this report.

Lastly, workshop participants gave feedback on the three sessions. The majority felt that the evening had been a useful exercise in terms of thinking about how Viridor's plans might affect the health and wellbeing of the population in Splott (see Appendix D for evaluation comments and Appendix E for a blank evaluation form).

The Way Forward

In submitting this Interim HIA Report to Cardiff Council's Planning Committee in time for its meeting on June 9th, 2010, Splott and Tremorfa Local Partnership Group (S&TLPG) staff are seeking to ensure that the views expressed at the Stakeholder Workshop are taken into account by the relevant decision-making body for Viridor's

second waste incinerator application submitted in February 2010. S&TCFP staff hope that by bringing in Public Health Wales (PHW) and the Wales Health Impact Assessment Support Unit (WHIASU) on this issue, there will at least be the recognition that the views expressed here, in combination with the health profile and the literature review, suggest that there are important, useful and valid extra layers of evidence for decision-makers which are not typically included in other forms of risk and impact assessments.

1.0 Interim HIA Report – Viridor’s Plans for Splott Ward

This interim Health Impact Assessment (HIA) Report offers some provisional results, analysis, conclusions and recommendations as well as background information about the types of data sources and methodologies used in the HIA process.

In terms of the structure of this report, Chapter 2 offers a health profile of the community in Splott indicating what is currently known about the health and wellbeing of the population living in the area. Chapter 3 is a literature review about the current state of academic knowledge about the health impacts of waste incineration. Chapter 4 then details the results of the Stakeholder Workshop along with discussion of the recommendations at the front of this report. Finally, Chapter 5 offers provisional conclusions at this interim stage.

In the pages that follow, qualitative interview data from a Stakeholder Workshop held on April 20th, 2010, is presented along with a health profile of the community in Splott (based on publicly available quantitative health statistics) and an academic literature review covering what is currently known about the nature of the health impacts associated with waste incineration.

The Final In-Depth HIA Report, which is due to be ready by mid-July, 2010, will be presented to the Planning Inspectorate in time for Viridor’s appeal over its first set of waste incineration plans for Trident Park, Splott (ref: 08/2616/E). The appeal is to be held on July 13th-16th, 2010. The Final Report will include further qualitative data from continued investigations into the attitudes of community members in Splott.

1.1 Outline of Events

Viridor’s 2010 documentation described the proposed site at Trident Park as:

“an industrial site located some 1.6 kilometres to the south-east of Cardiff City Centre immediately north of the Port of Cardiff with access being gained from Ocean Way via Glass Avenue ... The site occupies some 4.5 hectares of the Trident Park development area that amounts to 20.2 hectares in total. The site and its surroundings formed part of the East Moors Steelworks that closed in 1978. Following its reclamation the Nippon Electric Glass (UK) Limited developed a cathode ray tube components factory on the land, which ceased production in 2005.” (SLR/Viridor, 2010, 1)

In December 2008, the company applied to build and operate an Energy-from-Waste (EfW) incinerator there (ref: 08/2616/E). The idea is to recycle as much domestic waste as possible and create energy from incinerating the remainder. The facility can accept up to 350,000 tonnes per year of non-hazardous residual waste (SLR/Viridor, 2010).

In 2009, Viridor’s consultant, SLR, stated that it:

“[H]as undertaken a ‘prospective HIA’ to predict the potential consequences of the proposed Energy from Waste (EfW) facility at Trident Park, Cardiff using the best available tools and UK technical guidance.” (SLR/Viridor, 2009, 1)

This prospective HIA, however, was not made available in the collection of planning documents that Viridor placed online (http://www.viridor-consultation.co.uk/trident_park/). However, SLR does refer to an HIA best practice guidance document, *Developing Health Impact Assessment in Wales* (NAW, 2000, 5). This states that:

“The outcomes of health impact assessment are particularly important for people and communities and therefore, *their participation in the process is vital*”² (italics added).

Viridor and SLR did publish a Human Health Risk Assessment (HHRA) on their web site. This assessment, which looks at a narrow range of health indicators, was undertaken because the regulators, the Environment Agency Wales (EAW) and the Health Protection Agency (HPA), make it a statutory requirement of both Environmental Impact Assessment (EIA) and Integrated Pollution Prevention and Control (IPPC) waste operating licence applications. By contrast, HIAs are not a statutory part of the planning regulations in Wales. However, they are increasingly regarded by the Welsh Assembly Government (WAG) as a key element in best practice (cf. WAG, 2001, 2006, 2008a, 2008b).

SLR’s Human Health Risk Assessment (HHRA) produced in 2009 concentrated on air quality issues alone. It concluded that:

“[I]ndirect, long-term exposure to all persistent contaminants emitted from the proposed EfW facility and subsequently deposited to soil does not pose a health risk to downwind receptors.” (SLR/Viridor, 2009/10, 17)

The Non-Technical Summary (NTS) of the Environmental Statement’s (ES) therefore concluded that:

² Note that the NAW guidance document from 2000 was superseded in 2004 by further advice from Welsh Assembly Government (WAG) which included expanded advice on community participation (WHIASU, 2004)

“[T]he effects of the development are not considered to be significant. The impacts which could be considered to be contentious (landscape and visual, air quality/human health) have been fully mitigated (SLR/Viridor, 2010, 19)”

Viridor’s initial waste incineration application was nevertheless refused in July 2009 by Cardiff Council’s Planning Committee on sustainability grounds. The company launched an appeal which will be heard by the Planning Inspectorate starting on July 13th, 2010.

Then, in February 2010, Viridor launched a second, revised application for a waste incinerator at the same site in Trident Park (ref: 10/0149/E). This application showed that the several aspects relating to sustainability that Cardiff’s Planning Committee had previously been concerned about had been amended.

However, at that stage, health and wellbeing concerns about the planned facility within the community in Splott appeared not to have been fully addressed by the company with its HHRA (as part of the EIA process) and earlier attempts at community engagement.

Thus, when Viridor announced its revised application in February 2010, Splott and Tremorfa Local Partnership Group (S&TLPG) staff noted a number of comments from individuals in community groups. These suggested a feeling that there had been insufficient engagement by Viridor (and/or by the Local Planning Authority, Cardiff Council) with Splott residents on the question of the potential health risks from the proposed facility.

It was in this context that, in March 2010, S&TCFP asked the Cardiff Local Public Health Team (LPHT) and the Wales Health Impact Assessment Support Unit (WHIASU) to investigate public attitudes in Splott on what the potential health

impacts of the Viridor incinerator were felt likely to be. This is currently being done using a broadly focused Health Impact Assessment (HIA) that looks at a wide range of health and wellbeing indicators.

1.2 Policy Context

In 2009, the Welsh Assembly Government began a review of its waste strategy which is still continuing. It consulted widely and produced a consultation document *Towards Zero Waste* (WAG, 2009). Until this is concluded, it is not possible to state how incineration fits into WAG's long-term waste policies. However, a waste management position does exist for the South East Wales region with its Regional Waste Strategy (SEWRWG, 2003, 2008) although this too appears to be under review.

1.3 Health Impact Assessment (HIA)

A broadly focussed HIA is an effective way to capture and analyse public health concerns because of its high level of public engagement (Parry & Wright, 2003; Chadderton *et al*, 2008). Unlike HHRAs, the analysis in an HIA about the potential future impacts of policies, plans and developments in terms of health *and* wellbeing issues is based on a mixture of quantitative and qualitative data, i.e. both statistical information *and* local first-hand knowledge are compared.

HIA's methodology is rigorous and scientific in its approach to risk and impact assessment (Birley, 1999, 2003; Joffe & Mindell, 2002). Its broad scope, taking in a wide range of health and wellbeing indicators, offers a rounded picture of the likely

distribution of health effects within a population, i.e. HIA recognises that there will be greater health impacts of plans, policies and developments on vulnerable groups (see also Appendix A for a description of the HIA process).

2.0 Health Profile of Splott Ward

Freely available data acquired via Public Health Wales (PHW) suggests that Splott is a deprived area. Deprivation is known to be associated with greater ill health and reduced wellbeing. Because of this association, the expectation is that Splott residents, in general, face worse health outcomes than those residents in most other parts of Cardiff.

2.1 Economic Deprivation

Splott is the fourth most deprived ward in Cardiff. It falls into the top five most deprived wards in Wales. According to the 2001 Census there were 12,074 people living in the ward. 92% of these residents were white and the age structure was similar to the Cardiff-wide figure. Life expectancy, however, was predicted to be 74.7 years which is lower than the Cardiff and Welsh average predictions of 77.6 years (ONS, 2006).

Splott has three Lower Super Output areas (LSOA's) which have been identified as falling within the top 10% of deprivation within Wales. 37% of the Splott population live in these LSOA's (WIMD, 2005). Of these areas, 47% of the population have no qualifications while 32% are in full-time employment (Census, 2001).

Splott is home to significant numbers of vulnerable groups, including:

- 2,621 People in 2001 were recorded as having a limiting long-term illness which represents nearly 22% of the population;
- 728 lone parents were recorded in 2001;

- 1,247 children were noted as living in workless households;
- approximately 90-100 gypsy traveller are residents on the Rover Way site;
- approximately 110 asylum seekers are housed in council houses in the Splott ward;
- 2,050 people in 2001 were 60 years old or over (i.e. 17% of the population).

(sources: ONS, 2001; Cardiff Council)

In terms of education, the average proportion of people with no qualifications in Splott's Communities First areas is 47%. This figure is significantly higher than the Cardiff as a whole where the figure is 27%. Splott 8 has a lower proportion of people attaining up to a level 4 qualification compared to the Splott as a ward total (Census, 2001).

In relation to Economic Activity, the average proportion of people in full-time employment in Splott's Community First areas is 32% which is 6% lower than the 'Cardiff as a whole' figure (which is 38%). In addition, both Lower Super Output Areas have an above average proportion of permanently sick/disabled economically inactive residents compared to Cardiff as a whole (Census 2001).

Children's economic circumstances are essentially determined by the economic status of the adults in their household. The UK average is 16% (2008), while the Cardiff average is 26% (2007). The average proportion of children in workless households in Splott's Community First areas equates to 50% (2007, DWP benefit data).

2.2 Deprivation and Ill Health

Analysis of data from a number of sources show clear associations between deprivation and a number of negative health outcomes. People living in Splott have higher levels of ill-health and a greater exposure to the major risk factors affecting health (which prove to be statistically significantly). It is reasonable to expect that the associations demonstrated between deprivation and adverse health outcomes and increased exposure to risk factors affecting health at the 'all Wales' level apply in both Cardiff and Splott.

Thus, people living in Splott are twice as likely to be physically inactive, one and a half time more likely to smoke and more likely to suffer from obesity when compared to those living in the least deprived wards in Wales (NPHS, 2006).

3.0 Literature Review – Health Effects of Incineration

[Note that a more comprehensive version of this literature review will be completed for the Final Report – it is currently in a draft state only]

At first glance, the scientific literature on the health impacts of waste incineration appears to be broadly split into two camps. There are those who pursue a narrow definition of health in their methodology, thanks to a ‘tight focus’ (Kemmer, 2000), in which data is sought from a relatively short list of health indicators and typically from certain specialisms including epidemiology and toxicology. Then there are those who pursue a broader definition of health and so are said to have a ‘broad focus’. These studies scope much more widely for health impacts and they draw on a range of academic health studies covering health *and* wellbeing.

However, this picture of two competing camps also needs to distinguish between those doing research into the science that affects waste management issues and the engineers and practitioners who build and operate incinerators who occasionally publish results of their work. In this context, the questions of scientific uncertainty and how to regulate incinerators arise. On the one hand, engineers feel very confident with the certainties of waste incineration, an industrial process that is over a hundred years old. But, on the other hand, an increasing number of health studies suggest that the engineering tolerances at which waste incineration plants operate may need to be reviewed in the light of the scientific uncertainty that exists in terms of their health effects.

Thus, the scientific and technological practice of incineration can be said to be ‘contested’ (Elliott *et al*, 2010) and a straightforward picture of the health impacts of incineration does not necessarily emerge from reviewing the literature.

3.1. Health Impacts of Economic Activity

There is a large body of health research on the negative impacts of going from paid employment to unemployment in terms of health and wellbeing (e.g. Jin *et al.*, 1995; Thomas *et al.*, 2005; van Lenthe *et al.*, 2005). Such negative outcomes can include depression, chronic ill health and suicide.

The links between fuel poverty and ill health are better known given that one of the major links between social inequalities and health is adverse housing conditions (Hopton & Hunt, 1996; Healy & Clinch, 2004; Shortt & Rugkasa, 2007). By contrast, the health impacts of certain housing improvements have also been calculated and are generally positive (Thomson *et al.*, 2001).

In this context, few studies have been done on the health impacts of Combined Heat and Power (CHP) systems and how they can benefit districts neighbouring Energy from Waste (EfW) plants. One study however suggests that counter to the expected benefits of a reduction in fuel poverty, an increasing number of CHP systems in an area may have an adverse effect on air quality. However, the authors state that more research is needed (Wilkinson *et al.*, 2007).

3.2 Health Impacts of Environmental Inputs

In terms of the potential for heating via CHP, a number of studies have attempted to evaluate the benefits of heating from waste incineration (e.g. Eriksson *et al.*, 2007) although not in overt health terms.)

(cf. Thompson & Anthony, 2005)

For example, Rabl and Spadaro (2001) come from a tight focus perspective which only looks at the potential health impacts of air quality concluding that:

“health impacts of [municipal solid waste] incineration appear insignificant, if the emissions respect the EC [2000] regulations”

Yet Thompson and Anthony (2005) examine incineration from a broad focus perspective. Their consideration of what is known about the range of pollutants coming from incineration through reviewing other scientific studies leads them to conclude that scientific uncertainty about incineration is greater than that suggested by engineering practitioners. They conclude that:

“Increased adult lung cancer and all cancers have been found in the vicinity of incinerators: the peak seems to occur at least 14 years after incinerator start-up. There have been no direct studies of the incidence of cardiac illnesses around incinerators, but as incinerators are a major source of fine particulates, and ischaemic heart disease is a relatively common cause of death, substantial excess cardiac mortality and morbidity would be predicted. The foetus and infant are particularly susceptible to damage from toxins and carcinogens, and there are indications that some effects may be passed to the next generation. Increased birth defects and an increased incidence of childhood cancers have been demonstrated around incinerators.” (Ibid., 115)

Breaking this down, according to Thompson and Anthony (2005), incinerators produce “huge” quantities of fine and ultrafine particulates which are less than PM2.5

and less than PM1 in width, respectively. The current Environment Agency regulations look for PM10s coming from incinerator stacks. The WHO (2005) points out that particles less than PM2.5 are “more dangerous because they penetrate more deeply into the lung and may reach the alveolar region.

Thompson and Anthony (2005) claim that only 5–30% of the PM2.5s will be removed by the modern filters in the stack and virtually none of the PM1s. The majority of particles emitted by incinerators are the most dangerous ultrafine particulates which filters in the stack are the least effective at removing. Thompson and Anthony (2005) go on to suggest that the smallest particles, chiefly those of 0.2–0.3 µm, will have a considerable health impact which is supported by long-standing research into the health impacts of particulate air pollution (Dockery *et al*, 1993; Pope *et al*, 2002; COMEAP, 2009).

Such contrasting research shows the contested nature of the science of incineration. Thus, while some researchers report, for example, that long-term exposure to PM results in a substantial reduction in life expectancy (Pope *et al*, 2002; WHO, 2005), other studies refute this in terms of incineration’s contribution.

3.3 Wellbeing Impacts

[Note, an individuals’ identity and sense of place can impact upon their mental wellbeing]

(cf. Lima, 2004)

4.0 Stakeholder Workshop

The purpose of the Stakeholder Workshop was to identify:

- how stakeholders felt that Viridor's planned incinerator might impact, both positively and negatively, on the health and wellbeing of the population in Splott, in particular, vulnerable groups; and
- what mitigation would help to maximise the positive impacts and minimise the negative impacts that were identified.

4.1 Methodology

Invitations were sent out to a range of stakeholders from the Splott area including Viridor Ltd and Cardiff Council (see Appendix C for the invitation letter). Acceptances came from residents as well as representatives from local residents' associations, a local councillor, a teacher, a local businessman, a member of the Environment Agency Wales and a member of Friends of the Earth. A complete list of attendees at the Stakeholder Workshop is given in Appendix B. It was with regret, however, that given the range of questions asked about the planned Trident Park facility, representatives from Viridor and Cardiff Council chose not to attend.

The Invitation letter, shown in Appendix C, encouraged participants to read more about Viridor's plans via hotlinks to both a local press article and Viridor's HHRA report and to contribute their views on the basis of what they knew of the project.

4.2 Workshop in Outline

As an introduction to the evening, Rosalind Greenup, the Co-ordinator of the Splott and Tremorfa Local Partnership Group (S&TLPG) welcomed the stakeholders and outlined the purpose of the workshop. This was followed by a presentation from Nick Hacking from the Wales Health Impact Assessment Support Unit (WHIASU) who explained the processes involved in HIA in the context of the planning process. There was also time devoted to the health service's understanding of how environmental factors affect health, the 'determinants of health' model (Dahlgren & Whitehead, 1991, 1993). At this point, attendees had the opportunity to clarify aspects of the planning process, the techniques involved in HIA and the nature of the workshop itself. The full agenda of the evening is provided in Appendix D.

The workshop was arranged around three sessions. Attendees were asked to get into two groups each with a facilitator (Nick Hacking or Eryl Powell, a Principal Health Promotion Specialist from the Cardiff LPHT). The groups were also assisted by S&TCFP staff - Rosalind Greenup, Nia Adamson, Samina Khan and Ena Douglas - who scribed various spoken comments in the discussions as well as helping to keep them focussed.

The first session identified who in the community stakeholders felt are the vulnerable groups within the overall population. The second workshop session focussed on Viridor's planned incinerator in terms of negative and positive impacts on the health and wellbeing of the Splott population. In the third workshop session, attendees were asked to identify what further mitigation work would be required to maximise the positive impacts and minimise the negative impacts.

As each workshop session progressed, participants recorded their suggestions on 'Post-It' notes. These were grouped thematically on poster-sized pages at the front of the workshop by the WHIASU facilitator, Nick Hacking.

A summary of the discussions for workshop sessions one and two are provided in sections 4.3 and 4.4, and the suggested mitigation of impacts are provided in section 4.5. The stakeholders who attended the workshop are hopeful that this feedback will be considered by Cardiff Council's Planning Committee and the Planning Inspectorate.

4.3 Workshop Session 1 – Impact on Vulnerable Groups

The aim of workshop session 1 was to identify the vulnerable population groups in Splott. This exercise used photocopies of Appendix 2 from *Improving Health and Reducing Inequalities: a practical guide to health impact assessment* (WAG, 2004) which is a screening checklist for potential vulnerable groups.

The health of vulnerable groups tends to be impacted much more than the rest of the population by negative 'health pathways', the cause-and-effect routes by which environmental stressors lead to clinical outcomes (Popay *et al*, 1998). Other risk and impact assessment techniques such as Human Health Risk Assessment (HHRA) do not necessarily identify vulnerable groups and do not use the WHO's broad definition of health when scoping for potential impacts.

As the workshop participants began to identify a range of population groups, these were collated at the front of the room under the following categories:

- All Local Residents;

- Children and Young People;
- People on Low Incomes;
- The Gypsy Traveller Community;
- People with Respiratory Diseases;
- Black Minority Ethnic (BME) Communities;
- People with Mental Ill Health;
- People with Learning Difficulties;
- The Elderly;
- The Disabled;
- People with Existing Ill Health;
- People with Limited Literacy;
- Transient Individuals and Groups.

At the end of this first session, having identified a range of potentially vulnerable groups it was pointed out that participants should have these groups in mind as they begin workshop session 2.

4.4 Workshop Session 2 – Screening of Viridor’s Development Plans

The aim of the second workshop session was to discuss Viridor’s proposed waste incineration development plans and to consider the likely impact upon the health and wellbeing of the population in Splott, both positively and negatively.

Results were again collated thematically. This section describes the discussion in detail and is followed by a summary of the positive and negative impacts identified.

4.4.1 Economic Impacts

The first theme to emerge was economic activity. There was a strong sense on both tables that any jobs created in this relatively deprived ward would be a good thing (see deprivation data in Chapter 2).

It was not clear to the stakeholders the precise numbers that Viridor expects to employ in the construction phase and in the operational phase although the ES does refer to around 250 and 50 respectively (SLR/Viridor, 2010). The hope expressed by one stakeholder was that some of the money earned by these new employees would be spent with businesses in the local area.

On the negative side, there was concern expressed about the skills required for the jobs in the operational phase. One stakeholder pointed out that these sorts of posts tend to be highly skilled and it may be difficult for Splott residents to train for them and so have access to this new labour market.

One stakeholder said that they felt unsure of Viridor's specific plans for Combined Heat and Power (CHP), but that it might be a good way to attract other businesses to the immediate area around the planned site in Trident Park. Others talked about how CHP could be a major economic benefit to the area in terms of possibly reducing energy bills for existing companies as well as having the potential to lift a certain number of home owners out of fuel poverty, something that all the stakeholders who spoke about economic activity felt was a major issue in the Splott area.

Importantly, amongst concerns expressed during the evening about what the community stood to gain from the Viridor application, a potential reduction in fuel poverty was regarded as one of the strongest benefits that stakeholders hoped was

still on offer. Both workshop facilitators pointed out at this point that there are links between fuel poverty and ill health in the research literature (see Chapter 3).

On the negative side of the CHP issue, fears were expressed by some stakeholders about whether or not Cardiff Council was likely to have managed to secure a Section 106 deal with Viridor in the current recessionary climate. A Section 106 agreement between a developer and the local planning authority (LPA) would help to fund the high investment costs for CHP. However, it was pointed out by one stakeholder that recessions are times when developers are more likely to have the upper hand in Section 106 negotiations.

Another hope expressed by several stakeholders was that Viridor's arrival might involve the transfer of some Section 106 Funding to community organisations given their links to vulnerable groups. One of the S&TCFP staff suggested that another tangible benefit to the community would be the sponsoring of community groups. Yet another stakeholder wondered if local schools, for example, might see a similar benefit from either Section 106 money or from some kind of corporate sponsorship. However, given the previous discussions about CHP, not everyone in the workshop was convinced these were likely propositions.

Fears were also expressed by several stakeholders that, whilst increased jobs and more money being spent in the local economy was to be welcomed, the arrival of a waste incinerator in Splott might harm the area in the long term. It was said that a worst-case economic scenario could occur if the construction jobs come from agencies outside Cardiff, if the operational jobs are overly skilled for Splott residents, if little money enters the local economy and if this waste development attracts other similar developments, then Splott might see its relative socio-economic disadvantage

reinforced and local residents might find it harder to break free of the cycle of their relative poverty.

It should be noted that with all of these economic possibilities under discussion, many of them very positive in tone, there were numerous questions that simply could not be answered without stakeholders from either Viridor or Cardiff Council's Planning Department.

<u>Health Impact Summary: Economic Activity</u>
Potential Positives Identified
<ul style="list-style-type: none"> • The Possibility of More Jobs; • Income Generation for Area from Employees; • Potential to Encourage Businesses into Area with Low Cost/Free Energy; • Potential Lower Fuel Costs for Existing Local Businesses & Homes; • Potential Section 106 Funding, e.g. for Local School & Community Groups.
Potential Negatives Identified
<ul style="list-style-type: none"> • Low Wage Jobs Only for Splott Residents; • Little Real Prospect to Make Energy for the Community from Combined Heat and Power (CHP); • Accelerates Disadvantages and Reinforces the Poverty Cycle.

4.4.2 Environmental Impacts

Alongside the economy, the greatest amount of time was spent in discussion about the environment. It was recognised by stakeholders from the preceding talk that evening about the determinants of health model (Dahlgren & Whitehead, 1991, 1993) that a long list of environmental factors can impact upon the health of individuals and groups especially vulnerable groups. They also saw how changing the perception of the area's environment was important in terms of the way individuals' identity and sense of place can impact upon their mental wellbeing.

One stakeholder was quick to point out that incineration is a better solution to waste management problems than continuing to send it to landfills. It was said that by making some of its own energy through CHP, the plant would reduce the amount of fossil fuels being used. This was linked to the earlier discussion where potential benefits were sought from Viridor linking up with local schools and community groups. While certain stakeholders said they hope for economic benefits from this, there was also the sense that education and awareness-raising about the issues of waste management was an important linked component.

Having seen the artists' impression of the Viridor plant on the cover of the ES, one stakeholder made the point that the visual impact would be striking and not out of place given Cardiff Bay's more recent developments.

On the negative side, there were concerns expressed about environmental pollution that might affect the health of the population in Splott. Air pollution was mentioned by several stakeholders, although there were uncertainties about how hazardous this health impact could be for different groups. What was recognised with more certainty by one stakeholder was that air pollution would have a long-term cumulative impact on the population in Splott. One of the facilitators, Nick Hacking

from WHIASU, pointed out at this point that Environmental Impact Assessment (EIA) does not measure cumulative impacts.

Another stakeholder said that they were concerned that the incineration plant would have a potentially greater health impact for those located nearest to the Trident Park site (but depending on wind direction). This same individual also questioned the large scale of the facility – it requires ‘stoking’ all year round to be economically viable - adding that it would have been more equitable to simply burn Cardiff’s waste.

Another stakeholder said they were concerned that air pollution emissions figures submitted to the Environment Agency Wales from incinerators were currently based on average figures rather than continuously monitored real-time data. This, they felt, might mean that any short-term rises in the output of the plant’s emissions beyond agreed limits with the EAW would be missed.

Others saw concerns with environmental nuisances like dust, smells and noise. The likely impact here of HGV road traffic was discussed at length including the potential for greater exposure to air pollution from congestion created by HGVs to physical injuries from traffic accidents, especially for children.

Several stakeholders expressed their fears that Viridor’s facility would likely add to a picture of already an overly-industrialised area. This was linked to the previous discussion about concerns for the cumulative effect of adding another source of pollution to Splott ward, however, it went further in terms of the perceptions that outsiders have of Splott. There was therefore a recognition that more waste industry in the area will likely make these potentially negative perceptions of Splott harder to shift in the future. Two stakeholders therefore said that they felt that the

environmental concerns highlighted in the workshop had the potential to negatively affect future investments in the community which would affect all groups.

Another environmental concern from one of the stakeholders was whether or not the facility's construction and operation would impact upon on the structures of people's houses. Lacking any precise input on this question from either Viridor or Cardiff Council, there was nevertheless agreement amongst the whole workshop that house prices would likely be negatively affected and being unable to sell could add to a perception of being in a poverty trap.

Concern was also expressed by stakeholders on one of the tables about the impact that negative perceptions in the community over air quality and environmental nuisance might have. In terms of physical activity rates, the suggestion was that outdoor activities could drop for all ages. The point was made that if the community generally felt the facility was hazardous, whether it was or not, they might respond in this way. As the stakeholders on the same table pointed out, this health outcome would likely conflict with Cardiff's agreed *Healthy City* status recently conferred on it by the World Health Organisation (WHO). There was also the suggestion from several stakeholders on both tables that potentially any negative health outcomes, including the lowering of physical activity rates, would likely conflict with a range of other Council-led health initiatives.

On this point, one stakeholder made the point that the operation of such a facility would conflict with the stated desire of the Council to boost recycling rates. Another felt that, with the facility, there will be a potential conflict of interest over what is taught to young people in Cardiff on the National Curriculum about waste and recycling and the Council's practice.

Health Impact Summary: The Environment

Potential Positives Identified

- It is Better than Landfill;
- Has the Prospect to Make Energy;
- Reduces Fossil Fuels Being Burnt;
- Has Potential for Partnerships, e.g. with Schools & Community Groups;
- Visual Impact Will Be Positive.

Potential Negatives Identified

- Air Pollution (including Dust);
- A Cumulative Air Pollution Effect Over Many Years for the Community;
- A Potentially Greater Health Impact for Those Nearer to the Site Location Depending on Wind Direction;
- The Large Scale – the Facility Has to be ‘Stoked’ All Year to be Worthwhile;
- Emissions Are Based on Average Rather Than Real Rates;
- There Could be Continuously Bad Smells;
- The Plant and Associated Road Traffic Will Generate Noise Pollution;
- Safety Concerns About the Extra Road Traffic in Terms of Congestion, Road Quality and the Potential for Physical Injuries.
- The Facility Adds to an Already Overly-Industrialised Picture in the Area;
- It Will Make Perceptions/Labels of the Community Harder to Shift;
- It Negatively Affects Future Investment in the Community;
- It Will Impact on House Structures/House Prices;

<u>Health Impact Summary: The Environment</u>
Potential Negatives Identified (cont.)
<ul style="list-style-type: none"> • Negative Perceptions of Air Quality and Environmental Nuisance May Mean Outdoor Activities Drop for All Ages; • This Would Conflict With Cardiff's <i>Healthy City</i> Status recently conferred by the World Health Organisation (WHO) and Other Council Initiatives' • The Facility's Operation Would Conflict With What is Being Taught About Waste and Recycling to Young People in Cardiff on the National Curriculum.

In the next session, suggestions for measures to mitigate the negative impacts identified here are made. These were first seen at the top of this Interim Report.

4.5 Workshop Session 3 – Mitigation of Impacts

The final workshop session re-examined the potential negatives which were identified in the previous session. The aim here was to make the most constructive and yet realistic suggestions in terms of mitigating these potentially negative health impacts.

Overall, the workshop participants recognised that there were a number of suggested negatives on the environmental front. However, many of these were based on perceptions and a lack of solid information about incineration in general and how this particular plant will operate. Thus, one very positive suggestion for mitigation cropped up again and again throughout the workshop. This was to boost opportunities for engagement between the community in Splott, Viridor, Cardiff

Council and the Environment Agency Wales (EAW). It was felt by several stakeholders that by working together and asking the community for its knowledge, some myths about incineration could be overcome whilst at the same time many more creative mitigating measures could be found for the genuine health impacts that community members remained concerned about. The discussion then centred on the Merthyr Community Liaison Group which was described as a successful example of community engagement with local industry. Several stakeholders nevertheless cautioned that a real commitment rather than a notional one to engagement through any Liaison Group was needed from all potential partners.

An interesting mitigation suggestion emerged from one of the stakeholders at this point: why not run a visitor centre? Others liked this idea and suggested that it would be a useful way to keep the issue of waste management in the public eye. There was also a sense that this might help the company to integrate better into the community and allow the community to access more information about incineration. The discussion picked this idea up again later on and a further suggestion of having a full- or part-time community liaison worker was put forward. If this person was recruited from the community, they could help to manage any Liaison Group meetings and ensure any outreach commitments are met via a visitor centre.

Mitigation Summary: Overall

- The community in Splott, Viridor Ltd., Cardiff Council and the Environment Agency Wales (EAW) should actively pursue a Liaison Group along the lines of the successful Merthyr Community Liaison Group;
- A Liaison Group, beyond its crucial role as an interface between key stakeholders in the community and Viridor’s facility, should also be committed to informing the wider community about the broader issues that surround waste management.
- Viridor should consider funding a community Liaison Worker at least part-time to run a visitor centre (this individual could also help to manage the suggested Liaison Group).

Economic issues were felt to be very important throughout the workshop and the group returned to the question of ‘who benefits?’ several times. There had been a sense from some stakeholders during the evening that another potentially polluting industry locating in the area was simply not fair. To mitigate this, it was felt that the community needed to see some benefits come from the planned incinerator. One stakeholder suggested that, in terms of the skill levels required for the construction and operational posts, more information needed be provided to the community (ideally, it was said, this could via a Liaison Group). The same stakeholder added that such information should include details of any apprenticeships and training as well as how community members can negotiate for these opportunities locally. As the ‘economic’ negatives in the previous section revealed, there was genuine concern that Splott residents might only be offered very low wage thus accelerating the relative disadvantage of the area.

Another way to mitigate the possibility that the community does not benefit directly in terms of jobs, would be a solid commitment from Viridor to Combined Heat

& Power (CHP). The community would gain an indirect yet very tangible benefit if CHP was used to help attract businesses to the Trident Park area and to address the high levels of fuel poverty in certain residential parts of Splott (which, as discussed in the previous sections, would be a significant boost to public health in the immediate area).

Mitigation Summary: Economic Issues

- More information should be provided to the community on the skill levels required for posts at the planned facility (ideally via a Liaison Group);
- This information should include details of any apprenticeships and training plus how community members can negotiate for these opportunities locally;
- A solid commitment from Viridor to Combined Heat & Power (CHP) with the community would offer a tangible benefit to community members from the planned facility;
- CHP with the community would help to address high levels of fuel poverty in Splott (and would be a significant boost to public health in the immediate area).

In terms of some of the ‘Environmental’ negatives of the previous section, air pollution was high on the list and was discussed in detail at several stages. The fears expressed in the scoping session included a belief that the air pollution monitoring of the site by the Environment Agency Wales (EAW) would be inadequate and that there would be a cumulative effect over many years for health of the local community in terms of air pollution.

To mitigate this, it was suggested by several stakeholders that the community, Viridor, Cardiff Council and the EAW needed to engage and to make information about the plant’s performance accessible to the whole community, i.e. produced in a

number of languages. According to one stakeholder, the EAW needs to successfully establish with the community what the timing and nature of its monitoring efforts are that ensure that Viridor's facility will operate within the guidelines laid down in the EAW's operating licence. It was said that the EAW's collection of emissions' data is based on average rather than real-time figures. For all these reasons, it was again recognised by the stakeholder group that a Liaison Group would be an ideal forum for such exchanges and long-term trust building.

In the previous session, several stakeholders highlighted their concerns that although HGV lorry traffic was unlikely to pass through the centre of the community, the plant and its associated road traffic will still generate noise pollution. In terms of traffic, there were also safety concerns in terms of air pollution and aggravation from congestion, the likelihood that road quality will be badly affected and the potential for physical injuries from any road traffic accidents (RTAs).

To combat these concerns, several stakeholders put forward suggested ideas in mitigation. This included putting together protocols between Viridor, the emergency services and the community in Splott in case the nominated routes for HGV traffic going to and from the plant cannot bypass the smaller roads in the community. It was also suggested that Viridor and Cardiff Council should agree a commitment with the community in Splott in terms of the quality and safety standards of the roads that the company's HGVs do intend to use regularly. The community stakeholders took this issue very seriously and felt that they would be more than happy to bring information about local traffic flows to Liaison Group meetings in order to help agree such protocols and commitments.

Lastly in terms of environmental mitigation, several questions were about the upstream decisions made by Viridor on alternative sites, alternative technologies and

why it is the scale that it is. Some stakeholders wanted to know why the site was selected and why waste might be accepted from several local authorities. Such question marks so late in the planning cycle suggest that Viridor’s earlier engagement activities had not necessarily reached a broader audience in Splott. Because of this, mitigation was suggested whereby more information on the original site selection process and the reasoning behind the potential acceptance of waste from other authorities needs to be provided to the community (again the proposed Liaison Group could have a key role in this).

<u>Mitigation Summary: Environmental Health Issues</u>
<ul style="list-style-type: none"> • The community, Viridor, Cardiff Council and the EAW need to engage and make information about the plant’s performance accessible to the whole community, i.e. produced in a number of languages;
<ul style="list-style-type: none"> • The EAW needs to successfully establish with the community what the timing and nature of its monitoring efforts are that ensure that Viridor’s facility operates within the guidelines laid down in the EAW’s operating licence;
<ul style="list-style-type: none"> • Protocols should be in place between Viridor, the emergency services and the community in Splott in case the nominated routes for HGV traffic going to and from the plant cannot bypass the smaller roads in the community;
<ul style="list-style-type: none"> • Viridor and Cardiff Council should agree a commitment with the community in Splott in terms of the quality and safety standards of the roads that the company’s HGVs intend to use regularly;
<ul style="list-style-type: none"> • Viridor and Cardiff Council should engage with the communities in Splott on creative ways to mitigate the visual impact of the planned facility (ideally an issue for a Liaison Group);
<ul style="list-style-type: none"> • More information on the original site selection process and the reasoning behind the potential acceptance of waste from other authorities should be provided to the community (via the proposed Liaison Group) as some felt excluded from any such discussions.

4.6 Workshop Conclusion

Ultimately, the stakeholder workshop was felt to be a successful forum by members of the group (see Appendix E for evaluation comments). It involved lively discussions around incineration and health and wellbeing impacts. Most importantly, the workshop highlighted recommendations which the community and its stakeholders would like Viridor, Cardiff Council and the Environment Agency Wales (EAW) to consider now, in terms of planning approval, and also in the future should approval be given.

In their evaluation of the workshop, the stakeholders commented on the “Balanced view of proposal” that they got, how it was “Very interactive & inclusive” and how “people were surprised by how much they had to input”. One stakeholder felt that “a longer session would be beneficial”, while another wanted to know if the HIA Report could be ready in time to assist decision-makers.

Ultimately, the HIA process must attempt to have some decision influence. One of the stakeholders wrote that what they felt was most important was:

“Ensuring this community commitment influences the process and that community input is recognised by Cardiff County Council.”

5.0 The Way Forward

It is hoped that Cardiff Council's Planning Committee will consider this material in its deliberations over Viridor's second waste incineration application. Firstly, this report included a health profile of the Splott community. This suggested that poverty and ill health are closely linked in the area. With a relatively large number of vulnerable groups compared to certain other parts the city of Cardiff, these vulnerable individuals and groups can be expected to be more adversely affected by certain health impacts than others because of their particular socio-economic status. Secondly, a literature review linked to current knowledge about the nature of adverse health impacts from environmental inputs suggests that the science of incineration is deeply contested. Whilst health studies have become progressively more broadly focussed, some are also now challenging the scientific uncertainties in the incineration process. Lastly, the results of a stakeholder workshop proved very useful in identifying how Viridor's plans might impact on the health and wellbeing of people in Splott, both positively and negatively. The workshop also identified what further mitigation might be required to maximise the positive and mitigate negative health impacts. The workshop also identified how such improved communication might occur - via meaningful engagement between all interested parties through a Community Liaison Group.

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Appendix A – Health Impact Assessment (HIA) & the Wales Health Impact Assessment Support Unit (WHIASU)

Health Impact Assessment (HIA)

HIA is a process which supports organisations to assess the potential consequences of their decisions on people's health and wellbeing. The Welsh Assembly Government (WAG) is committed to developing its use as a key part of its strategy to improve health and reduce inequalities.

HIA provides a systematic yet flexible and practical framework that can be used to consider the wider effects of plans, policies and developments and how these effects, in turn, may affect people's health.

HIA works best when it involves people and organisations who can contribute different kinds of relevant knowledge and insight. The information is then used to build in measures to maximise opportunities for health and to minimise any risks. It also provides a way of addressing the inequalities in health that continue to persist in Wales.

Wales Health Impact Assessment Support Unit (WHIASU)

WHIASU is based in the Cardiff Institute of Society, Health and Ethics (CISHE) which is part of Cardiff University's School of Social Sciences. It is funded by WAG, through Public Health Wales (PHW) and is resourced to cover both North and South Wales.

The key roles of WHIASU are:

- to support the development and effective use of the health impact assessment approach in Wales through building partnerships and collaborations with key statutory, voluntary, community and private organisations in Wales.
- to provide direct information and advice to those who are in the process of conducting health impact assessments.

- To contribute to the provision of new research, and provide access to existing evidence, that will inform and improve judgements about the potential impacts of policies, programmes and projects.

For more information with regard to HIA or WHIASU please contact:

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WHIASU Website: www.whiasu.wales.nhs.uk

Appendix B – List of Workshop Attendees

Name	Organisation
Nia Adamson	Splott and Tremorfa Local Partnership Group (S&TLPG)
Norman Allen	Environment Agency Wales
Chris Brown	Cardiff Friends of the Earth
Chloe Chadderton	Observer / Wales Health Impact Assessment Support Unit (WHIASU)
Liz Court	Local Resident
Gavin Cox	Local Councillor
Nic Daniels	Local Resident
Debbie Gray	Local Resident & Chair, South Splott Residents' Association
Rosalind Greenup	Splott and Tremorfa Local Partnership Group (S&TLPG)
Nick Hacking	Facilitator / Wales Health Impact Assessment Support Unit (WHIASU)
Samina Khan	Splott and Tremorfa Local Partnership Group (S&TLPG)
James Oxenham	Local Resident
Leoni Philp	Local Resident
Eryl Powell	Co-Facilitator, Cardiff Local Public Health Team (Public Health Wales)
Chris Selby	CELSA Manufacturing (UK) Ltd
Mike Shepherd	Observer / Cardiff Institute of Society, Health and Ethics, Cardiff University
Tamsin Stirling	Local Resident / Chair, Splott & Tremorfa Communities First
Claire Townsend	Willows High School

Appendix C – Invitation Letter Sent to Potential Attendees



Communities First

69b Splott Road

Cardiff, CF24 2BW

Dear xxxx

Re: Your Views on the Potential Health Impacts of Viridor's Incinerator in Splott

You are a key stakeholder in the community in Splott. Communities First would like to invite you to an interactive workshop in the evening. You will meet other key stakeholders and weigh up the likely health impacts, both positive and negative, of Viridor Ltd's proposed £150m incinerator on the community.

In 2009, Viridor submitted plans for an energy-from-waste (EfW) incinerator to burn waste from five South Wales local authorities - Cardiff, the Vale of Glamorgan, Monmouth, Newport and Caerphilly - in what is known as 'Prosiect Gwyrdd'.

However, last July, concerns about the sustainability of transporting toxic 'fly ash' to England meant the company's plans were rejected by Cardiff Council's Planning Committee. The company has since appealed.

A second set of plans was submitted in February of this year. The news of this second submission can be viewed at:

<http://www.walesonline.co.uk/news/cardiff-news/2010/02/04/viridor-resubmits-proposals-for-giant-incinerator-91466-25758789/#>

While some alterations have been made, Viridor has not changed the way it assesses the possible health impacts of the plant on the Splott community.

In 2008, the company undertook a 'Human Health Risk Assessment' (HHRA). This can be viewed at:

<http://www.viridor-consultation.co.uk/UserFiles/Appendix%2012%20-%20Human%20Health%20Risk%20Assessment.pdf?phpMyAdmin=BkG7EDZFSwGW5hpsqZf-nmOY790>

This HHRA, we feel, is narrow in terms of the health impacts it considers valid. By contrast, our stakeholder workshop and the focus groups that follow, are about casting a broader 'health and well-being' net and listening to community concerns.

The resulting report of what's called a Health Impact Assessment (HIA) will be presented by Communities First to the Council's Planning Committee. The HIA is run in conjunction with Cardiff's Local Health Board and the Wales Health Impact Assessment Support Unit (WHIASU).

We therefore look forward to seeing you at our HIA stakeholder workshop at 69b Splott Road on Tuesday 20th April, 2010, from 6pm. Refreshments will be provided.

I would be very grateful if you could confirm your attendance as numbers for participation are limited and if you are unable to attend your place will be offered to another.

Yours sincerely,

Rosalind Greenup
Co-ordinator, Splott Communities First

Appendix D – Agenda for Stakeholder Workshop

Splott & Tremorfa Communities First (CF)

Rapid Health Impact Assessment (HIA) Stakeholder Workshop

Tuesday, 20th April, 2010
18:00-21:00

Location: CF Office, The Methodist Church, 69b Splott Road,
Cardiff CF24 2BW

02920 873 998

Agenda

18:00	Registration - Tea and Coffee
18:15-18:20	Welcome and Introduction <i>Rosalind Greenup – Communities First Co-ordinator</i>
18:20–18:30	Presentation – Outline of Health Impact Assessment (HIA) <i>Nick Hacking - Wales Health Impact Assessment Support Unit</i>
18:30–18:35	Questions and Answers
18:35–18:40	Presentation - Introduction to Workshop Session 1 <i>Nick Hacking</i>
18:40–19:00	Workshop 1 – Impact on Vulnerable Groups Facilitators: <i>Nick Hacking & Eryl Powell, Principal Health Promotion Specialist, Public Health Wales</i>
19:00–19:10	Break – Tea, Coffee & Biscuits
19:10–19:15	Presentation - Introduction to Workshop Session 2 <i>Nick Hacking</i>
19:15–20:00	Workshop 2 – Strategic Screening of Viridor’s Development Facilitators: <i>Nick Hacking & Eryl Powell</i>
20:00-20:05	Presentation – Introduction to Workshop Session 3 <i>Nick Hacking</i>
20:05–20:45	Workshop 3 - Identifying Possible Mitigation of Impacts Facilitators: <i>Nick Hacking & Eryl Powell</i>
20:45-21:00	Evaluation

Appendix E – Stakeholder Workshop Evaluation Comments

Attendee	Expectations of Workshop	Expectations Met?	What Was Learnt?	Positive Outcomes?	What Worked/Didn't?	Any Other Comments
1	"To hear other people's views about the incinerator proposals + learn more about HIA as a technique."	8	"More about HIA. How wide in scope the potential impacts are. That there is a lot of benefit in getting a group like this together."	"Better shared awareness of concerns."	"Smaller group discussions worked well."	[none]
2	"To learn about the process of the HIA. To feed community concerns into a process + consolidate opinions + expertise from the community/perceptions of community members."	10 ("Beyond my expectations. Very well facilitated. Thank you.")	"What a HIA is, what it entails, thoughts about screening, scoping, mitigation."	"Got community feedback. Have an understanding of how we can move forward. Feel enthused + informed!"	"Really good group exercises. Came up with lots of info. Useful to start with background info. Good contrast of group work + listening to info."	"Really stimulated thoughts. Really well facilitated. Very appropriate level for audience."
3	"To understand what an HIA is + its very aspects. To gain a better understanding of the local Viridor project."	10	"Exactly what I wanted! To understand the various aspects of an HIA."	"A greater understanding of an HIA, the Viridor project itself."	"Group work and discussion was excellent."	"Although I understand the time restrictions for this session, felt that a longer session would be beneficial. Was really pleased with this training, was well facilitated and thought-provoking. Thank you!"
4	"Very good, interesting, relevant and well structured. Provided good opportunities for open discussion as well as possible solutions to people's concerns."	9	"How the HIA process work, how it can be used."	"Very positive open discussions about communities concerns."	"All exercises were beneficial, especially the mitigation session as I feel people were surprised by how much they had to input which was itself empowering."	
5	"Discussion of the impacts of the incinerator on health in the local community."	9	"Level of concern among the community. Right to consultation."	"Helped participants understand the proposals and the impacts of it. Increased community spirit."	"The techniques used helped focus discussion on the relevant issues and helped stimulate ideas and interaction between the participants."	

Continued/...

Attendee	Expectations of Workshop	Expectations Met?	What Was Learnt?	Positive Outcomes?	What Worked/Didn't?	Any Other Comments
6	"I came with some past experience of 'Human Health Risk Assessment' techniques, which I believed were more 'evidence-based'. Your definition of HIA is new to me & therefore enlightening (though I question how 'evidence-based' it is[])."	5	"HIA – wider appreciation."	"Positives & negatives openly discussed @ tables."	"Very interactive & inclusive. Quite noisy at times."	"In view of the timescales for the 'planning decision' (i.e. July) – was this HIA set up soon enough to influence the decision[?]"
7	"To learn more about health impact assessment as a community engagement process and because of concern about the potential health impact of the Viridor proposal."	8	"That there is a high level of commitment and understanding about the application already and that local people are very knowledgeable."	"Sharing learning and knowledge and ideas. Meeting new community members. Thinking about health issues in more detail."	"I think the workshop worked well."	"Ensuring this community commitment influences the process and that community input is recognised by Cardiff County Council."
8	"To learn more about the Viridor application. To understand the relevant impacts on my role/position in the community. To learn and understand the wider community perspective and issues."	7	"The general feelings of many stakeholders."	"Not all the thoughts towards the development were totally negative."	"The open discussions worked. No one from Viridor represented [-] many questions had no answers."	
9	"Open, in depth discussion regarding planning application for waste incinerator in Splott."	10	"A greater awareness of community and Environment/Friends of the Earth views."	"The discussions were open and fair and every person was given the opportunity to engage."	"Workshops were excellent."	
10	"Wasn't sure!"	10	"Balanced view of proposal. Legalities etc. of planning process. Role of different agencies."	"Greater knowledge/understanding of issue"		
11	"Not knowing what I was coming into, I found it an interesting & informative debate."	10	"The wider implication of hazards that could occur."	"Highlight the –ve and +ve outcomes."	"I think all of it was of equal importance."	

Appendix F – Blank Evaluation Form

Health Impact Assessment Workshop

EVALUATION FORM

1. What were your expectations prior to the workshop sessions?
2. Did the session meet them? (Please rate from 1-10 where 1=not at all, 10=very much met them).
3. What did you learn during the workshop?
4. What do you feel were the positive outcomes resulting from this workshop?
5. What do you think worked and what didn't?
6. Any other comments you wish to make.