Sub on obj 1

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ENVIRONMENTAL PROTECTION AGENCY,
Headquarters, P.O. Box 3000,
Johnstown Castle Estate,
CO. WEXFORD.

F.A.O. Ms. Ann Bosley,
Programme Officer

RE: REG. NO. 221-1
LABRE PARK CIVIC AMENITY SITE, DUBLIN 10.

Dear Ms. Bosley,

I refer to your letter dated 21 March 2006 enclosing the one objection to the Agency's proposed decision in respect of the above referenced Waste Licence application.

We have compiled a submission in response to the objection and I enclose six copies of the said submission for consideration by the Agency.

We note the comment in relation to the Oral Hearing and the Board's absolute discretion in relation to this matter. However, we would point out that all of the issues in relation to our proposal were dealt with in detail at the Oral Hearing conducted by An Bord Pleanala.

Yours sincerely,

TOM LOFTUS
HEAD OF WASTE MANAGEMENT SERVICES

T.L./S.D.
ENCL.

c.c. M. Twomey, A.C.M.
E. Wright, S.E.O.

Response to objection to proposed EPA decision on a Waste Licence application (221-1) by Dublin City Council for a Civic Amenity Facility at Labre Park, Ballyfermot, Dublin 10

April 2006

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Waste Management Service
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Introduction

This report provides a response to a submission from the Ballyfermot Travellers Action Project (BTAP) appealing conditions set out in the proposed Waste Licence (221-1) for Labre Park Civic Amenity Site at Ballyfermot, Dublin 10, following a proposed EPA decision on a licence application by Dublin City Council in respect of this facility.

On 28th January, 2005, Dublin City Council applied to An Bord Pleanála under Section 175 of the Planning and Development Act, 2000, for approval of a Civic Amenity and Green Waste Deposit Area. An EIS together with copies of relevant public notices and the list of prescribed bodies notified was also submitted.

Following the receipt of various submissions from the public the Board directed on 14th June, 2005, that an Oral Hearing be held.

Prior to the hearing evidence was submitted to the Board from the parties involved in the preparation of the EIS. This evidence was presented at the hearing which was held on 26th / 27th September, 2005.

In July 2005 Dublin City Council also made application to the EPA for a Waste Licence for the facility and details of this application were also submitted at the Oral Hearing.

The facility was granted planning permission by An Bord Pleánala on 16th January 2006 following the oral hearing. A copy of the Inspector's Report and the Board's decision are included with this report in Appendix 1 and 2, respectively.

Format of this report

In the BATP submission, concerns were raised or requests made with reference to four of the proposed Waste Licence condition headings as follows:

- Condition 1 – Scope
- Condition 2 – Management of the Facility
- Condition 3 – Infrastructure and Operation
- Condition 6 – Control and Monitoring

Under each condition heading a number of points (concerns/requests) were made by BATP. For the purpose of clarity, each point raised in the submission is summarised in this report and then followed by a response.

This response makes reference to the findings documented in the EIS submitted with the planning application as well as to the written and oral evidence presented at the oral hearing held by An Bord Pleanála.

Response to Submission

Condition 1 - Scope

Opening Hours

1.1 **Summary of Point Raised in Submission**
The BATP submission has objected to the proposed opening/operational hours as per conditions 1.7 and 1.8 of the proposed Waste Licence.

1.2 The opening/ operational hours specified in the proposed Waste Licence were included in the Environmental Impact Statement (EIS) submitted during the planning stage of this project and therefore the matter of opening hours was considered thoroughly by An Bord Pleanála during the planning process which included an oral hearing. Subsequently, planning permission was granted without any conditions related to the opening hours – (ref. An Bord Pleanála – Decision - Appendix 2).

1.3 It should be noted that the opening hours facilitate safe servicing of the site and also facilitates working members of the public. The site will be closed on Sundays. Restrictive opening hours can also cause unnecessary queuing especially on a Saturday.

Noise

1.4 **Summary of Point Raised in Submission**
The basis of the objection to the opening hours in the BATP submission is a concern about the potential noise impact created by the operation of the facility.

1.5 The impacts of noise were considered in detail at the planning stage of this project and the findings of study on noise are included in the EIS – Section 6 and are summarised as follows:

- *A baseline noise survey indicated that the existing noise environment at the Labre Park site is typical for an urban area exposed to distant traffic noise. The ambient noise level was approximately 52 dB(A) L_{Aeq}.*
- *During the construction phase of the civic amenity facility, the resulting noise levels will be comfortably within typical construction noise criteria, and minimal impact is anticipated.*
- *Taking account of EPA guideline limits, and assessment procedures of BS 4142, an assessment/design criterion of 53 dB(A) L_{Aeq} is considered appropriate for the operational phase of the proposed development.*
- *To ensure that noise impact is minimised during the operational phase it is recommended that a 3m high wall (noise barrier) be constructed along the northern boundary of the site, this will be facilitated by the construction of a wall to the rear of the proposed new housing development at Labre Park.*
- *The calculated noise levels at the adjacent houses, and at the adjoining residential development lands are in the range 46 to 53 dB(A) L_{Aeq}. The resulting noise impact is considered slight.*

1.6 The impact of noise was also considered in detail at the oral hearing where evidence in relation to noise was presented by Mr. Colin Doyle on behalf of ANV Technology Ltd. The evidence as presented at the Oral Hearing is summarised in the An Bord Pleanála Inspector's Report (Appendix 1) Para. 5.1.5 and a copy of the full brief of evidence prepared by ANV Technology Ltd. is also attached (Appendix 3).

1.7 In summary the evidence presented by ANV Technology Ltd at the oral hearing concluded that:

"with a 3m boundary wall in place, and for typical operation of the civic amenity facility, the calculated noise levels at the existing houses in Labre Park are in the range 41 to 47 dB(A). At the proposed housing development site north of the facility, the calculated noise level under typical operating conditions is approximately 50 dB(A). These predicted noise levels are within the assessment criterion of 53 dB(A), proposed for the facility. The predicted levels are lower than the existing ambient noise level, and are unlikely to be noticeable".

1.8 Evidence on the potential health effects of noise was also presented at the Oral Hearing by Dr. Martin Hogan and the conclusion in his brief of evidence states:

"The EIS suggests minimal impact in the environs with levels during the construction phase within typical noise construction criteria and during the operational phase will be less than 53 dB and the impact is considered less than significant. At these assessed levels the impact on human health of noise is in my opinion minimal".

1.9 The information in the EIS and the evidence presented and considered at the oral hearing, fully addresses the concerns raised about noise and the opening hours in the BATP submission.

1.10 **Summary of point raised in submission**
The noise attenuation characteristics of mobile homes was not addressed in the EIS

1.11 This matter was in fact raised prior to the An Bord Pleánala oral hearing in a submission made by the BTAP at the planning stage and was addressed in a response included in the brief of evidence provided by ANV Technology Ltd. as follows:

Noise Insulation of Trailers
"The BTAP objection raises the question of whether trailers would afford the same noise reduction as houses. Environmental assessment criteria are based on the assumption that residents have windows open for ventilation, or have other fixed ventilation openings. Under these conditions, the sound attenuating properties of caravans and houses are likely to be only marginally lower than for houses. The difference in sound level from outside to inside would be in the range 10 to 20 dB, depending on the size of the window or ventilation openings, and orientation of the openings".

A copy of the full brief of evidence prepared by ANV Technology Ltd. is attached (Appendix 3).

1.12 **Summary of point raised in submission**
BATP requests a noise monitoring programme to be initiated during the operational phase of the facility.

1.13 This is already a condition of the proposed Waste Licence from the EPA which specifies an annual noise monitoring programme in Schedule C, Table C.2.4.

Condition 2 – Management of the Facility

Facility Management

2.1 **Summary of Point Raised in Submission**
The BATP submission raises a concern about the appointment of unsuitable individuals or companies to manage the facility.

2.2 The issue of Facility Management is already addressed in condition 2.1.1 of the proposed Waste Licence in that it is a requirement that *'the licensee shall employ a suitably qualified and experienced facility manager'*. As a condition of the licence this requirement will be enforced by the EPA.

2.3 In the event that Dublin City Council decide to 'outsource' the management of the facility to a third party operator, this will be carried out through a proper tendering process and the selection criteria will consider all aspects of the operator's capabilities and past performance. In this event, condition 2.1.1 of the licence still applies and the EPA will enforce the requirement for a suitably qualified and experienced person to manage the facility.

Communication Programme

2.4 **Summary of Point Raised in Submission**
The BATP submission requests that a licence requirement for Dublin City Council to establish an interagency committee including representatives from residents to allow concerns or issues arising to be communicated and addressed.

2.5 As with all waste facilities members of the public are free to raise any concerns directly with the facility operator and, in the case of a licensed facility, with the EPA. All information pertaining to site monitoring and any other reports or correspondence with the EPA related to licence compliance are publicly available.

2.6 Condition 2.2.2.7 of the proposed Waste Licence requires the licensee to establish and maintain a Communications Programme to ensure that members of the public can obtain information at the facility, at all reasonable times, concerning environmental performance of the facility.

2.7 Based on the existing communication provisions it is not considered necessary to include additional provisions for the public to raise issues with the operator.

Employment at the Facility

2.8 **Summary of Point Raised in Submission**
BATP request that the contract to operate the facility should include a requirement to employ a percentage of local residents. This part of the submission also includes a request that the licence should include a condition which requires the training of Travellers to allow them to be able to take on positions in the facility.

2.9 This is not a matter which can be addressed in the Waste Licence.

Condition 3 – Infrastructure and Operation

Security

3.1 **Summary of Point Raised in Submission**
BATP have expressed a belief that the Civic Amenity Facility will become a play area for children from Labre Park.

3.2 Security of the facility is of paramount importance to Dublin City Council and the planned security arrangements were summarised in Section 3.5.2 of the EIS as follows:

The following security features will be put in place:

- *Palisade or other secure boundaries around the entire site – where appropriate.*
- *It will be possible to independently secure each of the five areas on the site, so that any one or all of them can be rendered inaccessible at any time even if the main site entrance is open.*
- *A Gate Office will be situated close to the site entrance. An additional office will be located within the Civic Amenity facility area.*
- *Installation of closed circuit television CCTV (for daytime visibility of areas of the site which are not clearly visible from the site office and/or night time visibility of the site.*
- *The use of security lighting during the hours of darkness.*
- *Appropriate use of traffic barriers and gates.*
- *If required, further security measures will be taken as appropriate.*

Additionally, site management will be required to implement appropriate security training and procedures for staff in site.

3.3 The proposed Waste Licence re-iterates the security requirements for the site in condition 3.2. It is not expected that any person will gain unauthorised access to this facility.

3.4 **Summary of Point Raised in Submission**
BATP have expressed a concern about 'fly-tipping' in the vicinity of the proposed facility and the need for a maximum response time and outline steps that would be taken to prosecute offenders.

3.5 The fly-tipping of waste is addressed in the Waste Licence - condition 6.1 which deals with litter control. Specifically condition 6.1.2 requires that all litter or other waste placed in the vicinity of the facility is removed immediately and in any event by 10.00 a.m. on the next working day.

3.6 The provision for prosecution of offenders is made in the Litter Pollution Act, 1997. This is not a matter to be addressed in the Waste Licence by the EPA. Dublin City Council will make adequate provision to enforce the Litter Pollution Act, if necessary, in the vicinity of the facility.

Condition 6 - Control and Monitoring

Air/Dust and Odour

4.1 **Summary of Point Raised in Submission**
The BATP believe that a significantly increased monitoring programme for air quality particularly for PM10, particulate matter should be undertaken, due to possible health impacts from increased dust deposition.

4.2 The impacts of dust and odour were considered in detail at the planning stage of this project and the findings of studies on both are included in the EIS – Section 9 and are summarised as follows:

The impact on air quality of the proposed Civic Amenity Facility at Labre Park was assessed.

- *Based on a review of published air quality data for the Dublin region, the existing environment in the vicinity of Labre Park is considered to be within air quality standards.*
- *During the construction phase of the development, there is a slight potential for dust nuisance at nearby properties, associated with construction traffic. This can be controlled by standard mitigation measures, such as wheel washes and covering loads of fine materials.*
- *The modelling studies undertaken as part of the environmental impact assessment have shown that the predicted pollutant concentrations present at the proposed development site are not significant. The site is typical of an urban environment in terms of air quality. The proposed development will not result in a significant negative impact on air quality.*
- *The potential for generation of dust from the Civic Amenity Facility is considered to be minimal. During construction, mitigation measures will control dust and mud impacts on the neighbourhood, while during the operational phase, good general housekeeping will ensure that dust generated due to spillages is minimised.*
- *The potential of nuisance due to odours was assessed. Provided green waste materials, and road sweeping wastes are regularly removed from the site, there is negligible potential for any associated odours.*
- *The proposed civic amenity site will not cause any significant bioaerosol, H_2S or odour impact if it is operated in accordance with the proposed operation plan and compacted green waste and deposit waste is removed off-site at regular intervals. All drains should be kept clean and free from debris.*

4.3 Additionally evidence on air quality, potential respiratory health effects and odour was presented at the Oral Hearing by Dr. Conor Tonra, Dr. Martin Hogan and Dr. Brian Sheridan respectively. The full text of their briefs of evidence are attached – Appendices 4, 5 and 6 and a summary of their presentations to the Oral Hearing can be seen in the An Bord Pleanála Inspector's Report (Appendix 1) sections 5.1.4, 5.1.7 and 5.1.6.

4.4 Regarding air quality Dr. Conor Tonra presented the following conclusions in his evidence:

"The dominant sources of air pollution in the vicinity of Labre Park arise from traffic, with a contribution from domestic and industrial combustion sources. Added to this is a contribution from distant pollutant sources, such as distant traffic and industrial emissions in the Dublin urban and greater urban areas".

Specifically in relation to PM_{10} Dr Conor Tonra stated:

"The recent monitoring data at the Shamrock Terrace CA site shows that while the hourly PM_{10} concentration on the site is generally raised during the peak operating hours at the site, it is not comparable to the contribution of the rush-hour traffic contribution, or the background contribution (probably as a result of local domestic heating)".

In relation to dust he stated in his evidence at the Oral Hearing, according to the Inspector's report that " *from observation at other Civic Amenity sites, this type of collection does not give rise to dust and any dust generated from waste materials will be limited to the site and will be unlikely to have any effect beyond the boundary".*

In his brief of evidence summary conclusions he stated that:

"The modelling studies undertaken as part of the environmental impact assessment have shown that the predicted pollutant concentrations present at the most sensitive receptors to the proposed development site are not significant. The proposed development will not result in a significant negative impact on air quality".

4.5 Regarding the potential respiratory health effects of the development Dr. Martin Hogan stated in his brief of evidence that:

"The assessment contained in the EIS determines negligible impact on air quality in the environment. Hydrogen sulphide, Nitrogen dioxide and PM10 are known to have deleterious effects however the proposed development is predicted to have essentially no detrimental effects on any of these outside the site. Based on these findings it is my opinion that the proposed site will have negligible effects on human respiratory systems".

4.6 Regarding odour, Dr. Brian Sheridan concluded in his presentation to the Oral Hearing, according to the Inspector's report that *"in his opinion, the proposed Civic Amenity site would have negligible impact in terms of odours".*

4.7 In his assessment of issues the An Bord Pleanála inspector in his report stated that:

"Apart from the air quality associated with traffic, the impact of the proposed development on air quality is not considered to be significant. Having regard to odours, bioaerosols and potential health effects, it is considered that concerns in this regard would not warrant refusal of the application".

4.8 Based on the above conclusions quarterly monitoring of dust at the facility and bi-annual monitoring of odour as specified in the proposed Waste Licence would appear to more than be adequate.

Flooding

4.9 **Summary of Point Raised in Submission**
BATP is concerned about the issue of flooding due to debris blocking the Galback stream.

4.10 There is no evidence indicating that the development of this facility will cause any increase in the potential for flooding to occur in this area. As pointed out in the submission from BATP, flooding has occurred due to debris blocking the Galback Stream. Also during the Oral Hearing evidence presented by Mr. Michael Stubbs, Area Manager, South Central Dublin Area, Dublin City Council, concurred with this statement. This evidence stated that:

"the stream had been completely blocked by illegal dumping and as a result a number of incidents of flooding had occurred".

He also stated that *"approximately 2,800 tonnes of waste material was removed from the area in August 2005".*

4.11 In his assessment of issues the An Bord Pleanála inspector stated in his report:

"Of note is the history of the selected site where in excess of €1.2 million was spent on surface clean-up operations in the last five years and in respect of which the opportunity exists to improve and regulate the site with attendant positive impacts".

4.12 Based on these facts it is clear that the issue of flooding in the area is not a matter which needs to be dealt with in the waste licensing of the facility.

Appendix 1: An Bord Pleanála Inspector's Report

An Bord Pleanála

Inspector's Report

File Reference: PL29N.EL.2042.

DUBLIN CITY COUNCIL

Proposed Development: **Civic Amenity Facility at Labre Park, Ballyfermot, Dublin 10**

Inspector: Daniel O'Connor November, 2005.

CONTENTS

1.0 INTRODUCTION

1.1 Dublin City Council, by letter dated 28th January, 2005, applied to An Bord Pleanála under Section 175 of the Planning and Development Act, 2000, for approval of a Civic Amenity and Green Waste Deposit Area. An EIS together with copies of relevant public notices and the list of prescribed bodies notified was also submitted.

1.2 Additional information was requested by the Board in relation to construction details and site investigations on 10th March, 2005, and this was submitted by the City Council on 20th April, 2005. The Board directed on 14th June, 2005, that an Oral Hearing be held and this was held on 26th / 27th September, 2005.

1.3 Dublin City Council made application for a Waste Licence for the facility to the EPA in July 2005 and details of the application were submitted at the Oral Hearing

2.0 DESCRIPTION OF PROPOSAL

2.1 The proposal as described in the application comprises:

- General Civic Amenity and Green Waste Deposit Area
- Fridge/Freezer Storage area
- Construction/Demolition Deposit Area
- Dublin City Council Street Cleansing Deposit Area
- Entrance road and entrance area.

2.2 The total area covered is 11,053 square metres of which the Civic Amenity Facility accounts for 4,412 square metres and the entrance road and entrance area for 4,211 square metres.

2.3 The Site Location is shown on Drawing 24014-002 included as an attachment in the EIS.

2.4 The site layout is shown on Drawing 24014-001e included as an attachment in the EIS.

3.0 ENVIRONMENTAL IMPACT STATEMENT

3.1 The EIS submitted was in one volume and included a non-technical summary. Patel Tonra Limited were the lead consultants who prepared the EIS on behalf of Dublin City Council. A specific part of the proposal in relation to operations is to have use by members of the Travelling Community (EIS states 8-10 persons) of the construction/demolition area for collection of material. The introduction to the EIS sets out the contents of the EIS and the waste management policy context is also set out.

3.2 Section 2 of the EIS details the **site location** and context and indicates the alternative sites considered and the reasons for not pursuing each one which include accessibility and extent of the sites examined.

3.3 Section 3 describes the **facility** and includes details of plant and equipment, security, fire control systems, safety in general and utilities.

3.4 Section 4 describes the **socio-economic context** both in the wider area and local (Labre Park) area. Most of the issues discussed were raised at the Hearing. The EIS describes a do-nothing scenario as involving the likely continuation of **fly tipping, anti social behaviour, etc.**

3.5 Section 5 details impacts in relation to **traffic and transportation.** The junction surveys were carried out on 8th December, 2004, at the following locations:

- Killeen Road and Kylemore Park North (north-west of the facility).
- Kylemore Road and Kylemore Park North (north-east of the facility).
- Kylemore Road and Kylemore Park South (north-east of the facility and the closest junction to the facility).

The EIS concludes that the Killeen Road/Kylemore Park North junction is considered acceptable although above the norm with respect to degree of

saturation and suggests some road marking measures to improve the situation. The other two junctions are stated to be within capacity for the design year of 2014. The issues were raised in detail during the Oral Hearing including the impact of charging on the use of the facility.

3.6 Section 6 describes the analysis carried out in relation to **Noise and Vibration** both during construction and operational phases. Existing locations at No. 15 and No. 23 Labre Park were selected as sensitive locations. A level of 53dB was adopted as the target for the operational phase and for the construction phase, the requirements of BS 5228 were deemed to apply. During the Oral Hearing the issue of noise was discussed in detail and the impact of the proposed 3.0 metre wall with regard to attenuation was also discussed.

3.7 Section 7 refers to **flora and fauna**. Proposed NHA's in the vicinity are noted, with particular reference to the Grand Canal, immediately to the south of the site. Approximately 12 square metres of freshwater marsh (GM 1) is listed within the site. Tables in this section include floral composition of grassland, freshwater marsh, drainage ditch and the grand canal bank and also lists of mammals and birds. Mitigation measures include avoidance of the grand canal bank and bunding of all tanks to avoid possible local aquifer contamination. The EIS concludes that with mitigation, the impacts on flora and fauna are unlikely to be significant.

3.8 Section 8 refers to **Architectural, Archaeological and Cultural Heritage**. The EIS stats that there is a low likelihood of impact on previously unrecorded archaeological remains. It states that the Johnny Hanifin Memorial (plates 2 & 3) will be impacted but it is proposed to remove and relocate the memorial.

3.9 Section 9 deals with impact on **air quality,** both during construction and in the operational phase. For dust deposition the TA Luft (2002) limits of 350mg/m^2/day are taken as a guideline. Existing air quality in the vicinity of Labre Park is examined and the EIS states that the dominant sources of air pollution arise from traffic, with a contribution from domestic and industrial combustion sources. Air quality monitoring results for Killeen Road are given

and the EIS notes that these are for the winter period and are not annualised. Reductions for some parameters for 2010 are noted. The EIS concludes (9.4.17) that increases in pollutants would be slight and in compliance with legislative limit values.

This section of the EIS also examines odours and bioaerosols and notes a high level of aspergillus fumigatus and mesophillic bacteria at location Lab B3 (on canal, south of the site). The EIS states that this may arise from the location of the sampler. The presence of the power lines is also mentioned as is the highly industrialised area. The issue of bioaerosols was raised with two of the expert witnesses during the Oral Hearing.

3.10 Regarding **Climate**, in Section 10 it is concluded that there would not be any significant impact on the microclimate or local climate of the area.

3.11 Section 11 of the EIS deals with **Landscape and Visual** impacts. This section includes a number of plates indicating views from the south of the site and an aerial view of the site and surrounding area. The proposal includes internal landscaping and planting on the southern side of the site. The EIS states that the inclusion of trees and a planted boundary screen on both northern and southern boundaries will reduce any negative impact of the boundary wall from the canal view.

3.12 Section 12 of the EIS deals with **Soils and Geology.** This includes a section outlining the **site investigations** carried out. Figure 12.2 indicates that six trial pits were dug and the results are indicated in Section 12.1.19 to 12.1.32. It is stated in Section 12.1.32 that it is probable that there is historical contamination of the soil environment at the site. Section 12.3 describes the possible effects of the proposal Section 12.4 describes remedial measures and includes reference to a "fit for purpose" risk assessment. These issues were discussed in detail at the Hearing and in the context of the further site investigations which included 30 trial pits and three boreholes.

3.13 Section 13 deals with **Water,** including both surface water and groundwater. It describes the Galback Stream which runs through the site and is culverted through much of its path downstream of the site. The main river in the area, the Camac is seriously polluted in the area. A list of wells drawn from GSI well card data is shown in Table 13.7 and it is noted that W09, which is not clear as being that of C&C or not and this was raised at the Hearing. Monitoring of the perched water table is recommended in the EIS. The EIS states that the site will operate under an EPA waste licence and surface water monitoring may be required.

3.14 **Material Assets** are dealt with in Section 14 of the EIS. The conclusion reached in this section is that the proposed development would have a very positive contribution locally and would have no negative impacts on material assets.

3.15 **Inter-relationships** between factors are covered in tabular form in Section 15 of the EIS.

4.0 PLANNING CONTEXT

4.1 The site of the proposed development is situated in the area covered by Map D of the Dublin City Development Plan 2005-2011. This map was submitted at the Oral Hearing and is tabbed LA 01.

4.2 The zoning of the site is Z6 which is "to provide for the creation and protection of enterprise and facilitate opportunities for employment creation".

4.3 Labre Park as developed at present, together with the site for additional housing is zoned Z1 which is "to protect, provide and improve residential amenities" The Drawing of the proposed housing by Gardiner Architects, Ref. GAL03-110-102 was submitted at the Oral Hearing and is tabbed LA02

4.4 In the written statement of the Development Plan, policy U1 sets out the priorities in relation to Waste Management which includes encouragement of recycling. Policy U4 states that the City Council policy was to implement the Waste Management Plan for the Dublin Region in conjunction with the adjoining Local Authorities.

4.5 The proposed development is considered to comply with the provisions of the Dublin City Development Plan, 2005.

5.0 REPORT ON ORAL HEARING

The Oral Hearing was held in the Lynch Green Isle Hotel, Newlands Cross, Dublin 22, on Monday 26th September and Tuesday 27th September, 2005.

The hearing opened at 11am on Monday 26th September, 2005. Appearances were taken from the Local Authority and others present. There were a total of 15 objections/submissions in relation to the proposed development.

5.1 Local Authority's Case

Mr. Tom Loftus, head of Waste Management, Dublin City Council, listed the witnesses who would set out the case for the proposed civic amenity facility. These witnesses were:-

1. Mr. Tom Loftus, Dublin City Council, to deal with the overall aspects of the proposal.
2. Mr. Michael Stubbs, Area Manager, South Central Area, Dublin City Council.
3. Mr. Martin Deegan - Traffic.
4. Dr. Conor Tonra - Air Quality.
5. Mr. Colin Doyle - Noise.
6. Dr. Brian Sheridan - Bioaerosols.
7. Dr. Martin Hogan - Health.
8. Mr. Eddie Phelan - Landscape.
9. Mr. Kieran Rose - Planning Issues.
10. Mr Burke – Site Investigations

Mr. Loftus outlined the **further information** that was submitted to An Bord Pleanála in relation to boundary walls, drainage details, entrance details and site investigations. He also put **three additional items** before the hearing, which were the EPA licence application, a copy of the site investigation report which accompanied the EPA licence application and a detailed drawing of the main entrance to the proposed facility.

5.1.1 Mr. Loftus gave Direct Evidence as follows:-

Mr. Loftus said the proposed development was a civic amenity/recycling centre covering approximately 1.1 hectares. He said the present environment at the location was very degraded from an environmental viewpoint, mainly due to illegal dumping. He said that in the recent past cleaning up of the site had been carried out at a cost of €600,000. He said it had also been cleaned up in 2001 in an operation which involved higher expenditure than the recent clean-up. He said the illegal dumping had caused water pollution and lead also to vermin, pest and serious nuisance.

Mr. Loftus said what was basically proposed was to build a **large paved open yard** in which containers of different types would be placed. He said the containers would take different types of waste and the actual types of waste would be defined by the terms of any EPA licence. He indicated that on other sites they had construction and demolition waste, washing machines, furniture and household priority waste, which are taken into different containers. He said there would be secure boundary fencing with the idea that waste could be taken in a segregated fashion. He said the proposed opening times were Monday to Saturday and on Sunday it would be closed.

Mr. Loftus outlined the requirements of the Waste Management Plan and noted that the requirement was for the achievement of ambitious recycling targets. He said the plan was to have at least 12 full scale recycling facilities by 2010 to comply with the Waste Management Plan.

He indicated the locations which were proposed for centres and noted that the general provision was for a centre for 60,000 persons.

In relation to choice of Labre Park, Mr. Loftus said the land was owned by Dublin City Council and in the new Development Plan is zoned Z6, in which this is a permissible activity. He said the presence of high voltage cables limits the potential uses of the site for alternatives. He said the proposal for the managed use of the land has the potential to significantly improve the

environment of the area. He said there was no other site identified in the area and the site fits with the waste strategy being implemented in the Dublin region.

5.1.2 Mr. Michael Stubbs, Area Manager, South Central Area, Dublin City Council gave Evidence as follows:- (Transcript Day 1, pages 26-32)

Mr. Stubbs said that the city was divided into five areas reflecting the electoral boundaries. He indicated the overall plans for the area surrounding the site and states that the site itself was under-utilised in every sense of the word by the fact that it has heavy voltage lines running right through it. He said adjacent to Kylemore Road it was proposed to dispose of the site for the construction of a storage facility. Also, it was proposed to regularise boundaries on the Killeen Road side, with Thorntons trailer park, which required more space. He said the illegal dumping has been a cause of concern both to the elected members in the South Central Area Committee and to the local business community and residents. He said the site had been cleaned as Mr. Loftus pointed out at a cost of €600,000. He said the stream had been completely blocked by illegal dumping and as a result of that there were a couple of incidents of flooding in the particular area. He said approximately **2,800 tonnes of material were removed in August**. He said the stream is now clear and flowing properly and they were keen to see the area developed this kind of illegal use of the site.

5.1.3 Mr. Martin Deegan gave Evidence to the Hearing in relation to **Traffic Issues** as follows:- (Transcript Day 1, pages 32-46)

Mr. Deegan described the surrounding road network. He said there were a number of industrial unit accesses opening onto the road and there is a T-junction with Kylemore Park South. He said there was footpath provision along Kylemore Park West and Kylemore Park North. Mr. Deegan describe the locations of Kylemore Road and Killeen Road and noted that Killeen Road had been recently realigned and widened from the Nangor Road to the western

side of the site. He said this has provided much needed improvement for all road users in terms of safety and capacity for the area.

Mr. Deegan said traffic surveys were carried out on 8th December, 2004, with morning and evening peaks surveyed for the Killeen Road and Kylemore Park North junction, Kylemore Road and Kylemore Park North junction and Kylemore Road and Kylemore Park South junctions. Based on a reference to TA 79/99 "Traffic Capacity for Urban Roads", Mr. Deegan said the existing two-way flow on Kylemore Park, Kylemore Park North, Kylemore Park South and the Kylemore Road indicated an ample level of existing residual capacity at all three junctions surveyed.

In relation to traffic generated by the proposal, Mr. Deegan said he took the worst-case scenario of the evening peak hour with a combination of vehicles arriving and leaving at the same time. He concluded that a total of 61 inbound and 65 outbound trips were possible but this scenario was unlikely to happen as part of a normal site operation.

Mr. Deegan said that heavy goods vehicles were anticipated to make up approximately 9% of the vehicle trips generated to the site in the evening peak hour. Mr. Deegan said the expectation was that 50% of the traffic would be from Killeen Road, which is to the west of the site, and 50% would be from the Kylemore Road, which is to the east. He said it was expected that the CIE railway bridge on Killeen Road immediately north of the junction was due to be replaced as part of CIE's repair and improvement programme. This was anticipated within the next five years. He said at that stage the opportunity could be availed of to provide a right-turning lane on Killeen Road for vehicles entering the industrial park. He said the recent introduction of a tipping charge in a similar facility at Shamrock Terrace had indicated a reduction of traffic by up to 40%. He said he understood the facility at Labre Park would be charging for waste delivery at its inception, therefore traffic generation is likely to be much lower than estimated within this report.

Mr. Deegan outlined a number of mitigation measures, including the provision of parking bays, efficient pay stations and appropriate manning on the site. In addition, he listed adequate signage, site lighting, improved road markings and installation of adequate signage from the main road network to the site. In conclusion, Mr. Deegan said that the proposed civic amenity facility at Labre park would be expected to generate a level of traffic which can be accommodated within the existing road network with **minimal additional traffic impacts.**

5.1.4 Dr. Conor Tonra gave Evidence in relation to **Air Quality** as follows:- (Transcript Day 1, pages 48-70)

Dr. Tonra stated that the assessment carried out dealt with the existing environmental conditions, the construction phase of the development and the operation of the completed development in relation to the impact on air quality.

Dr. Tonra said that the proposed facility was situated in a mixed residential and industrial area. He said from a traffic-emissions perspective, most sensitive receptors were at the junction of the Killeen Road and Kylemore Park Road (LeFanu Drive) and the junction of Kylemore Road and Kylemore Park South. He said pollutants considered include sulphur dioxide, nitrogen dioxide and oxides of nitrogen, PM_{10}, lead, benzene and carbon monoxide. He said that an increase of less than $4\mu g/m^3$ in NO_2 is not considered a significant change, nor is a change of $2\mu g/m^3$ of PM_{10}. The guideline criteria for dust under TA Luft of $350mg/m^3$/day was taken.

Dr. Tonra referred to air quality data published by the EPA, which gave mean concentrations for Dublin City of $29\mu g/m^3$ for nitrogen dioxide and $23\mu g/m^3$ for PM_{10}. He referred to the monitoring station closest to the development which is at Ballyfermot Library. The PM_{10} figures for 2003 at this location were $19\mu g/m^3$ and $14\mu g/m^3$ for 2004. He said air quality monitoring had been carried out on Shamrock Terrace, which was the existing Dublin City Council civic amenity site.

Dr. Tonra said the existing air quality indicators in the Dublin region are within current air quality standards, but reductions will be required to achieve the stricter limits which will apply in 2010.

Dr. Tonra referred to dust in the construction phase and noted that the development would not result in extensive areas of open soil for protracted durations. He said the impact would generally be slight and short-term. He said it was reasonable to expect that the dust disposition at the nearest houses would be less than 350mg/m^2/day. He said there would be a low probably of complaints, and the impact is likely to be insignificant.

Referring to traffic emissions, Dr. Tonra dealt with the receptors at No. 24 Labre Park, closest to Kylemore Park West, and to No. 8 Labre Park, which is closest to Kylemore Road. He also referred to LeFanu Drive, which was 85 metres from the junction of the Killeen Road and Kylemore Park North. Predictions were made and these were given in a number of tables submitted by Dr. Tonra. He said that these showed the increases involved will all lead to pollutant concentrations that will be in compliance with the appropriate legislative limit values. In addition, by the year 2014, Dr. Tonra said that all discreet traffic-pollutant concentrations are likely to have been significantly reduced compared to 2005. This was as a result of legislation-driven technology. He anticipated there would be a 20% reduction in carbon monoxide, 30% reduction in nitrogen dioxide and about 45% reduction in PM_{10}, compared to 2005 predictions.

Dr. Tonra said that there was a summary of predicted air quality data in relation to average Dublin City Council data at the modelled receptors. He said from observation at other civic amenity sites, this type of collection does not give rise to dust. He said any dust generated from waste materials will be limited to the site and will be unlikely to have an effect beyond the boundary. He said good housekeeping and regular sweeping would keep control on dust build-up on road surfaces and paved areas within the site.

Relating to the overall **air quality impacts**, Dr. Tonra said there would be slight increases in the levels of various traffic-related pollutants as a result of the proposed development. He said the receptors reflect likely worse-case impacts on air quality from traffic. He said this increase would not have a significant effect on air quality, even under worst-case average traffic conditions. He said from the summary table it was seen that the development will not have a significant negative impact on current air quality conditions in the area.

In relation to mitigation, Dr. Tonra mentioned the requirement for a dust control plan and during operation standard housekeeping measures would be sufficient mitigation. He said that based on a review of published air quality, the existing environment in the vicinity of Labre Park is considered to be within air quality standards. The potential for dust generation from the facility is considered to be minimal. He said that while there would be slight increases in the levels of various traffic-related pollutants, this increase **will not have a significant effect on air quality**, even under worst-case average traffic conditions.

5.1.5 Mr. Colin Doyle gave Evidence in relation to **Noise** as follows:- (Transcript Day 1, pages 72-81)

Mr. Doyle said that typical **noise levels** would be between 20 and 80 decibels. 80 would be encountered quite close to a very busy motorway. Traffic noise levels in the range 40-50 decibels would be described as relatively low and above 60 relatively high. Mr. Doyle noted the EPA Guideline for industrial noise sources of 55 decibels. He said all noise levels referred to in his evidence were in terms of 1-hour average noise levels (L_{Aeq}) unless otherwise indicated. He noted that a change of 10 decibels in noise would constitute an appropriate doubling in loudness to a person listening to the noise. He said the baseline and noise survey was conducted and the ambient noise levels approximately 52dB(A)L_{Aeq}. He said the underlying steady background noise is approximately 49dB(A).

Mr. Doyle said it was considered an assessment criterion of 53dB(A) is appropriate for this facility. He went on to describe the levels calculated based on the scenarios involving ordinary household waste recycling, full capacity usage and loading and unloading of skips which were the highest noise emissions. He said the calculated noise levels due to the facility at the existing houses at Labre Park range from 48 to 52dB(A).

Mr. Doyle went on to relate to the proposed housing development which would lie between the proposed facility and the houses at Labre Park. In that, he noted that there was a 3 metre high wall provided for and on his calculation of the impact of this wall and taking potentially additional vehicles using the facilities, he said the model results were slightly changed but these did not alter the overall conclusions in the EIS.

He said that with the 3 metre boundary wall in place the calculated noise levels at the existing houses in Labre Park are in the range of 41 to 47dB(A). He said at proposed housing development north of the facility, the calculated noise level is approximately 50dB(A). He said the predicted noise levels are within the assessment criterion of 53dB(A).

He said that in conclusion, subject to provision of a 3 metre noise screening wall, the resulting noise emissions from the proposed civic amenity facility will only occasionally be noticeable in the existing ambient noise level. He said the noise level due to the civic amenity facility is expected to be at all times less than 53dB(A) at all noise sensitive locations. Mr. Doyle said the **overall noise impact** of the proposed civic amenity facility is judged to be **slight**.

5.1.6 Dr. Brian Sheridan gave Evidence in relation to **Odour Impacts**:- (Transcript Day 1, pages 83-86)

Dr. Sheridan said that a baseline bioaerosol, hydrogen sulphide and sniff odour assessment of the proposed site location was carried out.

He said the current ambient bioaerosol air quality in the vicinity of the proposed site is good, with all the sampling locations within the proposed UK Environment Agency assessment criteria for both aspergillus fumigatus and total mesophillic bacteria.

Dr. Sheridan said the current ambient hydrogen sulphate air quality in the vicinity of the proposed site is good. He said the facility would accept the following waste types to include:-

- Dry recyclable materials.
- Green waste.
- Street cleaning waste.
- Construction waste.
- Bulky household waste.

In relation to dry recyclable materials, there would be no potential to cause any bio-aerosol or odour emissions.

Dr. Sheridan said that green waste would be compacted into enclosed containers and removed off-site approximately every 48 hours. The potential bioaerosol impact would be minimal. He said no shredding or composting would take place on-site.

Street cleaning waste would be stored within the enclosed container and removed off-site approximately every 48 hours. He said that as such material does not contain significant amounts of organic material the potential for such an operation to cause odour complaints is negligible.

In relation to Thorntons Recycling process in the vicinity, this involved black bin waste or municipal solid waste. Dr. Sheridan said no municipal solid waste would be accepted at the proposed civic amenity site. Therefore, no comparisons in relation to odours can be drawn between the adjacent plant, which was Thorntons Recycling Limited, and the proposed civic amenity site.

Dr. Sheridan said in his opinion, the proposed civic amenity site would have **negligible impacts** in terms of bioaerosols and odours.

5.1.7 Dr. Martin Gerard Hogan gave Evidence in relation to **Human Health Effects**:- (Transcript Day 1, pages 87-95)

Dr. Hogan dealt with the potential health effect of green waste/bio-aerosols. He said there were very few studies on sites such as Labre Park and he would expect that there would be lesser effects than from a composting facility. He said this was because the composting process relies on microbiological breakdown involving heat and very significant microbiological growth. He said that aspergillus fumigatus is a fungus and one of the many micro-organisms which bring about the everyday decay of leaves, wood and other organic materials in our environment. He said lawn mowing had been identified as a common source of exposure to this fungus. He said the dynamics relating to composting was that it becomes too hot for some bacteria involving rapid growth in the number of aspergillus and this occurred in the later, higher temperature stages of composting. He says this would be absent when composting does not take place. Dr. Hogan said in his opinion the health risks posed to the general population from the Labre Park site in question are **negligible**.

Dr. Hogan said there was no evidence in the medical literature which would support the proposition that dust might arise from the proposed facility and could increase the incidence of respiratory health complaints. Based on the assessment contained in the EIS which determined negligible impacts on air quality, Dr. Hogan said it was his opinion that the proposed site will have negligible effects on human respiratory systems.

In relation to the potential health effect of **ESB powerlines**, Dr. Hogan noted these were already in-situ. He said some studies have purported to show an apparent excess of health effects in the vicinity of powerlines. He said these effects have been inconsistent or explained by other factors. He said work done by Henshaw and others suggested a mechanism for potential health

effects, particularly on lung tissue. This stated that electrically charged particles formed in the air around powerlines and this could make them "sticky" to items such as environmental pollutants. He said this notion was noteworthy in that it provided an alternative explanation as to how powerlines might have an effect rather than the previous explanation of a direct effect of electromagnetic radiation. He said there is no evidence that dust per se and more specifically dust generated from the proposed facility has any effect one way or the other. Dr. Hogan said it is very difficult in medicine to prove a negative, that is to say something has absolutely no effect. He said it is possible there is no measurable effect at all if any health effect was present it is so small as not to be significant.

Relating to the health effects on flooding, Dr. Hogan mentioned Weils Disease, and this is transmitted by rats and an increased risk could occur in the presence of stagnant water. He said there is no proposal to take in food waste so there is little in the vicinity to attract vermin. Dr. Hogan said in his opinion the proposed facility will not increase the risk of Weils Disease. He said the noise impact would be considered less than significant. In summary, Dr. Hogan said his opinion was the assessed human health effects at the proposed facility are assessed as negligible.

5.1.8 Mr. Kieran Rose gave Evidence in relation to **Planning**:- (Transcript Day 1, pages 97-101)

Mr. Rose said the site is zoned 'Z6', which was to "provide for the creation and protection of enterprise and facilitate opportunities for employment creation". The lands to the north are zoned 'Z1' which was "to provide, provide and improve residential amenities". He said plans are being prepared for the redevelopment of this halting site to provide 22 new residential units and a community centre. He said the lands to the south of the site along the Grand Canal are zoned 'Z9' which was "to preserve, provide and improve recreational amenity and open space" and they are also a conservation area.

Mr. Rose said a civic amenity/recycling centre is open for consideration in a 'Z1' or a 'Z6' zone. He said in the current Development Plan that "open for consideration uses" may be permitted where the Planning Authority is satisfied that the proposed development would be compatible with the overall policies and objectives for the zone. The Development Plan policy stated that it was necessary to avoid developments which would be detrimental to the amenities of the more environmentally sensitive zone.

Mr. Rose said a wide range of recycling initiatives had been introduced to achieve targets required under the Management Plan. He noted the EIS for the proposal examined the proposed development and its possible effects with regard to human beings/health and safety, traffic, noise, flora and fauna, architectural, archaeological and cultural heritage, air, climate, landscape and visual impact, soils and geology, water and material assets. He noted the EIS stated that the **impacts will be positive** insofar as the area has been subject to large scale illegal dumping over many years. Mr. Rose said it was considered that the proposed development is in accordance with the proper planning and sustainable development of the area and the provisions of the Development Plan.

5.1.10 Mr. Burke gave Evidence in relation to **Site Investigations** as follows:- (Transcript Day 1, pages 189-191)

Mr. Burke said the site investigation report carried out in relation to Labre Park by TES was dated June 2005 and he proposed to outline the conclusions. (This document is tabbed LA03).

Mr. Burke said the material deposited within the site over an extended period of time varied both laterally and vertically across the site. He said 30 trial pits were indicated in Figure 2 of the report and 30 soil samples were retrieved to establish leaching of contaminants from the infill material had resulted in pollution of the subsoil environment. He said three boreholes were drilled to establish that leaching of contaminants had resulted in pollution of the groundwater environment. Mr. Burke said that detailed analysis of the soil

and groundwater samples indicated that the material deposited within the site have **not resulted in gross contamination** of the soil or groundwater environment. He noted that one of the boreholes had been vandalised.

Mr. Burke said following the results of the site investigation it was proposed that the material within the site **should remain in-situ** and largely undisturbed. He said the soil material is classified as inert and therefore will not require special disposal arrangements. He noted that any surface charring of the ground resulting from old bonfires or burnt-out cars should be excavated and sent off-site for specialist treatment. Mr. Burke said the development of the site would not result in any significant cumulative impact on the site or groundwater environment subject to the appropriate drainage and discharge arrangements.

5.2 Questions put to the Local Authority

Questions were put by the representatives of the objectors, commencing with questions to Mr. Loftus, who was joined by Mr. Stubbs and Mr. Rose in relation to general questions on the development.

5.2.1 Mr. Keeling asked Mr. Loftus Questions as follows:- (Transcript Day 1, pages 105-126)

Mr. Nap Keeling, representing the **Ballyfermot Travellers Action Project** (BTAP), asked Mr. Loftus if the additional site investigation report was carried out after the EIA. Mr. Loftus confirmed that this was so and that it was the site investigation report which was part of the waste licence application to the EPA.

Mr. Keeling asked the rationale for the specific site as chosen. Mr. Stubbs confirmed that the halting site had been in place since 1968. Mr. Keeling asked why over that long period it had never been proposed that a football pitch would be put on the site. Mr. Loftus stated that there was a public park within 500-600 metres and that he understood it had been deemed not

necessary to put additional open space facilities in that open ground. He said it was not suitable as it was dotted with large pylons supporting the high voltage cables. These were stated to be 220kV and they are at the upper limit of the type of cables that are used to carry power. Mr. Loftus stated that approximately 2% of this size of cables were underground and that in Europe generally high voltage cables are above ground. The particular issue is a question of cost. In relation to a further question from Mr. Keeling, Mr. Loftus said that the field was never intended as a sort of an amenity. He said the land was not zoned as open space and the issue of illegal dumping was another issue. Mr. Loftus said the part of the site that suffered the illegal dumping was on both sides of the Galback River on the north side and to a lesser extent on the south side of the river. Mr. Loftus stated that the connection with illegal dumping was two-fold, one that developing the site would reduce the opportunity for illegal dumping and the development of such sites reduces the incentive for people to dump illegally.

In relation to **traffic** generated, Mr. Loftus stated that while the amount of traffic had dropped when the charges were introduced in Shamrock Terrace, the amount of waste did not and he said it was found that people tend to combine their waste and to use one trip rather than multiple trips.

In relation to **flooding**, Mr. Loftus said that the additional hard surfacing involved also attenuation and that the major problem was the blocking of the outlet pipe under Kylemore Road by debris. He said the pipe under Kylemore Road was a 1.5 metre diameter pipe. He said the noise barrier provided between the new housing proposal and the site would provide additional flood protection.

Mr. Keeling asked if the fact that the alternative sites were all close to halting sites and Mr. Loftus said that the sites involved impinged on other residents as well. Mr. Loftus outlined the other sites in the city and pointed out that these were surrounded in some cased by settled community housing, which was quite close. He said if the alternative sites have halting sites beside them it is just a coincidence. Mr. Loftus said the one significant difference in this case

was that it had been brought to their attention that a number of people living in Labre Park actually work in the waste industry and do collect waste. He said they had, subject to EPA permission, proposed that within the site facilities would be made available for local families who are legally engaged in the waste business to deposit material at the site.

In relation to **enforcement** action taken on foot of the clean-ups in 2001 and 2005, it was confirmed that no prosecution had been taken. Mr. Loftus said that the evidence stood up, they would take prosecutions.

Mr. Loftus stated that it was the hope that it would eliminate illegal dumping in the area but this wasn't the reason that the site was being developed. He said it was part of the overall strategy to allow the City Council to collect waste in a segregated fashion.

Mr. Keeling asked about the operation of the facility, and Mr. Loftus said that the City Council would own the facility but a decision had not been taken as to operations.

In relation to a question on U-store, Mr. Stubbs stated that additional information had been requested by the Planning Authority in relation to the application for that site.

In relation to the road at the western end of the site beside No. 24, Mr. Loftus and Mr. Rose stated that the zoning hadn't been changed in relation to it and that whether it was deemed to be part of the 'Z1' or 'Z6' zonings it was a permissible development.

5.2.2 Mr. Declan Brassil, on behalf of **C&C Ireland**, asked Mr. Loftus Questions as follows:- (Transcript Day 1, pages 126-141)

Mr. Brassil asked Mr. Loftus about site selection and consideration of alternatives. The site selection criteria, which were given in six points in Section 2.5.3 of the EIS, were the subject of questioning by Mr. Brassil of Mr.

Loftus. Mr. Brassil asked was the **site selection criteria** prepared having regard to effects on the environment, Mr. Loftus said that the potential for the proposed development to improve the general area was looked into. Mr. Brassil stated that the mandatory requirements for the consideration of alternatives, having regard to environmental effects, did not appear to be present in the EIS. Mr. Loftus said that none of the sites that were identified as being alternative were considered suitable and were not further analysed or investigated. He said they didn't manage to identify any alternative sites which would be suitable for the development. Mr. Brassil said that he would submit that the EIS is invalid on that basis. He asked why the requirement for the site to be owned by the Council was inserted given the Council's powers of CPO. Mr. Loftus said that the sites in the Council's ownership were looked at because they didn't have to go through CPO procedure. In relation to the sites not being currently utilised, Mr. Brassil asked why sites in the ownership of the Council weren't considered if there was use made of them. Mr. Loftus took an example of a site owned by the Water Services Division which would have already a beneficial use.

Mr. Brassil referred to the four alternatives assessed in the EIS. He suggested only two sites were assessed because two were ruled out on the basis of size. Mr. Loftus said that size is a factor but that wouldn't mean that they could not use small sites. He said they would not be suitable for recycling centres.

In response to further questions from Mr. Brassil, Mr. Loftus said there were five different areas in the City Council and the Kylemore Road and the Killeen Road provided accessibility as the site was close to major traffic routes. Mr. Brassil drew attention to the two physical barriers of the canal and the railway line in the area. He asked Mr. Loftus about Criterion 5, namely poor potential for development, and noted that the site was rezoned 'Z6' in the current Development Plan. He said this had been 'Z7' in the previous Development Plan and at this stage Mr. Rose answered that 'Z6' would be a more modern zoning than 'Z7' and would allow offices and so on. Mr. Keeling noted that other areas of the city had remained 'Z7' and that 'Z6' would envisage a higher density of development and a more intensive employment use than the

'Z7' zoning that the site previously had. In relation to a question on the development being enhanced over the previous Development Plan, Mr. Rose said that argument could be made but it was up to the market to decide the value of a piece of land.

In relation to the final criterion, Mr. Keeling suggested that the EIS was unclear in respect of the impact of illegal dumping. He asked was the clean-up taken below ground level and Mr. Loftus said it wasn't an environmental remediation of the site. He said in general clearance was above existing ground levels but there would be some interference with the surface levels when that was being carried out. Mr.Loftus said that in relation to the change from 'Z7' to 'Z6' zoning, the site itself hasn't changed. He said if anything the disadvantages that the site had suffered from traditionally still exist.

Mr. Brassil asked about page 184 of the EIS (12.4) and in particular the statement that an assessment known as a '**fit for purpose risk assessment**' should be carried out. He suggested that the City Council hadn't established that the site was fit for purpose as it stated that it might have to be remediated throughout during the development. Mr. Loftus said they had felt confident the site would not cause major problems and said there was a witness available in relation to site investigation. Mr. Brassil asked if it was appropriate that a justification for the development was the remediation of the site being contingent upon the development proceeding. Mr. Loftus said that in his view the site was suitable for the proposed development. He said based on the knowledge of the site at the time they were confident that they were not going to find any major problems at the site on foot of detailed site investigations. He said that as most of the identified material had been there for a long time, most of the degradation would have occurred to that waste.

5.2.3 Mr. Ronan Hallissey, on behalf of the **Ballyfermot Travellers Action Project**, asked Mr. Loftus Questions:- (Transcript Day 1, pages 141-171)

Mr. Hallissey was joined in some of the questions by Ms. Madden and Ms. Lucey.

Mr. Hallissey asked would it not be more correct to get proper management of the site as a first priority. Mr. Loftus referred to the estimated 2,800 tonnes removed in the previous clean-up and referred to the photographs of the site. He said he was trying to illustrate that one of the benefits of managing the site would be an overall beneficial impact on the local community in comparison to what is there at the moment.

Mr. Hallissey asked about the grazing of horses and Mr. Loftus said that the City Council never gave permission for the grazing of horses on the property. He said the halting site itself was never designed with animal husbandry in mind.

In relation to Policy R12 of Dublin City Council Development Plan and the aim to enhance the general environmental health of areas occupied by residential communities, Mr. Rose replied that the type of facility proposed is open for consideration in a residential zone or an employment zone. Regarding Policy 19 of the Dublin City Development Plan, which recognises separate identifies, cultural positions and history of travelling people, Mr. Loftus said that one of the proposals in this project is that they would provide local deposit areas for people engaged in the waste industry and travellers have historically been engaged in the waste industry. He said in essence provision was being made for local community in this facility. Mr. Hallissey said he accepted that the proposed development for the extension of Labre Park is a good development and it would be very welcome by the residents of Labre Park. However, he said that the small residential area will be isolated or segregated. He said the cul-de-sac is not the issue, but what is surrounding the proposed development is the issue. Mr. Loftus said that developing the site in

a managed fashion will only improve the environment for the locals who reside there.

Ms. Paula Madden, from the Ballyfermot Travellers Action Project, asked what is going to happen as a consequence of this development. She said it is a long road with 30 houses on one side and there is now going to be 22 more new units of accommodation. She said behind the original 30 houses there are industries, factories and at the end of the site is Thornton's trailer park. She said there was going to be no green space at all for people to see. She said that while people were being given something on one hand it is being taken away on the other. By way of response, Mr. Loftus said that the 3 metre high wall at the back of the properties is not an enormous height of wall to be put at the end of a back garden. He said the recycling centre will be close to the new houses in Labre Park, but some existing recycling centres are closer to existing houses. He confirmed to Ms. Madden that the housing development is at a pre-Part 8 submission and will shortly be lodged. He said the problem with a see-through wall or railings, this does not act to attenuate sound, which a solid wall does. He said there is a balance between privacy, quietness and views.

Ms. Lucey said she wished to clarify that in fact there would be now industrial development on three sides if the development goes ahead.

Mr. Deegan confirmed at this point that the consultation had taken place at the Ballyfermot Civic Centre with local residents in Labre Park, at which about 40-45 people had attended. Mr. Loftus confirmed that it would be more correct to call the land swap with Thorntons a kind of rationalisation of the boundaries. He said Thorntons had a triangular shape to the land and they drew a straight line down, which meant that they swapped from one side to the other. He described it as a squaring off of boundaries.

In response to a question from the Inspector, Mr. Loftus said he would prefer if they could have the community centre built before the access road goes through. He explained the proposed sequence of building, which was that the 12 houses at the western end of the new development were to be built first and

then the eastern and finally the community centre. He said the community centre will be the last unit to be built in the development within Labre Park and that was why they had to keep the existing one open in the interim period. He said there would be 12 months of a gap between the completion of the civic amenity site and the completion of the new community centre, but also there would be a construction period, so there could be up to three years at which the children would have to cross the road to the community centre.

Mr. Hallissey pointed out there were 151 children under 18 years of age on the site. Mr. Loftus said he understood the younger children use the community centre attending the crèche. Ms. Madden stated that 41 children use the Barnardos services, which is a pre-school, and there were 37 children that use Exchange House and that is use for other activities as well. Mr. Loftus said that a footbridge had been discussed. He said he did not know if that was the appropriate or best solution and another solution was to put in a signalised crossing which would be more appropriate or, if the timing would allow it, putting in the equivalent lollipop lady at that location. He said it would be the City Council's intention to allow children to cross safely at that location however it is necessary to do it. He said he felt confident that they could dealt with it to the Agency's satisfaction. This was in response to a comment from Ms. Madden that the measures might not be in line with the guidelines of Barnardos and Exchange House.

She said the period would probably be about the next three to four years. Mr. Loftus said he did not think it would be three or four years, but he said construction traffic would be there before the public traffic comes onto it. He said it would be easier to talk to contractors as they would work to a defined plan, which would allow safe crossing at that location. Mr. Loftus said in addition that they would engage at local consultation and they would certainly set up a **liaison committee** with the local community to ensure that when the facility is being built all of these issues are dealt with appropriately. Mr. Loftus suggested that where the community centre is located at present has a lot of dumping around it and Ms. Madden said it was welcome that the new centre is further up the site.

In response to a question from the Inspector, Mr. Loftus said that construction access could not be achieved via either the Kylemore Road or the Killeen Road.

5.2.3 (Continued) Additional Response in relation to Community Centre:- (Transcript Day 2, pages 37-40)

Mr. Hallissey said that they had checked with Barnardos, who run the after-school and pre-school service, and they said they would be very unhappy with the idea of a road in operation between Labre Park and the community centre, even temporarily. He said all access and egress to the site must be under safe conditions in their health and safety policy and he thought it was very likely that they would have to pull their childcare services if that situation exists. Mr. Loftus responded to say that the sequence of construction within Labre Park would mean that for a period of time there is going to be heavy construction traffic up at that end of the site building the new houses in quite close proximity to the community centre because of the way the phasing is set out.

Ms. Madden said that at no point had it been suggested in the discussions on the redevelopment of Labre Park, that the other development was going to go ahead before the redevelopment of Labre Park. Mr. Loftus said that the architects working in the Labre Park scheme said that the sequencing involved the construction of the community centre last. Ms. Madden said that at no point did they feel that there was going to be any risk to the activities that are happening in the community centre in terms of the proposed civic amenity centre. Mr. Hallissey confirmed to the Inspector that all the children attending the school are from Labre Park.

5.2.4 Mr. Fergus Hayes asked Mr. Deegan Questions as follows:- (Transcript Day 1, pages 172-176)

Mr. Hayes, of **URS Environmental Consultants**, in association with Mr. Brassil and on behalf of C&C Ireland, asked Mr. Deegan about the extent of the queuing on Killeen Road and also the breakdown of traffic using the facility. Mr. Deegan said they had made an assumption that all of the delivery and service vehicles would arrive in the p.m. peak, which he said in reality had a rare probably of happening. He told Mr. Hayes that the figure for the junctions analysed for 2014 represented 3.6% of the network flows. In reply to Mr. Hayes, Mr. Deegan said that the traffic using the facility at quieter times of the day would not cause a problem outside of the peak. In relation to the junction of the Killeen Road and Nangor Road, it was established that URS had carried out a junction analysis on the junction and in the meantime this had changed from a roundabout to a signal-controlled junction. In this regard, Mr. Deegan said that he considered that the study of that intersection served little in the context of their development because the traffic generated by the proposed scheme was so well dissipated by Killeen Road it was towards the level of being negligible in its effects on that junction.

5.2.5 Questions were put to Mr. Deegan by Mr. Hallissey, the Inspector and Mr. Muldowney as follows:- (Transcript Day 1, pages 177-187)

Mr. Hallissey asked Mr. Deegan about the presence of a lunchtime traffic flow peak in certain areas of Ballyfermot. This question arose from the Ballyfermot Area Noise Assessment Report and Mr. Deegan said that the traffic surveys on the Killeen Road and the Kylemore Road indicated the worst-case scenario to be the p.m. peak. He said for Killeen Road there is a definite dip between the a.m. and p.m. peak. He said Kylemore Road work separately in a different way and indicated a peak between 1.00pm and 1.30pm, which was a bit different to the peak experienced in the Ballyfermot Area Noise Assessment Report. Mr. Hallissey asked about the choice of 8th

December as a date for a traffic survey and Mr. Deegan agreed that on that day the schools would not be open.

In relation to the contribution made by the potential new traffic arising from the Thornton's trailer park, Mr. Deegan said that as they had taken all the delivery trucks arriving in the p.m. peak hour, which was unlikely, that additional trips would have been covered.

Mr. Deegan confirmed to the Inspector that Killeen Road attracts more traffic but that the main flows on the Kylemore Road are higher.

Mr. Francis Muldowney, Kylemore Avenue Residents Association, asked Mr. Deegan about heavy lorries passing through Ballyfermot, and he pointed out that there was a 3 tonne limit on the roads there. Mr. Muldowney said that trucks were coming through towards Thorntons all the time and Mr. Deegan said that the majority of the trips associated with delivery of waste materials to this facility would be from cars rather than heavy goods vehicles.

5.2.6 Questions were put to Dr. Tonra as follows:- (Transcript Day 1, pages 202-208)

Mr. Hallissey referred to the figure of 31.8µg/m^3 of nitrogen dioxide recorded at the Killeen Road. Dr. Tonra said the air quality study referred to was carried out during the winter, which would also have contributions from space heating in the surrounding area. He said on an annualised basis, which is the criterion set by the EU, it would be much less. In reply to Mr. Hallissey, who said the conclusions were different, Dr. Tonra said that there had been several attempts made on different fronts to reduce the emissions of vehicles throughout Europe. The said the emissions from vehicles are dropping year on year. He said that although traffic will have increased by 2014, the actual emissions for vehicles will have dropped. He said the effect of the proposed development on air quality would not significantly increase the negative impact on air quality. He stated that air quality modelling at Labre Park took account of quality arising from the emissions from Kylemore Road, Killeen

Road and the new road at the back going straight into the site. In reply to a question from Mr. Hallissey, Dr. Tonra said that he wouldn't expect there would be major hold-ups and queuing at the gate of the facility.

In reply to a question from the Inspector, Dr. Tonra said that deposition average is over a month for dust. He said he has seen dust standards quoted quite regularly recently. He also stated that limits for PM_{10} were due to be reviewed downwards in 2010.

5.2.7 Questions were put to Mr. Doyle in relation to Noise Issues as follows:- (Transcript Day 1, pages 208-230)

Mr. Hallissey asked about a recorded measurement of 69dB for a receptor 20 metres away on Shamrock Terrace. Mr. Doyle said this was measured at Shamrock Terrace during the removal of skips and heavy vehicles operating continuously on-site. He said the calculated sound level for Labre Park was 58dB and with mitigation with the 3 metre wall it would be 53dB. He said that the range as presented in the EIS was between 48 and 53dB with mitigation.

In relation to the **attenuation of sound** in trailers or caravans as opposed to brick houses, Mr. Doyle said that the sound reducing properties of a building are basically a function of whether the windows are open or not. He said that the Building Regulations Part E deal with sound transmitted from one residence through a party wall to the other and does not deal with environmental noise.

Mr. Doyle stated that the sound reduction through an open window which was open 2-3 inches for ventilation might be 15dB. If the window was closed it would be 30dB, he considered. In relation to the pre-school, Mr. Doyle said that the WHO specification of a decibel level of 35 is for inside the classroom. He said the 53dB outside would be considered relatively moderate noise exposure. In reply to a question from Mr. Hallissey, Mr. Doyle said regarding outdoor play areas, the noise exposure might be slightly in excess of 50dB,

which it is at present. He said it would probably increase by a decibel or two but would still be within guideline levels for playgrounds.

In relation to the design of the community centre, Mr. Doyle suggested that permanent ventilation on the walls with trickle ventilators and acoustic attenuators would be recommended.

Mr. Muldowney asked Mr. Doyle about concentration levels of children during classes, and Mr. Doyle stated that he was in doubt that if the building is properly designed that it would give a very good indoor noise environment. Mr. Muldowney asked would the wall which is proposed keep the noise level down when the skips are in action. Mr. Doyle said the average noise level would be within criteria, but the sounds could be audible inside the classroom for a short duration.

Mr. Hallissey asked Mr. Doyle about the interim period and the analysis carried out in relation to the existing community centre. Mr. Doyle said this had not been analysed. He said to the best of his memory, at the time of preparation of the EIS, he had assumed that the community centre was moving somewhere. He said the pre-school would have to operate during the construction phase and during the first year of operation so this has not been assessed. He stated that this would be something that would need to be looked at. He said mitigation measures in terms of that one year period when the existing pre-school would be exposed to high noise levels as such could be looked at as an extended construction period of say commissioning period for the centre.

In relation to the Ballyfermot Air Quality and Noise Assessment Report, which stated that no further negative impacts and noise levels should be accepted on the Kylemore and Ballyfermot Roads, Mr. Doyle told Mr. Hallissey that the cause of the high noise levels was the high volume of traffic or the existing traffic on those roads. He said the traffic impact of the development would be negligible in terms of noise levels.

Ms. Sinead Lucey asked for clarification on the noise level and Mr. Doyle said this was 53dB while the facility is operating, He stated that the predictions were calculated by computer and the assumption was that the noise generation could occur anywhere on the site. He said it was assumed that the source of noise was spread out throughout the amenity facility and the answer that came out was 53dB. On a related question from Mr. Keeling, regarding the running of the site, Mr. Doyle said that one should try to avoid continuous noise generation right beside the boundary. He said for instance a particularly noisy activity could be emptying glass. He said it would be a good idea to put those bins a bit further away from the houses. He stated that the calculations of the numbers being spoken about at that time referred to the currently empty site just north of the boundary of the proposed civic amenity facility.

Ms. Madden asked Mr. Doyle if Labre Park was going to be redeveloped on a residential basis was there any survey done in relation to the noise impact of both developments going on at the same time. Mr. Doyle said he had not assessed the construction phase in this respect.

5.2.8 Dr. Sheridan was Questioned in relation to Odour as follows:- (Transcript Day 1, pages 231-238)

The Inspector asked Dr. Sheridan on what basis had he stated in his evidence that the odour abatement system recently installed in Thorntons is successfully treating odour emissions from the facility. Dr. Sheridan said that was on the basis of five individual EPA audits that have been done on the site and they said they had detected no odour. He said this information was on the public file as well.

Mr. Devoy, of Kylemore Residents Association, asked Dr. Sheridan how the new system was going to work as there was a bad smell coming from Thorntons on that particular day. Dr. Sheridan said there was no odour abatement system proposed for the civic amenity centre because there are fundamentally two different types of operations. He said the potential for odour is eliminated because there would be no odour emanating from the

material. He said he mentioned Thornton's abatement system because it had been raised in the C&C statement.

Mr. Hayes asked Dr. Sheridan a question in relation to the survey of the site with regards bio-aerosols. Dr. Sheridan said bio-aerosol data is very limited at the moment world-wide and not only in Ireland. He said the two bio-aerosols of concern would be mesophillic bacteria and aspergillus. He said as there was no composting on-site the risk associated with the micro-organisms is very much reduced as the waste was to be deposited in an enclosed vessel and transported off-site approximately every 48 hours. Mr. Hayes asked why was a baseline carried out if there wasn't going to be an impact and Dr. Sheridan said it was now standard practice and was requested by the EPA.

Mr. Hallissey asked about the elevated levels of aspergillus and mesophillic bacteria recorded at location ID Lab B3 (Ref. Table A.9.3 EIS Aspergillus 604, Mesophillic Bacteria, 2317). Dr. Sheridan said that one suggestion that the wind was blowing downwind from Bluebell Road. He said it was blowing straight across the Weir Bridge, the weir from the canal where the overflow water was flowing into the channel and that was one suggested reason. Mr. Hallissey said it was a common complaint in Labre Park that odours are a problem. He explained it was odours arriving in Labre Park from elsewhere. Dr. Sheridan said that he did not do hydrogen sulphide baseline testing as the materials would have negligible odour emission. In relation to Dublin City Council's street cleaning vehicles, Dr. Sheridan said the material was going to be deposited within an enclosed container as far as he was aware.

5.2.9 Questions to Dr. Hogan in relation to Health Effects:- (Transcript Day 1, pages 238-241)

The Inspector asked Dr. Hogan about the interacting of the dust and the powerlines and he said it was based on the cyronine theories, where charged particles could attract environmental pollutants. Recent studies have said there might be a link between powerlines and a type of Cancer, but other letters to the British Medical Journal would say that it doesn't show that,

because the people looked at living close to the powerlines were too dissimilar to the people who lived away from the powerlines. In relation to the environmental pollutants in the air, Dr. Hogan said that in bringing in green waste and street cleaning waste that neither are inherently highly intoxicant and they would be enclosed. He said he could not see medically how, even assuming the ionising theory was correct, there would be an adverse health effect.

In relation to emissions from vehicles, Mr. Hallissey asked Dr. Hogan if there was evidence of higher levels of respiratory tract infection and asthma. Dr. Hogan said with regard to general vehicular emissions this would be covered by emission levels and modelling spoken of previously. He said he hadn't assessed it because the contribution to total traffic at the facility would be relatively small. He said in an urban environment it would have a very, very small effect and might be insignificant.

5.2.10 Questions were put to Mr. Phelan in relation to Landscape and Visual Aspects:- (Transcript Day 1, pages 245-245)

In response to a question from the Inspector, Mr. Phelan said that a civic amenity site is essentially a **large open yard** and he would attempt to soften that up by including a few trees or small landscaped areas. He said there is also a line of trees on the northern side of the boundary wall. This was in order to lessen the impact of the screen wall that was required for sound attenuation. He said they were also looking at increasing the vegetation on the canal-side. Mr. Phelan explained that the trees would be outside the wall and there would be a requirement to leave space to enable cleaning of the stream along the line.

In reply to a question from Ms. Madden in relation to the location of the trees, Mr. Phelan said the proposed new residential units for Labre Park would have a rear boundary wall. Then there would be a space between that and the Galback Stream. He said there was 3-4 metres of space that has been allowed so that the maintenance of the stream can continue. Mr. Phelan said the trees

would be immediately in front of that. He summarised by saying there would be a stream and then the access for maintenance, the line of trees and then the 3 metre high acoustic barrier. The wall running along the existing community centre would be 3-3.5 metres high.

Ms. Madden asked about the heritage walkway along the canal and Mr. Phelan said that for residents in general the existing access to the canal walk will not alter.

5.2.11 Exchange of Information between the Local Authority and the Representatives of C&C:- (Transcript Day 2, pages 5-13)

Mr. Brassil clarified that a **submission** was made to Dublin City County Council on **23rd April, 2004**, in connection with proposed Draft Variation No. 48 to the Dublin City Development Plan, which had proposed the rezoning of Areas A and B at Kylemore Park and Labre Park, Dublin 10. This proposal was for the provision of a trailer parking waste management services depot and access to the proposed civic and amenity recycling centre. The submission stated that C&C Ireland source large volumes of groundwater as well as public water supply to use the manufacturing of their drinks products. This equated to 200 million litres per year. The submission stated that it was of concern that the proposed facilitation of this waste facility in close proximity to the drink manufacturing plant increases the potential of contamination of the local groundwater supply. It was clarified that this was made to the Planning Department and referred to Labre Park and Kylemore Road. Mr. Brassil said the person who prepared the submission stated that it had been on the public domain, that there was a well on-site from the previous submission. He said it was only subsequently when URS undertook a review of the EIS for the purposes of the hearing that it was established that the well may not have been identified and not assessed in terms of potential impact on the well. Mr. Brassil said that this would not probably have been on the file. Mr. Brassil said that this well was in use since 1968. He confirmed to Mr. Loftus, who asked him questions on the matter, that no particular issues with the quality of the water were present to the best of his knowledge. He said the

water is treated before it is actually used in the process. He said the well is in bedrock and is about 55 metres deep. Mr. Loftus asked Mr. Hayes if the well as currently situated was fairly well protected from contamination from ground sources and surface sources. Mr. Hayes said that he would agree with the information with regard to the site characterisation as being in the EIS. He said he had questions of the site investigation report and if there had been a fuller explanation of all this in the EIS it may not have been an issue for his client. Mr. Brassil referred to the submission document and said there were only two paragraphs relating to the well in the document.

Mr. Loftus asked could he see submissions so that his expert witnesses could respond in case there was extra information involved.

5.2.12 Mr. Burke was asked Questions as follows:- (Transcript Day 1, pages 191-201)

Mr. Hayes asked Mr. Burke if he could establish the direction of groundwater flow on the site. Mr. Burke said that had not been established. He said the person who carried out the actual site investigation was Mr. Mark Conroy, who was not available on that day. (Mr. Conroy attended on Day 2 of the hearing).

Mr. Hayes asked does this report on site investigations constitute the risk assessment which was actually mentioned in the EIS. Mr. Burke said it was a factual report on the material that was buried on the site. He said as far as he was aware no risk assessment had been carried out. He said in the conclusion the majority of the material is seen as inert.

In relation to sensitive receptors or users of groundwater, Dr. Tonra said that although he had not written that section of the EIS his understanding was that there was no groundwater abstraction within a mile of the site. Mr. Hayes said that C&C have a major abstraction 200 metres from the site. Following a number of questions involving Mr. Loftus, Mr. Hayes and Mr. Burke, Mr. Loftus said the material that was deposited over the last 50 years has been

impacting, or not impacting as the case may be, on the groundwater that is currently being used. He said the City Council proposals would not impact on the groundwater source in any way. Mr. Hayes said he would have expected that there would be some sort of analysis of the local groundwater situation and following further questions it was thought that the reference of W09 might have referred to the C&C well as it is listed with the Geological Survey of Ireland.

Mr. Hayes asked about gas and Mr. Burke said that at the time of the site investigation report no gas readings were taken.

Mr. Keeling pointed out that the Board could refuse permission based on environmental matters and that insufficient information, regardless of any application to the EPA, would be justification for a refusal.

Mr. Loftus said that reference was made to the known well points as listed by the GSI. Questioning on site investigation was suspended at this point to await the availability of Mr. Conroy on Day 2 of the hearing.

5.2.13 Questions were asked of Mr. Mark Conroy, TES Limited, in relation to the Site Investigation Report of June 2005: (Transcript Day 2, pages 14-31)

Before commencing with questions to Mr. Conroy, it was established between Mr. Loftus and Mr. Brassil that the groundwater source for C&C was at 200 million litres per year, which was equivalent to 500-600 cubic metres per day or 50-60 cubic metres per hour on an hourly basis. It was also established that C&C take 700 cubic metres per day from the public water supply on average.

Mr. Hayes asked Mr. Conroy questions in relation to the factual report on the site investigations of June 2005. He said the report which he had received the day before went some way towards answering some of the questions. In relation to risk assessment of the site, Mr. Hayes asked was it Mr. Conroy's opinion that there is now **no need for a risk assessment**. Mr. Loftus said that the EIS had stated that should contaminated material be found in significant

concentrations it is recommended that a site specific risk assessment be carried out. He said that his understanding of the situation has seen that significant contamination was not found, therefore a site specific risk assessment is not necessary. Mr. Hayes quoted Point 13.5.4 of the EIS, which referred to risk assessment. He also asked a question about the construction of the wells and the detail of screening and where the groundwater was actually taken from. Mr. Conroy stated that Appendix A of the Borehole Log gives details of well construction. He said the method of drilling was rotary drilling and details were given on the stand pipe retrofit that was installed to each borehole.

Mr. Hayes asked was the groundwater a mixture of perched water and bedrock. Mr. Conroy said it was and the drilling continued to bedrock as they wanted to prove definitely where rockhead was within the site. He confirmed that groundwater is across the bedrock interface. He stated the standard quality assurance procedures were followed in relation to sampling. Mr. Conroy confirmed to Mr. Hayes that the original plan was to have three boreholes, but one was vandalised. He said the site investigation was to characterise the setting of the site. He did not have information on groundwater flow direction, but it would be his opinion that the groundwater flow mirrors the surface water and this would be towards the Cammock River.

In relation to landfill gas, Mr. Conroy stated that no degradable material was encountered across much of the site and therefore it was felt there was no requirement to determine landfill gas within the site. He told Mr. Hayes that any municipal waste encountered had fully degraded. Mr. Hayes asked did he think it posed any sort of a threat to neighbouring properties, and Mr. Conroy said he did not think so.

In response to questions from the Inspector, Mr. Conroy said there were elevated parameters in some boreholes of nickel, manganese and ammonia. He said the nickel and manganese were not significantly elevated and it could be naturally occurring. In relation to the ammonia, he said this forms in anaerobic conditions with low oxygen in the soil which would concur with the site characterisation.

Mr. Conroy stated that the spacing of a 25-30 metre grid across the site was a focused site investigation where you have a knowledge of something on-site and you want to determine it. He said it was a follow-on from the EIS effectively. He said the original investigation consisted of six trial pits and he had carried out 30 boreholes. He said they were deeper and there was no gross contamination. Mr. Conroy explained that gross contamination would be above the intervention level as per Dutch guidelines. He said the parameters he would look for, for contamination, would be hydrocarbons and if there had been industrial sludge he would expect volatile and semi-volatile organic compounds. He listed nepheline and pyrene as parameters to watch for.

The Inspector asked would the report be deemed to be more comprehensive than a factual report as stated. He said the conclusions would and in relation to the quotation that "owing to the results of site investigations, it is proposed that materials within the site should remain in-situ and largely undisturbed", Mr. Conroy said that as there was not contaminants found above levels that would require remediation, it was felt to leave the material in-situ would be the best use. He said he would assume that the construction would be to protect the site from any uncontrolled discharges from the site. He said the soil would be at no increased risk or no reduced risk. He said it is predominantly a clay fill material. He said for clarity there is no problem with the site. The material that had been infilled would not have to be removed down to the natural subsoil or natural soil material.

Mr. Hayes asked Mr. Conroy if the groundwater flow direction was established it could give his client a lot more piece of mind. He asked was there a possibility that the wells that were installed have created a preferential pathway for the contamination of the bedrock aquifer beneath the site. Mr. Conroy said the boreholes have straddled the subsoil and bedrock, but the findings of the site investigation is there is no contaminants. He said therefore he wouldn't perceive a risk to the aquifer. He said that there had been no follow-up monitoring of the well since the production of the site investigation

report. On a further question from Mr. Hayes, Mr. Conroy said it was factually true that there are no boreholes to the north.

For clarification, Mr. Loftus asked Mr. Conroy was it his opinion that the groundwater flow was to the south to the Cammock. Mr. Conroy said that was his opinion. It would be the principal surface water channel in the region and that would be the major groundwater discharge point.

5.2.14 Questions were put to Dr. Fergal Callaghan in relation to Site Investigations as follows:- (Transcript Day 2, pages 31-36)

Dr. Callaghan confirmed to the Inspector that he produced the original soil and water chapters of the EIS, which related to site investigations also. He said the exercise was largely a desktop exercise. The Inspector asked about comments in the EIS mentioning "foul smelling" and "powder" and Dr. Callaghan said that that was why they recommended further investigation as being necessary. Dr. Callaghan said that the site investigation report of June 2005 would have followed the recommendations that he had made.

Mr. Hayes asked about landfill gas survey and risk assessment, and Dr. Callaghan said that what Mr. Conroy had said in relation to the 30 trial pits on the site which in his opinion was a comprehensive site investigation, he thought he would agree that it was a comprehensive grid pattern plus the boreholes which were also carried out. He said that if the people who did the physical examination were of the opinion that landfill gas monitoring was not required based on what they were saying, he would certainly concur with that.

Mr. Hayes said that there was a plot of land going to be developed for residential use very close by and it would be a recognised issue that landfill gas would be one of the things that would have been checked. Dr. Callaghan said he could only go on the fact that the people on the ground made a decision based on what they observed and he was quite happy with that decision.

Mr. Conroy took up the point raised by Mr. Hayes and said that the site investigation undertaken within the site were fit for purpose and whether it was for residential or for industrial there would be no deviation in the site investigations undertaken. Mr. Hayes pointed out that it was specifically recommended in the EIS and not discussed at all in the site investigations. He said he was not necessarily disagreeing but it was hard for anybody reading information to make sure.

5.3 Submissions

Submissions were taken from the objectors and are set out in the paragraphs below.

5.3.1 Submission by Mr. Declan Brassil as follows:- (Transcript Day 2, pages 41-60)

Mr. Brassil stated that Declan Brassil & Company, Chartered Planning Consultants, and URS Environmental Consultants had been retained by C&C Ireland and a submission would be made by himself and by Mr. Hayes and Mr. McCann of URS. The submission is tabbed Sub 01, a summary of which is as follows:-

- The EIS is invalid due to insufficient and inadequate information with reference to Schedule 6 of the 2001 Regulations.

- C&C has been in operation since 1968 at the location and is accredited under ISO9000 of 2000. The EIS is inadequate in relation to omissions on potential impacts, transportation and cumulative impacts of waste processing facility in the area.

- The EIS gives site selection criteria, none of which relate to environmental effects. Failure to comply with paragraph 1(d) of Schedule 6 of the 2001 Regulations.

- Inadequate information in the EIS in relation to site investigations, description of site context and lack of reference to large scale waste processing facility 300 metres to the north-west of the subject site. No mitigation measures and no provision for quarantine area for unacceptable waste. Management issues not adequately considered.

- No impact assessment on C&C as a potentially sensitive receptor is contained in the EIS. Particular reference to the groundwater environment and a well with up to 56 cubic metres per hour abstraction.

- No assessment of the incidence of disease vectors, such as birds and rodents.

- The approach to carrying out assessments at a later time in relation to site is not acceptable. The Council is obliged to remediate its site now.

- It would be prudent to require construction and demolition waste to be stored in skips which can be covered to prevent dust generation.

- Inappropriate approach to have the City Council refer mitigation measures in relation to drainage to their own Drainage Department.

- Inadequate assessment of inter-relationship of factors.

- EIS Amendment Regulations, 1999, are quoted as being relevant and these have been replaced by the 2001 Regulations.

- The subject site does not comply with the proximity principle.

- Accessibility and connectivity of the site to the community is extremely poor.

- Inappropriate for the local authority to justify the facility on this site by reason of its failure to take or initiate the appropriate legal procedures in respect of illegal activities on this site in the past.
- Requirement for a comprehensive management plan to mitigate against identified significant potential impacts.

- In any permission a condition would be required for the formal approval of a management plan prior to commencement of development.

5.3.2 Submission by Mr. Hayes in relation to Traffic and Transportation:- (Transcript Day 2, pages 60-64) (See also written submission tabbed Sub 03)

Mr. Hayes submitted that the EIS fails to address the impacts of the proposed development on the local road network for the following reasons:-

1. The road network assessed is too confined.

2. Trip generation was guesstimated.

3. Mitigation measures are either already in place or are aspirational.

4. No consideration given to parking, stacking or queuing requirements.

Mr. Hayes said that junctions of the Killeen Road/Nangor Road, Kylemore Park, Naas Road and the Ballyfermot Roundabout should have been assessed.

The absence of surveying data and reference to TRICS database and certain assumptions fails to address the impact of the development.

Specifically, the stop line on Kylemore Park North is unlikely to relieve predicted delays and congestions and the proposed railway bridge on Killeen Road would reduce rather than increase visibility for right-turning vehicles.

5.3.3 Mr. Nap Keeling on behalf of the Ballyfermot Travellers Action Programme made a Submission:- (Transcript Day 2, pages 65-66 and 69-77)

Mr. Keeling said that he was relying on his submission of 1st March, 2005, which is on the file. (This is tabbed Sub 04 and is on the main file cross reference 2 on submission). Mr. Keeling noted that the submission had six categories followed by a conclusion and there was a further letter of 14th March with three extra pages. Mr. Keeling said he wished to make some additional points by way of summary.

Mr. Keeling said that one could not have a principled objection to the idea of recycling in a modern day community. However, he said anybody was perfectly entitled to have an objection in relation to the location of a particular recycling unit. Mr. Keeling submitted that there were 150 children and roughly 250 people in total directly beside this particular unit. He said the proximity of those people is immediately striking and he considered this was unnecessary. In relation to alternative sites, he said if one took a cynical approach one could said there is a ticking of a box exercise where simply two sites that were known to be too small were suggested. He said it was a remarkable coincidence that all three sites were right beside halting sites. He said the cleaning up of the site was something that people were grateful to the City Council for and he referred to the suggestion that replacing what was considered to be a bad thing with a good thing was being put forward.

Mr. Keeling submitted that the travellers receive a level of racism and ill and mal-treatment and do not feel comfortable going down to the local park where, at least anecdotally, there is a record of anti-social behaviour. He said the question of segregation and isolation has come up and while lots of people would like to live in cul-de-sacs in this situation a small area is surrounded by industrial land.

He submitted that the field could have been used for other things. Effectively this is surrounding the area with relatively high buildings on this already

concrete cul-de-sac. In relation to flooding, Mr. Keeling said that it is not something that occurs irregularly, but at least two to three times a year.

A serious planning concern is given rise to by the effect on the community centre. Mr. Keeling said he noted the question put by the Inspector in this regard and in particular the sequencing of the development of the community centre which gives rise to most concern.

Mr. Keeling submitted that while there would be certain disruption with the redevelopment, it is the combination of the development on the halting site and the development of the amenity centre that gives rise to most concern.

Mr. Keeling submitted that the adequacy of the EIS was in question and he submitted that under Section 175 of the Planning Act the Board are perfectly entitled to refuse permission based on the inadequacy of the environmental information put before it.

In conclusion, Mr. Keeling set out some possibilities. He said while emissions could not be conditioned, other conditions could be attached to the permission that might make this development more acceptable, at least to the residents of Labre Park. He said in particular he would like to see a condition dealing with the school and the community centre and the sequencing and the protection of the children during the combined development period. He said he would like to see Dublin City Council being brought into communication.

Mr. Keeling said that the field at the moment is the only green area in which the residents feel comfortable in and have used for 40 odd years. He said he had to express disappointment that despite this fact they were not given a right of first refusal. He said what is there now is the death-knell in terms of the development of the site for future populations. He said this included and exacerbated the potential of isolation and segregation of the site.

5.3.4 Submission by Ms. Helen Connors:- (Transcript Day 2, pages 66 and 67)

Ms. Connors said she was a resident of Labre Park and was rearing seven children there. She asked what impact psychologically would the development have on the children of Labre Park. She said when people first moved in there were no factories. Ms. Connors said that there were areas of green space and the photographs had only shown parts of dumps and walls. She said industry and factories surround the area and it was going to be like a prison without a sentence.

5.3.5 Submission by Ms. Breda Berry:- (Transcript Day 2, page 68)

Ms. Berry said she was concerned about the proposal to take the existing community centre away and use it as an office. She said that for the past few years it has been up the road but it is only now that it is really making an impact on the site with the children. She said at this stage there are children going into first year of secondary school and that had never happened before. She said it was all because of things like the homework clubs, after-school groups and Barnardos. The segregating of the site by boundary walls, she said, was going to make a very big impact on them.

5.4 **Closing Submission by the Local Authority** (Transcript Day 2, pages 77-82)

Mr. Loftus, on behalf of Dublin City Council, stated that the predicted impacts had been looked at in the EIS which was prepared for the project. He said further information was requested by the Board and this was submitted and arising out of the EIS it was considered necessary to do a detailed site investigation of the site. He said this was completed and a copy sent to the Board. He said submissions which were received were responded to in writing.

Mr. Loftus described the proposed development as in essence a paved yard. He said the public would be invited to bring waste to the facility, where it would be segregated and stored prior to being sent forward for recovery at

other facilities. He said it is not unreasonable to expect that the City Council could at least collect the material which was produced before sending it to other local authorities for further processing.

In relation to site selection, he said Labre Park was judged to be the most suitable site available to the City Council in the area.

Mr Loftus submitted that the proposal was a long neglected site and described the current environment as seriously degraded. He stated that there would be unavoidable impact on the community centre and he said the City Council would engage in consultation to ensure that an appropriate risk assessment is carried out. He said he would welcome expediting construction of the community centre but he could not see that at this stage.

Mr Loftus made reference to the C&C well and said the submission had been made in relation to a proposed variation in the Development Plan. He submitted that it was at a depth of 55 metres buried well below the impermeable boulder clay layer and he would consider that there is no risk from the proposed operation which would impact on the well.

5.5 Written Submissions prior to Hearing.

Submissions were received from the Prescribed Bodies as follows:-

1. Development Applications Unit of the Department of Environment, Heritage and Local Government (file tabbed PB1, received 9th March, 2005) which related to silt traps, reference to otters and fencing of the Galback Stream and the Grand Canal.

2. Department of Communications, Marine and Natural Resources (file tabbed PB2, received 7th March, 2005) regarding silt traps and fishery protection. Dublin City Council responded by letter received 21st March stated that a silt trap was proposed and undertook to consult

with both Waterways Ireland and the Eastern Regional Fisheries Board (ERFB).

Thirteen objections to the proposal, some of which requested an Oral Hearing were received. Not all of the objectors attended the Hearing. The issues raised are considered to be considered generally in Section 6.0 of this report dealing with the assessment of issues.

6.0 ASSESSMENT OF ISSUES

6.1 Adequacy of the EIS

The adequacy and validity of the EIS was challenged based on the absence of information relating to a number of issues including consideration of alternatives, description of site context, materials assets, management procedures, groundwater and site investigations reports. Having considered the written submissions and following the evidence given and submissions made during the Oral Hearing it is considered that the EIS is valid.

6.2 Alternatives

There were questions raised in relation to the site selection criteria applied and the lack of reference to taking account of the effects on the Environment. While the site selection criteria do not specifically mention effects on the environment, it is considered that impacts on human beings, socio-economic factors, noise and air quality issues were relevant to the site selection process and were taken into account in the course of the examination of alternatives by the Local Authority. Of note is the history of the selected site where in excess of €1.2 million was spent on surface clean-up operations in the last five years and in respect of which the opportunity exists to improve and regulate the site with attendant positive impacts.

6.3 Groundwater and Surface Water, Soils and Geology.

Based on the EIS as originally submitted, several questions were raised in relation to soil contamination and reference was made in the EIS to further work and a risk assessment exercise. The original site investigations consisted of six trial pits. A further site investigation was carried out in June 2005 and details were submitted to the Oral Hearing. This investigation included 30 trial pits and three boreholes and specialist evidence was given in respect of both the original and subsequent site investigation teams. From the second report

and the evidence given at the Hearing, it is considered that the conclusions reached are satisfactory and that the Local Authority proposals are acceptable.

On the issue of potential soil contamination, based on the site investigations of June 2005 and the evidence given at the Hearing, it is considered that the retention of the subsoil in-situ and largely undisturbed would not have significant negative effects on the subsoil.

In relation to groundwater it emerged at the Hearing that the C&C well is within 200 metres of the site. The quality of the well to date has been satisfactory and this is agreed by both parties. As the proposal is to effectively seal the site from future possible soil contamination by construction of a concrete yard, it would appear that future potential for contamination would be reduced. It is noted that there is no information available from one of the three boreholes due to it having been vandalised and it is considered that any requirement for monitoring comes under the issue of emissions and would be relevant to the EPA licence procedure.

6.4 Transportation

The traffic levels in the general vicinity of the site result in a certain amount of congestion on both the Killeen and Kylemore Roads over a considerable period of the working day. The observation that a midday peak occurs is noted. Any proposed development in the area would add at least some traffic to an already busy situation. In traffic terms, the proposed development would not rank as a high traffic generator. The fact that there is a charge proposed for the service is noted, as is the likelihood that most deliveries of waste would be from private cars. It is considered that the traffic impacts, together with the associated noise and air emissions are acceptable.

6.5 Construction Phase

The problems associated with the construction phase were well established at the Oral Hearing. Not alone would the construction of an access road at the

west end of Labre Park present difficulties over an extended period for access to the present Community Centre, but the proposed building of the new Community Centre and the construction of the 22 new housing units, together with their sequencing would have a major negative impact on Labre Park during construction.

The housing construction is not the subject of this application, but its impact on Labre Park, when combined with the impacts associated with the proposed Civic Amenity Centre cannot be disregarded in the context of this application as both developments are proposed by the Local Authority.

Without attempting to propose solutions, it appears that the optimum situation would be if both developments could be constructed without having to use the existing road in Labre Park. It would appear that this could only be done if a separate access could be made to the civic amenity site and if construction of the housing units could be effected from that entrance. This would involve a construction site boundary to be erected on the north side of the new housing and an effective joining of the two construction operations. While the Local Authority said at the Hearing that they did not see a possibility of getting an alternative access or altering the phasing of the housing and the new Community Centre they did indicate that they would welcome the opportunity to construct the new community centre in the initial phase if the opportunity arose.

As regards possible conditions attaching to a permission for this application, it would not be appropriate to condition a phasing in relation to the replacement Community Centre unless removal of the construction traffic for the new housing could be achieved and this is outside the scope of this application. Foremost of importance is the safety of children and in this regard the population of Labre Park of 250, of which 150 are children is particularly noted. A condition regarding safety is included in the recommendation for approval.

6.6 Air Quality, Odours, Health Effects

Apart from the air quality associated with traffic, the impact of the proposed development on air quality is not considered to be significant. Having regard to odours, bioaerosols and potential health effects, it is considered that concerns in this regard would not warrant refusal of the application. Issues regarding emissions and possible conditions are a matter for the licensing procedure by the EPA.

6.7 Noise

The impacts regarding noise are not considered to be such as to warrant refusal of the application. It is noted that the proposed community centre would need to be designed from an acoustic point of view and this was noted by the Local Authority specialist witness.

6.8 Flora and Fauna

The area is surrounded on three sides by industrial development and therefore flora and fauna issues pertain to the Grand Canal area. In this regard the submission of the Development Applications Unit of Department of the Environment, Heritage and Local Government (DEHLG) is relevant (PB 1 on file). Two conditions (3&4) are proposed to take account of the recommendations of the DEHLG.

6.9 Landscape and Visual

It is considered that the proposals in relation to landscaping are generally acceptable.

6.10 Other Issues: Climate, Socio-Economic, Material Assets, Archaeology.

In relation to climate, the conclusions of the EIS that there would be insignificant impact is accepted. In relation to Material Assets it is considered

that, based on past experience of the site there is an opportunity to improve the general environment of the area. With proper management of the site, together with effective dialogue with local community and business interests, it is considered that socio-economic impacts can be positive. A condition regarding a liaison-committee is included in the recommendation for approval. Subject to the testing proposed in Section 8.7.1 of the EIS, the provisions regarding archaeology and cultural heritage are considered satisfactory.

7.0 RECOMMENDATION

It is recommended that An Bord Pleanála approve of the proposal of Dublin City Council for a Civic Amenity Facility at Labre Park, Ballyfermot, Dublin 10, as described in the Environmental Impact Statement submitted on 27th January, 2005, subject to conditions as detailed below.

REASONS AND CONSIDERATIONS

Having regard to the following:-

- the provisions of the Dublin City Development Plan,
- the Dublin Regional Waste Plan,
- the nature and extent of the mitigation measures proposed,
- the EIS produced in respect of the development,
- the evidence tendered and submissions made during and prior to the Oral Hearing in relation to the likely effects on the environment of the proposed development,

it is considered that, subject to the modifications set out in this order the proposed development would not be in conflict with the proper planning and sustainable development of the area and would not result insignificant adverse effects on the environment.

CONDITIONS

1. A Local Liaison Committee shall be established by Dublin City Council at the detailed design stage of the proposed Civic Amenity Facility to act as a forum for disseminating information on planning and construction work relating to the Facility. The Committee shall be representative of the Local Authority, their Consultants and Contractors when appointed, Ballyfermot Travellers Action Project and local business interests.

Reason: To provide a consultative forum for local community, and commercial interests likely to be affected by the construction activities associated with the provision of the Civic Amenity Facility.

2. In the event that construction access to the site of the proposed Civic Amenity Facility is not provided other than through the west end of Labre Park, and the replacement community centre is not constructed prior to the construction of the Civic Amenity Facility, a method of safe access for children shall be provided to the existing Community Centre. The access shall be manually controlled when in use and lockable gates shall be provided as required at the crossing. A full safety audit, certified for suitability for use by children shall be carried out prior to the commencement of construction.

Reason: In the interest of safety of pedestrians and particularly children using the existing community centre.

3. The area of the Galback Stream and the Grand Canal shall be fenced off during construction.

Reason: To protect riparian zones of watercourses.

4. That a survey for the presence of otters along the banks of the Grand Canal shall be carried out prior to construction.

Reason: In the interest of reducing impacts on protected species.

Daniel O'Connor
Engineer Gd I

November, 2005.

Appendix A

Objections made to the proposal.

Ref.	Agent	Objector Name	Address		Notes
1	Self	Elizabeth Daly	111 Kylemore Drive, Ballyfermot	Gen. Thorntons	
2	Paula Madden	BTAP Ballyfermot Travellers Action Project	201c Decies Road, Ballyfermot	Health & Safety, Community, Traffic, Noise, Air, Flooding	
3	Theresa Mc Gouran	Markiewicz Community Centre	205 Decies Road Ballyfermot	Community	
4.	Wm Mangan	Lower Ballyfermot Tenants and Residents Association	205 Decies Road Ballyfermot	Community	
5	Self	Rose Connolly	8 Millrose Estate, Bluebell, Dublin 12	Poll. Foot & mouth burials	
6	Self	Dolores Kinsella	492 Bluebell Avenue, Bluebell, Dublin 12	Do.	
7.	John Montgomery	Ballyfermot Community Association	Civic Centre, Ballyfermot Road Upper	Community, Construction	
8.	Gerry Royal	Ballyfermot Theatre Workshops	Civic Centre, Ballyfermot Road Upper	Community Thorntons	
9	Self	Bernadette Warren	54 Gurteen Avenue, Ballyfermot	General	
10	Self	Francis Muldowney	41 Kylemore Ave. Ballyfermot, Dublin 10	Odours, Traffic, Noise, Flooding	
11	Self	Francis Griffin	4 Orchard Avenue, Weaver Road, Clonsilla, Dublin 15	Community (Social Worker)	
12	Self	Christine Dwyer	163 Raheen Park, Ballyfermot	Pollution	
13.	Declan Brassil	C&C Ireland	Kylemore Park West, Dublin 10	Traffic/Pollution.	
Sub 1	DAU	DEHLG		PNHA Gd Canal	
Sub 2		DCMNR		Silt trap Fisheries	

Appendix B

List of Submissions handed in at Oral Hearing.

Local Authority

LA 01	Map D, Dublin City Development Plan 2005 - 2011
LA 02	Housing Development Labre Park (proposed)
LA 03	Site Investigation, Factual Report June 2005.
LA 04	Bridge Details Drawing 24014 –012C
LA 05	DCC application to EPA for a waste Licence (3 vols)

Objectors

Sub 01	Submission of Declan Brassil in assoc with URS
Sub 02	Submission of Declan Brassil (April 2004) regarding proposed Variation in Development Plan (10 pages with details of water consumption C&C)
Sub 03	Submission (Mr Brian McCann) on Traffic on behalf of C&C. (see also Report 5.3.2)

Appendix 2: An Bord Pleanála Decision

An Bord Pleanála

PLANNING AND DEVELOPMENT ACTS 2000 TO 2004

Dublin City Council

APPLICATION by Dublin City Council for approval under section 175 of the Planning and Development Act, 2000 in accordance with plans and particulars, including an environmental impact statement, lodged with the Board on the 27th of January, 2005.

PROPOSED DEVELOPMENT: Development of a general civic amenity and green waste depot area circa 4,412 square metres, fridge and freezer storage area circa 435 square metres, construction/demolition deposit area circa 985 square metres, Dublin City Council street cleansing deposit area circa 1,010 squared metres, entrance road and entrance area circa 4,211 square metres at Labre Park, Ballyfermot, Dublin.

DECISION

GRANT approval for the above proposed development in accordance with the said plans and particulars based on the reasons and considerations under and subject to the conditions set out below.

Reasons and Considerations

Having regard to:-

(a) the provisions of the current Dublin City Development Plan,

(b) the current Dublin Regional Waste Plan,

(c) the nature and extent of the mitigation measures proposed,

(d) the environmental impact statement prepared in respect of the development,

(e) the submissions made in relation to the likely effects on the environment of the proposed development, and

(f) the report and recommendation of the person who conducted the oral hearing,

it is considered that, subject to compliance with the conditions set out below, the proposed development would not result in significant adverse effects on the environment and would be in accordance with the proper planning and sustainable development of the area.

Conditions

1. Prior to commencement of the proposed civic amenity facility, the local authority shall establish a local liaison committee to act as a forum for disseminating information on planning and construction work relating to the facility. The committee shall be representative of the local authority, their consultants and contractors when appointed, Ballyfermot Travellers Action Project and local residential and business interests.

   Reason: To facilitate and promote the involvement of the local community in ensuring that the facility is operated and monitored to appropriate standards.

2. In the event that the construction access to the site of the proposed civic amenity facility is not provided other than through the west end of Labre Park, and the replacement community centre is not constructed prior to the construction of the civic amenity facility, a method of safe access for children shall be provided to the existing community centre. The access shall be manually controlled when in use and lockable gates shall be provided as required at the crossing. A full safety audit, certified for suitability for use by children, shall be carried out prior to the commencement of construction.

   Reason: In the interest of safety of pedestrians and particularly children using the existing community centre.

3. The civic amenity facility shall not come into operation prior to the completion of the proposed new community centre.

   Reason: In the interest of the amenities of local residents.

4. The area of the Galback Stream and the Grand Canal shall be fenced off during construction.

   Reason: To protect riparian zones of watercourses.

5. The fencing on the southern boundary shall be suitably planted on both sides.

Reason: In the interest of visual amenity and, in particular, views of the site from the canal.

6. A survey for the presence of otters along the banks of the Grand Canal shall be carried out prior to construction.

Reason: In the interest of reducing impacts on protected species.

Member of An Bord Pleanála
duly authorised to authenticate
the seal of the Board.

Dated this day of 2006.

Appendix 3: Brief of Evidence – Noise Impact - Mr. Colin Doyle

ORAL HEARING RELATING TO

Labre Park Civic Amenity and Recycling Transfer Facility

NOISE IMPACT

BRIEF OF EVIDENCE

COLIN DOYLE

ANV TECHNOLOGY LTD.

26th September 2005

EDUCATION AND EXPERIENCE

My name is Colin Doyle. I am an Environmental Consultant with ANV Technology.

I have an honours degree in Physics, and a Masters degree in Physics from Trinity College Dublin, and have completed a postgraduate diploma course in pollution management from the University Of Staffordshire. I am a member of the Institute of Acoustics.

I have more than 25 years professional experience in scientific and engineering areas, of which the last 10 years have been spent specifically working on environmental noise and air quality assessments.

Labre Park Civic Amenity and Recycling Transfer Facility

ANV Technology carried out an assessment of the potential noise impact of the proposed development.

The project team was:

Colin Doyle B.A.(mod), M.Sc. MIOA (project manager), Ross Whyatt B.Sc., and Bridget Ginnity B.A.(mod), M.Sc. MIOA, MICI.

Noise Assessment

Noise is measured in units of decibels, denoted dB(A). The A-weighting approximates to the response of the human ear. Typical noise levels are shown in Figure 1. Human perception of the noise impact of a development depends on the level of the noise and the change in noise level.

Environmental noise levels are normally expressed as time-average noise levels over a reference period of one hour. All noise levels referred to in this evidence are in terms of 1-hour average noise levels (L_{Aeq}) .

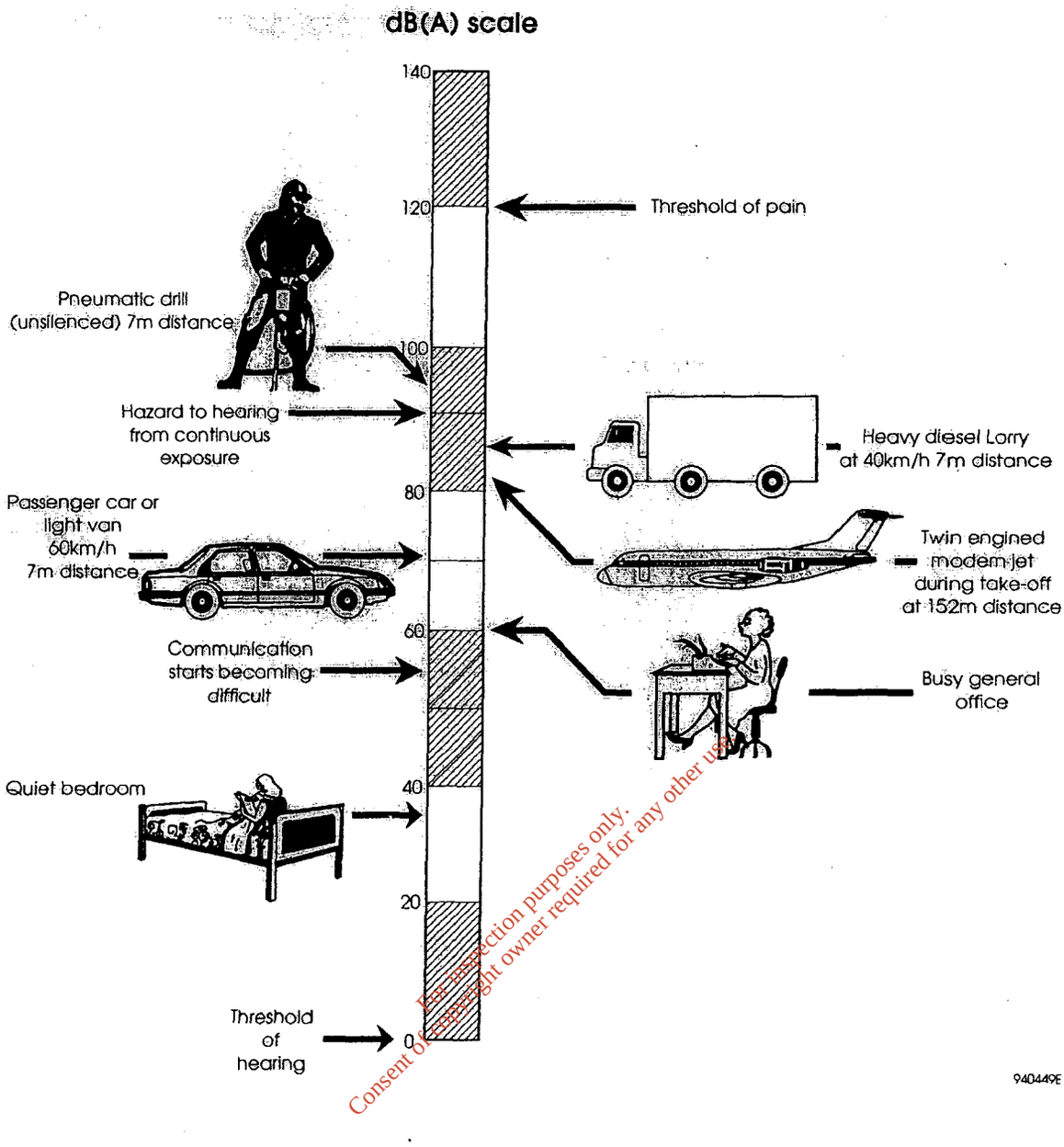

Figure 1 Examples of noise levels

Source: National Roads Authority (NRA) (2000)

Table 1. Subjective assessment of changes in noise levels, in terms of perceived change and loudness

Change in Noise Level	Subjective Change	%Change in Loudness
0	No change	0%
1 to 2 dB	Negligible change	10%
3 to 5 dB	Noticeable change	30%
6 to 9 dB	Clearly noticeable	70%
>10 dB	Substantial change	>100% (more than twice as loud)

1. A baseline noise survey was conducted to determine the approximate character and level of the existing noise environment at the Labre Park site. The ambient noise level was found to be relatively constant throughout the site, and was due to traffic noise. The noise was moderate in level, and typical for an urban area exposed to distant traffic noise. The ambient noise level was approximately 52 dB(A) L_{Aeq}. The underlying steady background traffic noise was approximately 49 dB(A).

2. An assessment of likely noise generation during the construction phase was carried out based on the methodology of British Standard BS 5228 "Noise control on open and construction sites", and based on experience at a range of construction sites.

3. Daytime construction noise limits are typically set at 70 dB(A). The calculated noise levels during the construction phase of the Labre Park facility range from 58 to 63 dB(A) at residential locations north of the site. During the construction phase of the proposed facility, the resulting noise levels will be comfortably within typical construction noise criteria, and minimal impact is anticipated.

4. The noise emissions from the proposed civic amenity facility were calculated based on measured noise emissions from existing facilities, at Shamrock Terrace, in Dublin, and in Ennis, and Inagh Co. Clare.

5. In calculating noise emissions from the proposed facility, account was taken of the projected traffic that will use the facility at Labre Park.

6. In determining the potential impact of the proposed facility, an assessment criterion was first established. It was considered that an assessment criterion of 53 dB(A) is appropriate for this facility. Where predicted noise levels exceed this criterion, an adverse impact is judged

to exist, and the severity of the impact depends on the degree of exceedence of the criterion.

7. I will now describe briefly how this 53 dB(A) assessment criterion was arrived at. British Standard BS 4142 provides a methodology for rating noise in mixed residential and industrial areas. The BS 4142 assessment procedure involves a comparison of the noise generated by the development with the pre-existing background noise. If the additional from a development exceeds the background noise by 10 dB, there is considered to be a high probability of noise complaints. If the noise exceeds the background noise by 5 dB, the situation is considered marginal with respect to noise complaints.

8. In considering an appropriate assessment criterion, account was also taken of the Environmental Protection Agency daytime noise limit of 55 dB(A), which is applied at licensed waste facilities throughout Ireland.

9. A reasonable assessment criterion for the site is therefore considered to be 53 dB(A). This is within the EPA limit, and constitutes a less than marginal probability of complaints according to BS 4142.

10. The noise impact of the development was considered for three operating scenarios to provide an estimate of the typical, and highest expected noise levels.

- Scenario 1: ordinary household waste recycling – relatively low noise emission activity

- Scenario 2: full capacity usage of the facility – moderate noise emissions

- Scenario 3: skips and other waste receptacles being loaded/unloaded – relatively high noise emissions.

11. It should be noted that the highest noise scenario, will occur infrequently. A noise impact assessment, and specification of mitigation measures based on the highest noise scenario, will provide a good margin of protection for the community, as the average routine operational noise levels will be lower than the levels assumed in the highest noise scenario.

12. For the typical operation of the facility (scenarios 1 and 2 referred to), and without any noise screening, the calculated noise levels due to the facility at the existing houses in Labre Park range from 48 to 52 dB(A), due to activities and vehicle movements at the proposed facility.

13. During the typical operation of the facility, and without any noise screening, the calculated noise due to the facility ranges from 52 to 53 dB(A) at the proposed new residential development site to the north of the facility. These predicted noise levels are just within the assessment criterion of 53 dB(A) proposed for this project, and consequently, the noise impact is judged to be slight.

14. Under the highest noise scenario, which would occur less frequently, the calculated noise level at the existing houses in Labre Park is 54 dB(A), again assuming that there is no noise screening. In the proposed residential development site, the predicted noise level under these conditions is 58 dB(A). While the predicted levels at the existing houses are just slightly above the assessment criterion, the predicted noise level at the proposed residential site is 5 dB above the assessment criterion. Consequently it was considered that there would be an adverse noise impact under these highest noise emission conditions, and that noise mitigation measures would need to be incorporated in the site design to ensure that the assessment criterion of 53 dB(A) would be achieved on all occasions.

15. To ensure that noise impact is minimised during the operational phase it was therefore recommended in the EIS that a 3m high noise barrier be constructed along the northern boundary of the site.

16. From a copy of the draft plans for the proposed residential development, made available since preparation of the EIS, I note that such a boundary wall has indeed been specified.

17. Based on the plans provided, I have revised the noise calculation model for the proposed site. This revision takes account of the 3m boundary wall at the proposed housing development to the north of the facility, and also of a 3m wall on the western side of Labre Park. This wall will screen the access road from the houses in Labre Park. This wall was not fully included in the analysis presented in the original EIS.

18. In revising the noise model, the opportunity was also taken to increase the estimated traffic movements to the peak hourly p.m. values given in the traffic section of the EIS (126 vehicle movements per hour). Allowance is also made in the revised noise model for the screening effects of the proposed new housing development at the existing houses in Labre Park.

19. The revised noise model results in slightly changed noise predictions compared with the values presented in the EIS. However these changes do not alter the overall conclusion of the EIS.

20. With a 3m boundary wall in place, and for typical operation of the civic amenity facility, the calculated noise levels at the existing houses in Labre Park are in the range 41 to 47 dB(A). At the proposed housing development site north of the facility, the calculated noise level under typical operating conditions is approximately 50 dB(A). These predicted noise levels are within the assessment criterion of 53 dB(A), proposed for

the facility. The predicted levels are lower than the existing ambient noise level, and are unlikely to be noticeable.

21. Under conditions of highest noise emissions from the facility, which would occur less frequently, the predicted noise levels at the existing houses in Labre Park are in the range 47 to 49 dB(A). At the proposed housing development site north of the facility, the calculated noise level due to the facility under these highest noise emission conditions is 53 dB(A).

22. Under these infrequent high-noise operating conditions, the noise may occasionally be audible at a low level in the existing ambient noise level at Labre Park. In the proposed new residential development site north of the facility, the noise may be noticed at a low level, just above the existing ambient noise. The resulting noise impact is considered to be slight.

23. In conclusion, subject to provision of a 3m meter noise screening wall, the resulting noise emissions from the proposed civic amenity facility will only occasionally be noticeable in the existing ambient noise level.

24. The noise level due to the civic amenity facility is expected to be at all times less than 53 dB(A) at all noise sensitive locations. The overall noise impact of the proposed civic amenity facility is judged to be slight.

Replies to Objections Related to Noise

Francis Muldowney

The question of noise exposure of the pre-school was raised in this objection.

It is understood that the new pre-school will be located adjacent to the north-eastern corner of the civic amenity facility. It will be screened by a 3m high boundary wall. The assessment of noise impact for premises closest to the facility indicates that the noise levels will be within guidelines for a school environment. The calculated noise due to the facility at the school ranges from 44 dB(A) to 52 dB(A), depending on the intensity of usage and activity at the facility. A good quality indoor noise environment in the pre-school can readily be achieved through good design and standard construction techniques.

Ballyfermot Travellers Action Project (BTAP)

In their objection submitted, the issue of noise is dealt with in section 4 of the document dated March 1, 2005.

World Health Organisation Guidelines (WHO)

The statement in the BTAP document that noise levels in excess of 55 dB(A) will result in serious annoyance is misleading. The World Health Organisation guideline levels for community noise refer to noise levels below which few people are affected. The 55 dB(A) guideline is the level below which few people will experience serious annoyance. It does not imply that at, or above 55 dB(A), there is an immediate transition to serious annoyance.

The WHO guidelines state:

"During daytime, few people are highly annoyed at LAeq levels below 55 dB(A), and few are moderately annoyed at LAeq levels below 50 dB(A)."

WHO "Guidelines for Community Noise", section 4.

An EU working group of noise experts has published a position paper on the effects of noise:

"Position paper on dose response relationships between transportation noise and annoyance" Luxembourg: Office for Official Publications of the European Communities, 2002, ISBN 92-894-3894-0.

In this document graphs are presented of expected percentages annoyed as a function of noise level. At a traffic noise level of 55 dB(A), for example, the percentage "highly annoyed" is expected to be 6%. For each dB increase above 55 dB(A), the predicted annoyance increases by approximately 1% ,

which is significantly less than the statistical error range inherent in the published graphs.

There is therefore only a gradual increase in annoyance beyond 55 dB(A).

Construction Noise

During the construction phase, noise levels in the range 58 to 63 dB(A) are expected at the nearest residences. In the context of a limited duration construction project these levels would be tolerable. It is not possible to carry out any construction activities without generating noise. The normal construction noise limit used for projects in Ireland is 70 dB(A). Construction noise levels are expected to be comfortably within this limit.

Traffic

The BTAP objection points out a discrepancy between the traffic figures in the noise section of the EIS, and the figures in the traffic section.

At time of writing the noise section of the EIS final projected traffic data was not available. The traffic noise calculations have since been revised based on the maximum traffic estimates presented in the traffic section of the EIS. In the original calculations, much of the noise emissions were in fact associated with activities within the facility, rather than due to noise associated with traffic to and from the facility. In addition, in the original calculations, allowance was not made for the proposed screening wall along the access road, at the western side of Labre Park. When the calculations were re-run with the maximum traffic assumptions, and allowing for the screening wall at the road, there was no change in overall predicted noise levels at the existing or proposed new houses.

Noise Levels in excess of 58 dB(A)

The BTAP objection expressed concern at predicted noise levels of 58 dB(A).

The predicted noise level of 58 dB(A) given in the EIS Table 6.5 was in the absence of any noise mitigation. With noise mitigation in place, in the form of a 3m high wall, the highest predicted noise level is 53 dB(A), as shown in Table 6.6.

The BTAP objection refers to a WHO classroom noise criterion of 35 dB(A), and concern that it would be exceeded.

Noise Levels at New Pre-School

The 35 dB(A) criterion referred to in the BTAP objection applies inside the classroom. For a properly designed school building, built using standard construction techniques, there would be no technical difficulty in achieving an indoor noise level of less than 35 dB(A).

Likewise for the proposed community centre, standard construction techniques will be capable of achieving a sufficient degree of sound reduction to ensure a high quality indoor noise environment.

Noise Insulation of Trailers

The BTAP objection raises the question of whether trailers would afford the same noise reduction as houses. Environmental assessment criteria are based on the assumption that residents have windows open for ventilation, or have other fixed ventilation openings. Under these conditions, the sound attenuating properties of caravans and houses are likely to be only marginally lower than for houses. The difference in sound level from outside to inside would be in the range 10 to 20 dB, depending on the size of the window or ventilation openings, and orientation of the openings.

Ballyfermot Air and Noise Report

The BTAP objection refers to the Ballyfermot Air and Noise Report, and that 1% more people in Ballyfermot are exposed to high noise levels than in the rest of Dublin City. While there are differences in noise exposure profile in Ballyfermot compared with the rest of Dublin, on balance, the conclusions of the Ballyfermot Air and Noise Report do not indicate that Ballyfermot is a high noise exposure area. In its conclusion, the report states:

"The noise mapping project for the Ballyfermot Area shows that, overall, the majority of the population in the area are not being exposed to excessive levels of noise from traffic."

The most significant difference between noise exposures in Ballyfermot and the rest of Dublin is in the "moderate" noise range of 55 to 59 dB(A), which is described in the report as follows::

"A higher percentage of the population in the Ballyfermot area (46%) are being exposed to L1018Hr levels between the 55-59 decibel range, than those in the total South Central Area or Dublin City Council area. The figure for both the St. Central Area and Dublin City Council area are 21% and 18 % respectively. However these sound levels would not be considered excessive."

The report defines noise levels of less than 68 dB(A) L10 as acceptable. It uses the "L10" noise descriptor, which refers to the noise level exceeded for 10% of the time. When converted to an average noise level, which is the noise descriptor used in the EIS for the Labre Park facility, this would correspond to 63 to 65 dB(A) LAeq, depending on assumptions of how the Ballyfermot noise data was calculated, which are not fully specified in the report. While the definition of "acceptable" levels of noise in the Ballyfermot Noise Report is debatable, it is clear that the highest predicted noise level of 53 dB(A) for the civic amenity facility at the proposed Labre Park civic amenity facility is substantially lower than what is termed acceptable in the Ballyfermot Air and Noise Report.

The BTAP Objection quotes also from the conclusion of the report which states:

"no further negative impacts on noise levels should be accepted on the Kylemore and Ballyfermot Roads."

While it I indeed desirable to strive to achieve as low as achievable traffic noise levels, the contribution of developments such as the proposed civic amenity facility are negligible in the context of existing traffic volumes on Kylemore and Ballyfermot roads, and limitation of such developments on the as part of an overall noise control strategy would be ineffective and could not be justified.

Appendix 4: Brief of Evidence – Air Quality – Dr. Conor Tonra

Proposed Civic Amenity Facility at Labre Park, Ballyfermot, Dublin 12.

Brief of Evidence
For Air Quality

Presented by:
Dr. Conor Tonra
Patel Tonra Ltd.

Presented at Oral Hearing on:
Monday 26 September 2005

patel tonra ltd.
environmental solutions

1.0 Introduction

1.1 My name is Conor Tonra. I hold an Honours Degree in Analytical Science from Dublin City University and a PhD in Physical Chemistry from Dublin City University. I am a Full Member of the Institute of Environmental Management and Assessment, and have full Chartered Environmentalist status. I have 17 years of experience in environmental consultancy and research and have 11 years experience in the preparation of Air Quality studies for EIA. I am a director of Patel Tonra Ltd., based in our headquarters in Balbriggan, Co. Dublin.

1.2 From a Professional Perspective, my areas of expertise which are of particular relevance to this project may be described as follows:

- Baseline Air Quality monitoring and assessment;
- Predictive modelling of transport effects on air quality;
- Design of mitigation measures in relation to air quality; and
- Environmental Impact Assessment for Air Quality.

2.0 Background

2.1 The impact on air quality of the proposed Civic Amenity Facility at Labre Park is considered. The assessment deals with the existing environmental conditions in the area, the construction phase of the development and the operation of the completed development.

2.2 The proposed facility is situated in a mixed residential and industrial area. The nearest sensitive locations to the site are the existing houses at Labre Park. There are a small number of residences at Nugget Cottages at approximately 100m to the southeast. There is also a proposed residential development adjacent to the northern boundary of the proposed Civic Amenity Facility. This residential development is also considered a sensitive location.

2.3 From a traffic-emissions perspective, the most sensitive receptors in this locality are those located closest to the busiest road-junctions, i.e. (a) the junction of Killeen Road and Kylemore Park North (Le Fanu Drive), and (b) the junction of Kylemore Road and Kylemore Park South (the eastern end of Labre Park, #8 Labre Park). We have also assessed the impact on air quality at the nearest receptor to the entrance to the proposed development, at #24 Labre Park.

2.4 During the construction phase, the main air quality aspects concern dust generation on site, and on haul routes to the site. The impact of construction traffic on local air quality is also considered.

2.5 The air quality aspects of the completed development include vehicular emissions from traffic to the facility, emissions from vehicles on site, and dust and odour generation.

3.0 Assessment Criteria for Airborne Pollutants

Combustion Products from Vehicles

3.1 The EU Directive for the framework for ambient air quality management (96/62/EC) and the various Daughter Directives introducing pollutant limit values (1999/30/EC and 2000/69/EC) have been transposed in Irish Legislation by the Air Quality Regulations, 2002 (S.I. No. 271 of 2002). The pollutants regulated in this legislation in Ireland include: Sulphur Dioxide, Nitrogen Dioxide and Oxides of Nitrogen, Particulate Matter (PM_{10}), Lead, Benzene and Carbon Monoxide.

3.2 In assessing whether a change in traffic pollutant concentration is significant, the U.K. Design Manual for Roads and Bridges (DMRB) states that an increase of less than 4µg/m^3 in NO_2 is not considered a significant change. This corresponds to 10% of the annual limit. Likewise a change of 2µg/m^3 of PM_{10} is not considered a significant change.

Dust Deposition

3.3 For dust deposition, there are no national or EU guidelines on acceptable deposition rates. The German air quality limits (TA Luft, October 2002) of 350mg/m^2/day for non-hazardous dust are taken as a guideline criterion in this assessment. This is a limit also commonly applied at construction and quarry sites in Ireland, i.e. sites where the potential to create nuisance dust is greatest.

4.0 Existing Air Quality

4.1 The dominant sources of air pollution in the vicinity of Labre Park arise from traffic, with a contribution from domestic and industrial combustion sources. Added to this is a contribution from distant pollutant sources, such as distant traffic and industrial emissions in the Dublin urban and greater urban areas.

4.2 Data on air quality is published by the Environmental Protection Agency (EPA), which is responsible for collating and disseminating national air quality data.

4.3 The most recent compiled and published data is for 2002/2003: Dublin City Council "Air Quality Monitoring and Noise Control Unit Annual Report 2003 – 2004", and "Air Quality Monitoring Report 2002", published by the EPA. All air quality parameters were reported to be within the applicable air quality standards for the year of monitoring.

4.4 The air quality status for 2003/2004, in relation to the (annual mean concentrations) significance criteria is summarised as follows:

- Nitrogen dioxide: 29 µg/m^3 (average of all zone A stations)
- PM_{10} : 23 µg/m^3 (average of all zone A stations)
- Sulphur dioxide: 8 µg/m^3 (average of all zone A stations)
- Carbon monoxide: 3.8 mg/m^3 (Winetavern St) [daily mean]
  4.8 mg/m^3 (Coleraine St.) [daily mean]
- Benzene: 3.8µg/m^3 (Winetavern Street)
- Lead: 0.03µg/m^3 (average of all zone A stations)

4.5 The nearest Dublin City Council monitoring station to the proposed development is at Ballyfermot Library, where monitoring of sulphur dioxide and PM_{10} is carried out. Results (annual mean concentrations) for 2003 & 2004 for these monitoring stations were:

- Sulphur dioxide: 11.2 µg/m^3 (2003)
- Sulphur dioxide 3.2 µg/m^3 (2004)

4.6 PM_{10} data for Ballyfermot (Library Monitoring Station) in 2003/2004 shows that air quality standards for PM_{10} are complied with. The air quality standards applicable permit an exceedence of a daily concentration of 50 µg/m^3 on no more than 35 occasions in the year. In 2003, this level was exceeded on only 4 occasions at this location; in 2004, this level was exceeded on only 5 occasions. The annual mean concentrations of PM_{10} at this station were:

- PM_{10} : 19 µg/m^3 (2003)
- PM_{10} : 14 µg/m^3 (2004)

4.7 A recent air quality monitoring study carried out in Ballyfermot during winter 2003-2004 (at Killeen Road) reported the following airborne pollutant concentrations (these are not annualised means):

- Nitrogen dioxide: 31.8 $\mu g/m^3$
- PM_{10} : 19.2 $\mu g/m^3$
- Benzene: 1.8 $\mu g/m^3$

4.8 A recent air quality monitoring study carried out at the Dublin City Council Civic Amenity Site at Shamrock Terrace (Dublin 1) during September 2005 reported the following airborne PM_{10} concentrations (these are not annualised means):

• PM_{10} :	Morning Rush Hour	29.4 $\mu g/m^3$ (std. dev. 18.5 $\mu g/m^3$)
• PM_{10} :	Evening Rush Hour	26.7 $\mu g/m^3$ (std. dev. 13.0 $\mu g/m^3$)
• PM_{10} :	CA Site Peak Hour	22.4 $\mu g/m^3$ (std. dev. 9.3 $\mu g/m^3$)
• PM_{10} :	Background, site closed	19.7 $\mu g/m^3$ (std. dev. 9.3 $\mu g/m^3$)
• PM_{10} :	Baseline	19.3 $\mu g/m^3$ (std. dev. 7.0 $\mu g/m^3$)

4.9 As regards existing levels of surface dust deposition, a visual inspection of the site did not detect any significant evidence of significant dust deposition. There is however from time to time unauthorised dumping at the site, which may on occasions give rise to wind blown dust.

Summary

4.10 The existing air quality indicators in the Dublin region are within current air quality standards (allowing for the sliding implementation scale to 2010). Reductions in levels of nitrogen oxides and PM_{10} will however be required in order to achieve the stricter limits which will apply in 2010. Dublin City Council has developed an Air Quality Management Plan for the Dublin Region, which aims to improve air quality through measures aimed at reducing emissions from traffic, domestic sources, commercial and industrial premises.

4.11 The recent monitoring data at the Shamrock Terrace CA site shows that while the hourly PM_{10} concentration on the site is generally raised during the peak operating hours at the site, it is not comparable to the contribution of the rush-hour traffic contribution, or the background contribution (probably as a result of local domestic heating).

5.0 Air Quality Aspects of the Development

Construction Phase - Dust

5.1 The main air quality aspects during the construction phase of the development may arise from the creation and propagation of dust on-site by the construction activities, and along the haul routes by construction vehicles. Vehicle exhaust emissions along the haul routes are also considered.

5.2 The proposed development will not result in extensive areas of open soil for protracted durations, or require major excavations. Rainfall and soil moisture content provide a natural dust control mechanism. During prolonged periods of dry weather, there is however potential for dust generation, which could result in a slight to moderate nuisance in the immediate vicinity of the site.

5.3 During prolonged periods of dry weather, dust generation on haul routes to the site may be significant. Soil and mud can be deposited on roads for several hundred metres from a site by vehicles serving the site. This gives rise to dust which gets re-suspended by passing traffic, and can result in soiling of properties along the route. The impact would generally be slight, with

dust deposition confined to the roadside boundaries of properties along the route. Again, the impact would be short-term, as dust is usually cleared during periods of rainfall.

5.4 The construction specifications for the proposed development will include provisions to manage dust emissions effectively on-site. Thus, dust deposition rates at the nearest houses can reasonably be expected to be less than 350 mg/m^2/day, at which level there will be little noticeable effect. There should be a low probability of complaints, and the impact is likely to be insignificant.

Construction Phase – Traffic Emissions

5.5 Combustion air pollutants are generated from construction vehicles and plant. The U.K. DMRB calculation model was used to carry out a screening assessment on potential air quality impacts from construction vehicles ("Design Manual for Roads and Bridges", version March 2000). The impact from construction vehicle emissions is estimated based on a nominal 8 truck movements per hour, at a speed of 20km/hr (the modelled data is presented in **Table 1)** in the vicinity of the nearest receptor at:

- Labre Park (#24), located (at its closest point) *ca.* 5 m from the roadside of Kylemore Park West, and

5.6 This volume of truck movements is calculated to generate a mean annual nitrogen dioxide concentration of *ca.* 1.8 µg/m^3, and a mean annual PM_{10} concentration of *ca.* 0.5 µg/m^3 at the nearest houses in Labre Park to the proposed development (those situated at the western end of Labre Park).

5.7 These projected increases are considered negligible, in the context of the significance criteria, and the existing local airborne pollutant concentrations (see **Table 1**).

Emissions from the Completed Development

5.8 The main air quality aspects during the operational phase of the development are emissions from vehicles, dust generation, and odours.

Operational Phase – Traffic Emissions

5.9 The traffic access to the site will be mainly from the two main roads in the area, i.e. Killeen Road and Kylemore Road, via the Kylemore Park Industrial Estate. Current and predicted average traffic flows in the vicinity of the proposed development were obtained from the traffic consultants responsible for the section of the Statement devoted to traffic and transport. These figures have been used to predict average concentrations of (a) carbon monoxide, (b) benzene, (c) oxides of nitrogen, (d) nitrogen dioxide and (e) particulate matter (PM_{10}) for the most sensitive receptors to:

- The 'new' road into the proposed development – Kylemore Park West extension,
- The junction of Killeen Road and Kylemore Park North, and
- The junction of Kylemore Road and Kylemore Park South.

5.10 An annual rate of increase in traffic volumes of 3% (as reported in the traffic section of the Statement) has been used to extrapolate from the current traffic flows (2005) to those expected in 2014, whether the proposed development takes place or not. The traffic consultants have estimated that HGVs will comprise no greater than 10% of the traffic flows in this area – the average Greater Dublin traffic is comprised of 7-8% HGVs.

5.11 The impact on air quality as a result of the projected increase in road traffic has been calculated using the procedures given in UK Department of Transport's Design Manual for Roads and Bridges (2003), Volume 11, Section 3, Part 1, Air Quality (DMRB). The Annex provides a screening method for the prediction of ground level concentration of various pollutants at sensitive receptor points close to new traffic developments.

5.12 Average concentrations of carbon monoxide, benzene, nitrogen dioxide, oxides of nitrogen and PM_{10}, at reference dates 2005 and 2014, have been determined for the most sensitive residential receptor points close to the development. These receptors are situated at:

- Labre Park (#24), located (at its closest point) *ca.* 5 m from the roadside of Kylemore Park West, [**Table 1**]
- Le Fanu Drive, located (at its closest point) *ca.* 85 m from the junction of Killeen Road and Kylemore Park North, [**Table 2**] and
- Labre Park (#8), located (at its closest point) *ca.* 35 m from the junction of Kylemore Road and Kylemore Park South, [**Table 3**].

5.13 These locations are considered to be where the most significant effects of increased traffic flow will be felt.

5.14 Calculations have been made based on existing traffic flows and those predicted to result from the proposed development. As the average speed of traffic, as well as distance of potential receptors from junction points have a significant effect on the generation of pollutants, calculations have been carried out using 4 different traffic speed scenarios at various road-links. These speeds are 15 km/hr (to represent traffic turning at junctions), 20 km/hr (to represent HGV traffic speeds on Kylemore Park West extension), 30 km/hr (to represent traffic slowing to turn at junctions) and 50 km/hr (to represent normal traffic-flow on urban roads). The results of these calculations are presented in **Tables 1, 2** and **3**.

5.15 As a worst-case situation, the proposed development will lead to an additional 953 AADT [Annual Average Daily Traffic] (8% HGV) at the Killeen Road junction with Kylemore Park North and an additional 477 AADT (8% HGV) at the Kylemore Road junction with Kylemore Park South. As a worst-case situation, there will be an additional 953 AADT (8% HGV) impacting the Labre Park receptor.

5.16 In order to facilitate direct comparison with the evaluation criteria discussed above, the traffic peak hour concentrations have been adjusted to give predictions of:

- The annual maximum daily (8-hour) concentration of carbon monoxide,
- The annual mean concentration of benzene,
- The annual mean concentration of oxides of nitrogen (NO_x) and nitrogen dioxide (NO_2), and
- The annual mean and daily mean concentrations of PM_{10},

using the methodology described in the DMRB. These adjusted figures for 2005 and 2014 are given in **Tables 1, 2** and **3**.

5.17 To summarise the screening model findings, if the development is fully operational in 2005, when these modelled pollutant concentrations are converted to the corresponding long-term significance criteria (see **Tables 1, 2** and **3**), the indications are that there will only be slight increases in the pollutants modelled at all three residential receptors. As can be seen from the Tables, the increases involved will all lead to pollutant concentrations that will be in compliance with the appropriate legislative limit values. The contribution of the traffic emissions to the local air quality conditions, assuming the published 2002-2003 data is representative of 2005 conditions, is given in **Table 4**.

5.18 Furthermore, by the year 2014, all discrete traffic-pollutant concentrations are likely to have been significantly reduced (compared to 2005), as a result of legislation-driven technology. At this time, if the development takes place, there will be a *ca.* 20% reduction in carbon monoxide found at the most sensitive receptors, a *ca.* 30% reduction in nitrogen dioxide and a *ca.* 45% reduction in PM_{10}, compared to 2005 predictions.

Table 1: ***Air Quality Assessment at Proposed Labre Park Civic Amenity Facility***

Summary of predicted air quality impact (due solely to traffic) at residential receptor (#24 Labre Park) located closest to the Kylemore Park West entrance to the proposed development. The receptor distances from the Road and the Junction are 5m and 92m respectively. The average traffic speeds modelled on the Road and at the Junction are 20 kmph (for truck movements) and 15 kmph respectively. NOTE: It is important to note that there is no legislative limit value for NO_x as opposed to NO_2.

Situation	Carbon Monoxide (mg/m^3)		Benzene ($\mu g/m^3$)		Oxides of Nitrogen ($\mu g/m^3$)			Particulates ($\mu g/m^3$)	
	Daily mean conc.	**Legislative limit value**	Annual mean conc.	**Legislative limit value**	Annual mean NOx conc.	Annual mean NO2 conc.	**Legislative limit value (NO2)**	Annual mean conc.	**Legislative limit value**
2005 no change	0.01	**10**	0.01	**5**	1.9	0.9	**40**	0.24	**50**
2005 during construction	0.01	**10**	0.01	**5**	4.3	1.8	**40**	0.49	**50**
2005 with development	0.02	**10**	0.02	**5**	4.2	1.8	**40**	0.55	**50**
2014 with development	0.02	**10**	0.02	**5**	2.9	1.3	**40**	0.31	**20**

Table 2: ***Air Quality Assessment at Proposed Labre Park Civic Amenity Facility***

Summary of predicted air quality impact (due solely to traffic) at residential receptor (Le Fanu Drive) located closest to the Killeen Road – Kylemore Park North Junction. The receptor distances from Killeen Road and the Junction are 34m and 82m respectively. The average traffic speeds modelled on Killeen Road and at the junction are 50 kmph and 15 kmph respectively. NOTE: It is important to note that there is no legislative limit value for NO_x as opposed to NO_2.

Situation	Carbon Monoxide (mg/m^3)		Benzene ($\mu g/m^3$)		Oxides of Nitrogen ($\mu g/m^3$)			Particulates ($\mu g/m^3$)	
	Daily mean conc.	**Legislative limit value**	Annual mean conc.	**Legislative limit value**	Annual mean NOx conc.	Annual mean NO2 conc.	**Legislative limit value (NO2)**	Annual mean conc.	**Legislative limit value**
2005 no change	0.06	**10**	0.06	**5**	15.7	5.4	**40**	1.7	**50**
2005 with development	0.06	**10**	0.06	**5**	16.1	5.5	**40**	1.8	**50**
2014 with development	0.05	**10**	0.05	**5**	10.9	4.0	**40**	1.0	**20**

Table 3: ***Air Quality Assessment, proposed Labre Park Civic Amenity Facility***

Summary of predicted air quality impact (due solely to traffic) at residential receptor (#8 Labre Park) located closest to the Kylemore Road – Kylemore Park South junction. The receptor distances from Kylemore Road and Kylemore Park South are 30 m and 27 m respectively. The average traffic speeds modelled on Killeen Road and on Kylemore Park South are 50 kmph and 30 kmph respectively. NOTE: It is important to note that there is no legislative limit value for NO_x as opposed to NO_2.

Situation	Carbon Monoxide (mg/m³)		Benzene (µg/m³)		Oxides of Nitrogen (µg/m³)			Particulates (µg/m³)	
	Daily mean conc.	**Legislative limit value**	Annual mean conc.	**Legislative limit value**	Annual mean NOx conc.	Annual mean NO2 conc.	**Legislative limit value (NO2)**	Annual mean conc.	**Legislative limit value**
2005 no change	0.06	**10**	0.07	**5**	20.0	6.5	**40**	2.1	**50**
2005 with development	0.07	**10**	0.07	**5**	20.1	6.7	**40**	2.2	**50**
2014 with development	0.05	**10**	0.07	**5**	12.3	4.4	**40**	1.1	**20**

Table 4: ***Summary of predicted air quality data, in relation to average Dublin City Council data for 2002-2003, at the modelled receptors.***

Receptor, Year	Carbon Monoxide (mg/m³)			Benzene (µg/m³)			Nitrogen Dioxide [NO_2] (µg/m³)			PM_{10} (µg/m³)		
	Daily mean conc.			Annual mean conc.			Annual mean conc.			Annual mean conc.		
	Without Development	With Development	**Legislative Limit Value**	Without Development	With Development	**Legislative Limit Value**	Without Development	With Development	**Legislative Limit Value**	Without Development	With Development	**Legislative Limit Value**
Labre Park, #24 **2005**	4.8	+0.0	**10**	3.8	+0.0	**5**	29	+0.9	**40**	23	+0.3	**50**
Le Fanu Drive, **2005**	4.8	+0.0	**10**	3.8	+0.0	**5**	29	+0.1	**40**	23	+0.1	**50**
Labre Park, #8 **2005**	4.8	+0.0	**10**	3.8	+0.0	**5**	29	+0.2	**40**	23	+0.1	**50**

Operational Phase – Dust Generation

5.19 Recyclable and other inert waste materials deposited in the skips and other receptacles have negligible potential for dust generation. From observation at other Civic Amenity sites, this type

of collection does not give rise to dust. Construction and demolition waste would however have potential for generation of wind-blown dust, during dry weather periods. The site will only accept inert construction waste. There is thus no health hazard associated with any such wind blown dust, just the potential for dust nuisance.

5.20 There is also potential for dust generated due to waste materials which may fall to the ground while being transferred into the waste receptacle. This material would be broken down by passing traffic, and could result in windblown dust within the yard areas. The impact would be limited to the site and is unlikely to have an effect beyond the boundary, with appropriate management practices in place.

5.21 Dust build-up on road surfaces and paved areas within the site will be kept under control by good housekeeping and regular sweeping.

Overall Air Quality Impact

5.22 The predictions for road traffic pollution generation indicate that there will be slight increases in the levels of various traffic-related pollutants as a result of the proposed development in the vicinity of the receptors modelled in Le Fanu Drive and Labre Park. These receptors represent the likely worst-case impacts on air quality from traffic. However, with reference to current European Union and Irish legislative criteria, this increase will not have a significant effect on air quality, even under worst-case average traffic conditions. It can be seen from the Summary Table (**Table 4**) that the development will not have a significant negative impact on current air quality conditions in the area.

6.0 Mitigation

Construction

6.1 During the construction phase there is a potential impact due to mud carried out from the site, and subsequent dust generation in dry weather. Soiling of roads can be minimised by cleaning of vehicles leaving the site, and covering of trucks carrying fine materials.

6.2 The contract specification for the construction of this development will include the adoption of a "Dust Control Plan" within the construction contract documentation which will seek to minimise the potential impact of construction dust emissions on adjacent communities and the road network. The plan will require the implementation of best practice procedures, such as the watering down of demolition sites and provision of wheel washes for construction vehicles. Inspection and monitoring of dust generating activities will be the responsibility of a senior site engineer who will have the authority to resolve any problems through suitable control procedures or, if necessary, by suspending work.

Operation

6.3 The air quality impacts during the operational phase are negligible, and there is no requirement for mitigation, other than standard housekeeping measures to ensure that the roads and set-down areas are kept clean, and that waste material spillages are immediately cleaned up in the vicinity of the waste receptacles.

Road Traffic

6.4 Emissions of pollutants from road traffic can be controlled by either controlling the number of road users or by controlling the flow of traffic. For the majority of vehicle-generated pollutants, emissions rise as speed drops, although the opposite is true for oxides of nitrogen. Emissions are also higher under stop-start conditions when compared with steady speed driving. Because of these effects, the calculations of the impact of road traffic were made using different speed considerations. Mitigation of traffic-emissions is best controlled, in this instance, by adopting the measures outlined in the traffic section (of the EIS) to maintain or facilitate free-flowing traffic, especially during peak traffic periods.

9.6.5 The pollutant concentration predictions discussed above show the effect of average speed on the generation of vehicle emissions. The free flow of the traffic in suburban areas and in the vicinity of proposed developments is normally essential in order to minimise the generation of traffic related pollutants. When this development is operational, however, even if the average traffic speed at junctions drops below 15 km/hr (which is unlikely), compliance with all the legislative criteria is likely to be achieved at the nearest sensitive residential receptors.

7.0 Summary

7.1 The impact on air quality of the proposed Civic Amenity Facility at Labre Park was assessed.

7.2 Based on a review of published air quality data for the Dublin region, the existing environment in the vicinity of Labre Park is considered to be within air quality standards.

7.3 During the construction phase of the development, there is a slight potential for dust nuisance at nearby properties, associated with construction traffic. This can be controlled by standard mitigation measures, such as wheelwashes and covering loads of fine materials.

7.4 The potential for generation of dust from the Civic Amenity Facility is considered to be minimal. During construction, the mitigation measures specified will control dust and mud impacts on the neighbourhood, while during the operational phase, good general housekeeping will ensure that dust generated due to spillages is minimised.

7.5 The modelling studies undertaken as part of the environmental impact assessment have shown that the predicted pollutant concentrations present at the most sensitive receptors to the proposed development site are not significant. The proposed development will not result in a significant negative impact on air quality.

7.6 The predictions for road traffic pollution generation indicate that there will be slight increases in the levels of various traffic-related pollutants as a result of the development in the vicinity of the receptors modelled in Le Fanu Drive and Labre Park. These receptors represent the likely worst-case impacts on air quality from traffic. However, with reference to current European Union and Irish legislative criteria, this increase will not have a significant effect on air quality, even under worst-case average traffic conditions.

Appendix 5: Brief of Evidence – Potential Health Effects - Dr. Martin Hogan

Précis of evidence

BRIEF of EVIDENCE of DR. MARTIN HOGAN

An BORD PLEANALA ORAL HEARING

LABRE PARK CIVIC AMENITY FACILITIES

BALLYFERMOT

DUBLIN 10

26TH September 2005

I Dr MARTIN GERARD HOGAN hold a primary medical degree from University College Cork Degree: MB. BCh BAO (1987).

I hold post graduate qualifications including a M.I.C.G.P 1991 and M.R.C.G.P 1991. I trained as a specialist in Occupational Medicine in the University of Manchester and hold the qualifications AFOM (RCP Lond) and MFOM (RCPI) 1995. I was made a Fellow of the Faculty of Occupational Medicine (FFOM) (RCPI) in 2001

I am a registered specialist in occupational medicine with the Irish Medical Council. I am currently a Full Time Consultant Occupational & Environmental Physician and Director of Employment Health Advisers Ltd.
I am Occupational Physician to University College Cork and a Lecturer in Occupational Medicine, University College Cork. I am a Specialist Trainer in Occupational Medicine since 1997. I am an Examiner with the faculty and Chairman of the Education committee of the Faculty

My areas of special interest are, Toxicology, Health effects of waste, Occupational Asthma, Noise Induced Hearing Loss and Occupational Hygiene

I was asked by Patel Tonra Ltd. to comment on the human health effect of the facility in Labre Park.

- No composting activities are carried out within the proposed facility, Dublin. The main wastes that will be accepted will be
    - Recyclable Materials
    - Green Waste
    - Street Cleaning Waste
    - Construction waste
    - Bulky Household Waste

POTENTIAL HEALTH EFFECT OF GREEN WASTE/BIOAEROSOLS

It is proposed that the green waste will be compacted into containers before being transferred off site for further processing. No shedding or composting will take place on site. This method of handling will greatly reduce the potential for the release of bioaerosols.

There are actually very few studies on sites such as the Labre Park facility, that is a collection point only. For many reasons one would expect lesser effects than, for example from a composting facility. The major reason for this is that the composting process itself relies on microbiological breakdown of organic material generates heat and very significant microbiological growth. In addition compost may be agitated or turned to equalise the degradation process all of the above with the potential to release a bioaerosol.

Aspergilus Fumigatus has been cited by various parties as a potential health effect when handling green waste. *Aspergillus fumigatus* is a fungus and one of many microorganisms which bring about the everyday decay of leaves, wood and other organic matter in our environment. It may be found virtually everywhere on earth, and, although we are all exposed to it regularly, it does not normally cause disease. Our bodies' immune system normally acts as if it were an innocent visitor, unless it invades tissues. In that event, the immune system responses will protect us from infection, very much as it does from pathogenic bacteria or viruses. Inhalation of spores is the most common route of human exposure.

A number of everyday activities indoors and outdoors can provide exposure to *A. fumigatus*, including lawn mowing, gardening, home landscaping, potting of household plants in soils, raking leaves (Sporik et al. 1993) and walking through an arboretum or along a nature trail. One author (Kowal et al. 1978) suggested mowing a lawn may be the most common source of exposure to *A. fumigatus* for residential dwellers. Residential or occupational exposure also can occur from contaminated air conditioners, construction dust (Bodey and Vartivarian 1989, Staib 1992, Kwon-Chung and Bennett 1992), and improperly managed compost piles in backyards or commercial operations

An enlightening description of microbial population dynamics occurring during composting was offered by Kramer et al. (1989).

"During composting, organic materials are decomposed by the growth of mesophilic organisms. During the process, heat is generated because of fermentation and results in the elimination of mesophilic organism[s] because of their thermolability. Thus, the substrate becomes ideal for growth of thermotolerant and thermophilic organisms [such as *A. fumigatus*] because of the lack of competition by relatively thermolabile organisms initially colonizing the compost." That is there is rapid growth in the number of Aspergilus in the later, higher temperature stages of composting. This of course is a stage that is completely absent when composting does not take place.

As stated from first principles one would not expect the growth and therefore the release of bioaerosols containing significant amounts of Aspergillus in the absence of composting.
Aspergillus therefore is ubiquitous in the environment and several daily activities are associated with higher levels. Indeed it is certainly probable that innocuous activities such as cutting the grass in the neighbourhood would result in a greater peak in Aspergillus levels than the proposed facility.

In my opinion the health risks posed to the general population from the Labre Park site in questions are negligible.

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POTENTIAL RESPIRATORY HEALTH EFFECTS

Correspondence to the board expressed a concern with regard to the health effects that might occur to the respiratory systems from increases in dust levels both from green waste and bioaerosols but also street cleaning waste. Aspects have already been addressed regarding green wastes and bioaerosols.

To my knowledge there is no evidence in the medical literature supporting the proposition that dust that might arise from the proposed facility could increase the incidence of respiratory health complaints.

The assessment contained in the EIS determines negligible impact on air quality in the environment. Hydrogen sulphide , Nitrogen dioxide and PM10 are known to have deleterious effects however the proposed development is predicted to have essentially no detrimental effects on any of these outside the site.

Based on these findings it is my opinion that the proposed site will have negligible effects on human respiratory systems

POTENTIAL HEALTH EFFECTS OF ESB POWER LINES

The presence of ESB Power lines in the site has been addressed in the EIS. These are already in situ. The development will not add to these or the power being transmitted through them.

The health effects of power lines have been extensively studied and reported in the medical literature. These are sometimes reported in the media such is the level of public interest. Some studies have purported to show an apparent excess of health effects in the vicinity of power line. However these effects have been inconsistent or explained by other factors such as socioeconomic or environmental issues. Eminant bodies including the European Commission have stated that there is no evidence of a scientific link between power lines and serious health effects

One of the submissions before the board has mentioned the work done by Henshaw and others suggesting a mechanism for potential health effects particularly on lung tissue. Put in simple terms the ions, or electrically charged particles formed in the air around power lines, as may be heard in the crackling often heard around them, could make them "sticky" to items such as environmental pollutants. The combined ion and

pollutant could then be inhaled and cause increased human exposure to these potentially toxic substances. This notion was noteworthy in that it provided an alternative explanation as to how power lines might have effect rather than the previous explanation of a direct effect of electromagnetic radiation. There is however no evidence that dust per se and more specifically dust generated from the proposed facility has any effect one way or the other

The work does not however provide proof of a consistent effect. In general while scientific data is continuing to be collected the medical community in general accepts that there is no proven health effect from power lines. It is very difficult in medicine to prove a negative that is saying something has absolutely no effect. We are not able to say this about power line but what we can say is that it is possible that there is no measurable effect at all and if any health effect was present it is so small as to insignificant.

POTENTIAL HEALTH EFFECTS OF FLOODING

Correspondence to the board expressed a concern with regard to the health effects of flooding. Whether the proposed development affects the risk of flooding at all is outside my expertise however there has been mention of an increased risk of Weils disease. Weils disease is caused by the organism Leptospirosis Icterohaemorrhagica. Whilst the risk is small the illness itself is serious so warrants attention

It is transmitted by rat urine and where vermin numbers increase in the presence of stagnant water a theoretical increased risk could occur, although for an increase in risk to actually occur would further require human contact with this stagnant water. . However I see no evidence to support the contention that the proposed facility would increase vermin numbers. There is no proposal to take in food waste so there is little in the facility to attract vermin. In all probability improved vermin control may reduce the numbers of vermin.

In my opinion the proposed facility will not increase the risk of Weils disease.

NOISE

Correspondence to the board expressed a concern with regard to the health effects that might occur with regard to noise levels associated with the construction an operation of the site.

The EIS however suggests minimal impact in the environs with levels during the construction phase will be within typical noise construction criteria and during the operational phase will be less than 53 dB and the impact is considered less than significant.

At these assessed levels the impact on human health of noise is in my opinion minimal.

SUMMARY

In my opinion the assessed human health effects of the proposed facility are assessed as negligible

Appendix 6: Brief of Evidence – Odour Impact - Dr Brian Sheridan

PRÉCIS OF EVIDENCE
BRIEF OF EVIDENCE OF DR. BRIAN SHERIDAN

AN BORD PLEANALA ORAL HEARING

LABRE PARK CIVIC AMENITY FACILITY AT, BALLYFERMOT, DUBLIN 10.

1. I, Brian Sheridan, hold a Hons. B.Sc. degree in Analytical Science (Biology) from Dublin City University; an M.Sc. (Agr.) degree in Engineering Technology from University College Dublin and a Ph. D. Eng. Degree in Engineering Science from University College Dublin. Since 2003, I have been Managing Partner of Odour Monitoring Ireland (here after refereed to as OMI) of 32, De Granville Court, Dublin Road, Trim, Co. Meath. OMI provides expert advice on air quality and odour measurement; dispersion modelling and biological and physical abatement design. I was also a Research Associate and Postdoctoral Researcher at the University of California involved in odour measurement and abatement for Orange County Sanitary District, California. To date, I have been involved in over 100 odour related projects. I am a Associate committee member of the VDI German Institute of Engineers currently developing an odour sampling standard and Committee Member of SE-035 Section of ASAE (American Society of Agricultural Engineers) in the development of a USA odour terminology and measurement standards.
2. In December 2004, OMI was requested by Patel Tonra Ltd. to undertake a baseline bioaerosol, hydrogen sulphide and sniff odour assessment of the proposed site location. The study was carried out in accordance with the recommendations provided within the guidance document "Standardised Protocol for the sampling and Enumeration of Airborne Micro-organisms at Composting facilities. This is the most recent guidance document available for performing such studies in background environments.
3. The current ambient bioaerosol air quality in the vicinity of the proposed site is good with all sampling locations within the proposed UK Environment Agency assessment criteria for both Aspergillus *fumigatus* and total Mesophillic bacteria.
4. The current ambient Hydrogen sulphide air quality in the vicinity of the proposed site is good with all sampling locations within the proposed World Health Organisation concentration level to prevent odour impact.
5. The civic amenity facility will accept the following waste types to include:
    - Dry recyclable materials,
    - Green waste,
    - Street cleaning waste,
    - Construction waste,
    - Bulky household waste (i.e. white goods, etc).
6. Dry recyclable materials will have no potential to cause any bioaerosol or odour emissions due to the nature of the handled material (i.e. dry and composition mainly of cardboard and other inert materials).
7. The green waste will be compacted into enclosed containers and removed off site approximately every 48 hours. The potential bioaerosol impact from such an operation is minimal as all green waste will be enclosed within a container and also removed off site approximately every 48 hours. No shredding or composting will take place on-site. As no green waste shredding or composting will occur, then the potential for odour emissions is also negligible.

8. Street cleaning waste will be stored within enclosed containers and removed off site approximately every 48 hours. Such material does not contain significant amounts of organic material. Therefore, the potential for such an operation to cause odour complaints is negligible as the potential for odours to escape from the storage container is minimal.
9. Thornton's Recycling Ltd handle significant amounts of municipal solid waste commonly referred to as black bin waste. No municipal solid waste (black bin waste) will be accepted at the proposed Civic Amenity Site; therefore no comparisons in relation to odours can be drawn between Thornton's Recycling and the proposed Civic Amenity Site. The odour abatement system recently installed in Thornton's Recycling Ltd in March is successfully treating odour emissions from the facility.
10. In my opinion, the proposed civic amenity site will have negligible impact in terms of bioaerosols and odours.

Publications as senior author and/or co-author

Refereed Journal Papers

1. Sheridan, B., T. Curran and V. Dodd. 2002. *Assessment of the influence of media particle size on the biofiltration of odorous exhaust ventilation air from a piggery facility.* Bioresource Technology 84, 129-143

2. Sheridan, B., T. Curran, V. Dodd and J. Colligan. 2002. *Biofiltration of odour and ammonia from a pig unit – A pilot-scale study.* Biosystems Engineering 82, (4) 441-453 (doi:10.1006/bioe.2002.0083)

3. Sheridan, B., T. Curran, and V. Dodd. 2002. *Biofiltration of n-butyric acid for the control of odour.* Bioresource Technology (Published)

4. Sheridan, B.A., E.T. Hayes, T.P. Curran, V.A. Dodd. 2003. *Atmospheric dispersion modelling of gaseous emissions from intensive pig production units.* Bioresource Technology (Published).

5. Hayes, E.T., Sheridan, B.A., Curran, T.C., Dodd, V.A., (2003). *Odour emission rates from intensive pig production in Ireland.* Bioresource Technology. Published.

6. Sheridan, B.A., Curran, T.P., and Deshusses, M.A., 2004. *Biofiltration of waste gaseous components-A review of recent operational and technological advancements.* Journal of Critical Reviews in the Environment. (*In review*).

Books

1. Magette, W., T. Curran, G. Provolo, V. Dodd, P. Grace, and B. Sheridan. 2002. *Draft BAT note for the pig and poultry sectors.* Environmental Protection Agency, Wexford. pp. 25 (in press).

International Conferences

1. Sheridan, B.A., T.P. Curran and V.A. Dodd. 2000. Biofiltration of exhaust ventilation air from pig units. IN: *Proceedings, AgEng2000: Agricultural Engineering into the Third Millennium, European Society of Agricultural Engineers. Published on compact disk as Paper 00-FB-003, 142 pp*

2. Sheridan, B.A., J.G. Colligan, T.P. Curran and V.A. Dodd. 2000. Biofiltration of exhaust ventilation air from pig units. *IN: B. Auvermann (ed.) Proceedings, 2nd International Conference on Air Pollution from Agricultural Operations, American Society of Agricultural Engineers, St. Joseph, Michigan, USA, pp. 384-390.*

3. Magette, W., T Curran, G Provolo, V Dodd, P Grace, B Sheridan and E Cummins. 2000. Best available techniques (BAT) for Irish intensive pig and poultry producers. *Proceedings, Sustainable Handling and Utilisation of*

Livestock manure from Animals to Plants, Danish Institute of Agricultural Sciences, Horsens, Denmark, pp. 16-23.

4. Curran T.P., B.A. Sheridan, E.T. Hayes and V.A. Dodd. 2002. Comparison of two dispersion models for odour nuisance prediction from pig units. *ASAE/CIGR Annual International Meeting*, Chicago, July 28-31, 2002. Paper No. 024014

5. Deshusses, M., Gabriel, D., Hannes, J., Sheridan, B.A. 2004. Biotrickling of odourous air from Orange County WWTP. WERF Speciality Conference, April, Seattle, WA. USA.

National Conferences

1. Sheridan, B.A., J.G. Colligan, T.P. Curran and V.A. Dodd. Biofiltration of exhaust ventilation from pig units. IN: *Agricultural Research Forum - Irish Grassland and Animal Production Association 25th Meeting*, 25-26 March 1999, University College Dublin.

2. Sheridan, B.A., T.P. Curran and V.A. Dodd. 2000. Biofiltration of exhaust ventilation from pig units. IN: *Proceedings, 10th Irish Environmental Researchers Colloquium, University of Ulster, pp. 16*

3. Sheridan, B.A., T.P. Curran and V.A. Dodd. Biofiltration of exhaust ventilation from pig units. IN: *Agricultural Research Forum - Irish Grassland and Animal Production Association 26th Meeting*, 14-15 March 2000, University College Dublin.

4. Magette, W., T. Curran, G. Provolo, V. Dodd, P. Grace, and B. Sheridan. 2001. Environmental evaluation of intensive animal production facilities. IN: *Proceedings, Rio+10 - Achievement and Challenge, Belfield, Dublin, 10-14 September 2001*

Other Publications

1. Curran, T., B. Sheridan, J. Colligan and V. Dodd. 1999. Odour control in pig housing. IN: D. J. Ruane and J. P. Irwin. (eds.) *Journal of the Irish Farm Buildings Association*. Irish Farm Buildings Association, Dublin, Ireland. *pp. 5-7.*

Publications Reviewer

Currently, Dr. Brian Sheridan receives research papers from two international Journals to review. These include:

1. Journal of Chemical Engineering Technology.

Association Memberships

Currently, Dr. Brian Sheridan is a member of the following research organisations:

1. External Committee Member of the VDI German Engineers Association- Odour sampling guideline document.

2. Committee Member of SE-035 Section of ASAE (American Society of Agricultural Engineers) in the development of a USA odour terminology and measurement standards.

Respectively submitted, Date:_____

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Brian A Sheridan B.Sc. M.Sc. (Agr.) Ph.D Eng.