

INTRODUCTION

13.1 This chapter presents the assessment of the potential impacts upon human health associated with the proposal.

13.2 Concerns have been expressed amongst the local community about potential health effects which could be associated with the proposed continuation of operations at the site. A number of reports have been produced on the health of the local community and potential health effects of the waste management operations around Wingmoor Farm.

13.3 This assessment comprises a review of relevant legislation, policies, guidance and government reports into the health effects of waste management operations, and an assessment of the reports specific to the local area and the operations on the site.

STUDY AREA

13.4 The study area for this assessment includes people living in the local area who could potentially be affected by the proposed development. There is no defined geographical study area, but people living closer to the site and to transportation routes to and from the site are more likely to be affected by potential effects of the proposed development.

13.5 The communities closest to the site are Bishop's Cleeve, Woodmancote, Southam, Brockhampton, Swindon, Elmstone Hardwicke and Stoke Orchard. There are also scattered farms and other properties lying outside these towns and villages. The main focus is on the closest community to the site, Bishop's Cleeve, together with the individual properties located closest to the site.

METHODOLOGY

13.6 Use of the best available quantitative and qualitative secondary data has enabled the effects upon human health to be considered within an epidemiological, social and planning context. The following methods have been used to determine the potential human health effects associated with the proposed development at Wingmoor Farm:

- a review of the health profile of the local communities through the use of statistical data and published

reports available from online resources (e.g. The Association of Public Health Observatories and Gloucestershire Primary Care Trust);

- a review of the study undertaken by the Wingmoor Farm Task Group, a sub group of Gloucestershire County Council (GCC)'s Health Overview and Scrutiny Committee
- a review of the Community Health Impact Assessment of the Wingmoor Waste Treatment and Landfill Sites facilitated by Gloucestershire PCT;
- consultation with Gloucestershire Primary Care Trust and other key health stakeholders;
- consideration and interpretation of the results and conclusions of other chapters of this Environmental Statement. In particular, the findings of the Air Quality and Groundwater chapters were reviewed and incorporated.

13.7 This work does not itself constitute a Health Impact Assessment or Health Risk assessment. However, it has drawn upon aspects of health risk assessment in interpreting the findings of other sections of this Environmental Statement. Health Impact Assessment (HIA) consists of 6 steps: (*Association of Public Health Observatories, "HIA Gateway," www.hiagateway.org.uk*)

- Decide whether a proposal requires HIA through a screening process
- Confirm the questions to be addressed under the HIA and specify the methodology to be used (referred to as scoping)
- Identify the potential health impacts of the proposal, and quantify where possible
- Make recommendations for enhancing the positive health consequences, and avoiding/minimising adverse health consequences and inequalities.
- Communicate the findings to decision makers.
- Monitor and evaluate the findings of the HIA

13.8 There is no statutory requirement for an HIA for the present proposal. However, this chapter has addressed the question of whether the proposed Scheme could have a significant effect on the health of local residents. Following the HIA procedure, the proposed health impacts have been identified from the assessments described elsewhere in this Environmental Statement, and recommendations made where appropriate.

CONSULTATION

Community Liaison Group

13.9 The operations of the Wingmoor Farm landfill site have come under regular and continued scrutiny. Health issues are the subject of debate in the forum of the

Wingmoor Community Liaison Group and, more recently the Wingmoor Farm Task Group which was formed on 30th January 2006 by Gloucestershire County Council's Health Overview and Scrutiny Committee.

13.10 Regular meetings of the Wingmoor Community Liaison Group are held, which comprises the site operator, the regulatory authorities, local councillors and members of the local community. Community Liaison Group meetings aim to provide forums which allow continued dialogue to take place in respect of site incidents and activities at Wingmoor Farm, including discussion of any alleged breach of planning and environmental controls.

13.11 The minutes of Wingmoor Farm Community Liaison Group Meetings during 2006, 2007 and 2008 were reviewed. This indicated that the main community concerns with regard to potential effects on health arise from the handling, treatment and disposal of APC residues and contaminated soils. Issues discussed at the Liaison Group include the following:

- dust and steam from APC residue landfilling;
- dust monitoring and dust content – geo-chemical analysis;
- phenolic odours arising from a consignment of contaminated soil;
- soil sampling;
- on-site and off-site accidental spillage of APC residue, and
- research into respiration and heart problems (a research publication was reviewed and reported not to be credible).

13.12 The main concerns with regard to potential adverse effects on health expressed via the Community Liaison Group include the following. These are considered in more detail elsewhere in this chapter.

- possible links between landfill sites and asthma;
- possible links between landfill sites and birth defects;
- possible links between landfill sites and cancer;
- stress, fear and anxiety; and
- mental health and well-being.

Pre-application discussions

13.13 Pre-application consultation with the following key health stakeholders took place during December 2008 and January 2009:

- Gloucestershire Primary Care Trust;

- Gloucestershire Health Protection Team (Avon, Gloucestershire and Wiltshire Health Protection Unit);
- Environment Agency;
- Tewkesbury Borough Council, Environmental Health Department; and
- Cheltenham Borough Council, Pollution Control Department.

13.14 Consultees were asked to respond to three questions focused on issues relating to potential effects on health associated with the Scheme.

- *Have you been involved with health studies carried out at Wingmoor Farm Landfill Site before? If so, what was the brief and context of the study? It would be helpful if you could confirm whether the work has been peer reviewed and/or published. Please could you provide a copy of any study reports, or identify where any study reports can be obtained.*
- *Notwithstanding your answer to the above question, do you consider that there are any potentially significant health concerns associated with the proposed development at Wingmoor Farm East Landfill or other similar operations? If so, please could you explain what they are, and why you consider they could be significant?*
- *Are there any further comments that you would like to make?*

13.15 Consultee responses are summarised as follows

13.16 Gloucestershire Primary Care Trust provided an interim response, dated 4th February 2009 which included reference to the Bishops Cleeve Neighbourhood Health Profile, October 2005. The PCT acknowledged that:

“people living in the Bishops Cleeve area generally experience levels of ill health which do not differ markedly from people living in other areas of Gloucestershire when a range of established health indicators and other less robust sources of evidence are compared”.

13.17 The following issues were requested by the PCT to be considered:

- Identification of potential sources of exposure;
- Identification of potential exposure pathways; and
- Identification of the receptors including potential sensitive receptors in the locality

13.18 These issues have been considered in this Environmental Statement. In terms of baseline

information, it was requested that health inequalities should be considered as part of a ‘general health and socio economic profile of the area in close proximity to the site’. In addition, the PCT provided details of mortality and morbidity data, road traffic issues, other impacts and cumulative impacts which it requested should be considered.

13.19 Gloucestershire Health Protection Team (response provided by Gloucestershire LINK). In its response dated 30th January 2009, Gloucestershire LINK confirmed that it would not make any comment until the Director of Public Health at Gloucestershire PCT formally releases the Community Health Impact Assessment.

13.20 Environment Agency: No comments received.

13.21 Tewkesbury Borough Council confirmed that it had no comments to make.

13.22 Cheltenham Borough Council stated that it had not been involved with any health studies carried out for the site and does not have any “specific concerns regarding this site above and beyond the usual potential impacts of a landfill site”.

IMPLICATIONS OF POLICY AND GUIDANCE

13.23 This section provides a review of relevant legislation, together with national, regional, and local planning policies and guidance as it relates to the consideration of human health. The following key policy documents are considered in detail below:

- The Waste Directive (2008/98/EC);
- Planning Policy Statement 10: Planning for Sustainable Waste Management, 2005;
- Planning Policy Statement 23: Planning and Pollution Control, 2004;
- Environmental Permitting (England and Wales) Regulations 2007;
- Saved policies contained in the Gloucestershire Waste Local Plan 2002-2012, adopted October 2004, and
- Gloucestershire County Council Waste Core Strategy Preferred Options, Technical Paper WCS-E: Hazardous Waste, Living draft, January 2008.

The Waste Directive (2008/98/EC)

13.24 The 2008 Waste Directive (2008/98/EC) provides the basis for waste management in EU Member States. Its fundamental aim is to protect human health and the environment from the negative impacts of waste

generation and management. The 2008 Directive requires Member States to:

“take the necessary measures to ensure that waste management is carried out without endangering human health, harming the environment and in particular:

- a) without risk to water, air, soil, plants or animals;*
 - b) without causing a nuisance through noise or odours; and*
 - c) without adversely affecting the countryside or places of special interest.”*
- (Article 13).

13.25 This principle is endorsed by the Environmental Permitting (England and Wales) Regulations 2007, which also considers effects caused by operational conditions such as noise and odour nuisance, risk to water, air, soil, animals and plants and adverse effects on the countryside.

Planning Policy Statement 10: Planning for Sustainable Waste Management, 2005 (PPS10)

13.26 The opening sentence of the first Paragraph of PPS 10 states that:

“The overall objective of Government policy on waste, as set out in the strategy for sustainable development, is to protect human health and the environment by producing less waste and by using it as a resource wherever possible”.

13.27 Paragraph 3 of PPS 10 goes on to recognise that one of the ‘key planning principles’ is to:

“Provide a framework in which communities take more responsibility for their own waste, and enable sufficient and timely provision for waste management facilities to meet the needs of their communities”

13.28 A further principle is to “reflect the concerns and interests of communities”. It is intended that this ES chapter achieves this, by ensuring that health issues are considered as part of this planning application, taking account of feedback from the consultees listed in paragraph 13.13.

13.29 Paragraphs 30 and 31 in PPS10 identify that health (and its wider social, economic and environmental determinants) are a material planning consideration during the determination of planning applications. PPS10 clarifies however that the detailed consideration of health implications is a matter for pollution control authorities and that Waste Planning Authorities should avoid carrying out their own detailed assessments, instead drawing on advice and consulting with relevant agencies:

“Modern, appropriately located, well-run and well-regulated, waste management facilities operated in line with current pollution control techniques and standards should pose little risk to human health. The detailed consideration of a waste management process and the implications, if any, for human health is the responsibility of the pollution control authorities. However, planning operates in the public interest to ensure that the location of proposed development is acceptable and health can be material to such decisions”

“Where concerns about health are raised, waste planning authorities should avoid carrying out their own detailed assessment of epidemiological and other health studies. Rather, they should ensure, through drawing from Government advice and research and consultation with the relevant health authorities and agencies, that they have advice on the implications for health, if any, and when determining planning applications to consider the locational implications of such advice. In turn, the relevant health authorities and agencies will require sufficient understanding of the proposed waste management process to provide considered advice. A concurrent process and a transparent relationship between the planning and pollution control regimes will help facilitate this”.

13.30 In terms of identifying suitable sites and areas, Paragraph 21 (i) states that planning authorities should consider:

“The cumulative effect of previous waste disposal facilities on the well-being of the local community, including any significant adverse impacts on environmental quality, social cohesion and inclusion or economic potential”

Planning Policy Statement 23: Planning and Pollution Control, 2004 (PPS23)

13.31 PPS23 reiterates the guidance in PPS10, noting in Paragraph 8 that health is a material planning consideration:

“any consideration of the quality of land, air or water and potential impacts arising from development, possibly leading to impacts on health, is capable of being a material planning consideration, in so far as it arises or may arise from or may affect any land use”.

PPS23 also addresses the Precautionary Principle which has roots in international law. It has been applied at a European level through Article 174(2) of the EC Treaty, but also appears throughout numerous European directives and transposed into UK law most commonly through the Environment Act 1995. PPS23 considers that the Precautionary Principle should be applied where:

“there is good reason to believe that harmful effects may occur to human health, animal or plant health, or to the environment; and the level of scientific uncertainty about the consequences or likelihood of the risk is such that best available scientific advice cannot assess the risk with sufficient confidence to inform decision-making”.

13.32 Appendix A to PPS23 lists a number of matters which should be considered as part of the planning process, in the context of other legal precedents. These include:

“The possible impact of potentially polluting development (both direct and indirect) on land use, including effects on health, the natural environment or general amenity”
and
“The objective perception of unacceptable risk to the health or safety of the public arising from the development”.

Environmental Permitting (England and Wales) Regulations 2007;

13.33 The Environmental Permitting Regulations combine the preceding Pollution Prevention and Control (PPC) and Waste Management Licensing (WML) regulations. The Environmental Permitting Regulations (EPR) provide a risk-based framework for permitting and compliance of industrial and waste management processes. The Environmental Permitting regime is designed to ensure that regulated processes such as the Wingmoor landfill prevent or minimise emissions to the environment, and do not cause significant harm.

13.34 The Environmental Permitting regime is enforced by the Environment Agency. A process operator must apply for an operating permit which meets demanding standards. Provided the Environment Agency is satisfied with the information provided with the permit application, and following consultation, a permit can be issued. The operator is then required to operate the process in accordance with the permit and permit application. The Environment Agency inspects the site regularly to ensure that it is being operated in accordance with the terms of the permit. A monitoring and reporting programme is implemented to verify that the facility is not giving rise to any significant adverse effects on the environment.

Saved policies of the Gloucestershire Waste Local Plan 2002-2012, (Adopted October 2004)

13.35 There are no direct health policies in the Gloucestershire Waste Local Plan 2002-2012, although indirect impacts on health are addressed in saved policy

37 which considers proximity to other land uses, stating that:

“Proposals for waste development will be determined taking into account such matters as the effect on the environment, occupants’ and users’ amenity and health, the countryside, the traditional landscape character of Gloucestershire, the local highway network, any hazardous installation or substance and any adverse cumulative effect in combination with other development in the area. Where appropriate, suitable ameliorative measures shall be incorporated in the proposals to mitigate, attenuate and control noise, dust, litter, odour, landfill gas, leachate and flue emissions”.

13.36 A number of ‘key objectives’ are also listed in the Waste Local Plan, one of which (‘key objective 3’) states that the Waste Local plan aims:

“To encourage sensitive waste management practices within Gloucestershire in order to preserve or enhance the overall quality of the environment and avoid risks to health”.

13.37 Chapter 6 of the Plan identifies one of the key monitoring tasks associated with the Plan as:

“To monitor the health impacts of waste management development by using information made available by the Gloucestershire Health Authority, the Department of Health and the Environment Agency”.

Gloucestershire County Council Waste Core Strategy Preferred Options, Technical Paper WCS-E: Hazardous Waste, Living draft, January 2008

13.38 This technical paper was produced by GCC to inform the preparation of its Waste Core Strategy. The document summarises the relevant national, regional and local policy. It also highlights the outcomes of stakeholder engagement on hazardous waste, and explains policy options relating to future hazardous waste planning. The technical paper includes notes of the Wingmoor Farm task group (see paragraph 13.47 and following).

Saved policies of the Tewkesbury Borough Local Plan to 2011

13.39 There are no specific saved policies of relevance to this assessment in the Tewkesbury Borough Local Plan to 2011.

EXISTING ENVIRONMENT

13.40 This section sets out the available baseline evidence of health indicators for the local population, focusing on the main population centre of Bishop’s

Cleeve, located approximately 1.5 km to the east of the site. The information and evidence has been gathered from a number of resources including:

- The Association of Public Health Observatories;
- Gloucestershire Primary Care Trust;
- Gloucestershire’s Health and Community Wellbeing Strategy;
- National Statistics Online;
- Gloucestershire Public Health Intelligence Unit, and
- National Centre for Health Outcomes Development (NCHOD).

Bishop’s Cleeve Neighbourhood Health Profile

13.41 In October 2005 the then Cheltenham and Tewksbury Primary Care Trust (PCT) (now Gloucestershire Primary Care Trust) produced a ‘Neighbourhood Health Profile’ for Bishop’s Cleeve (including Woodmancote).

13.42 Information provided in the October 2005 profile includes:

- population profile;
- housing, economic and deprivation Indicators;
- births, pregnancy and life expectancy;
- mortality rates (all causes/respiratory disease/cancer/coronary heart disease/infant mortality/stillbirths);
- hospital admission rates; and
- other health indicators.

13.43 Following prior concerns expressed by the local community about potential risks to health relating to cancer and congenital malformations, the health profile included consideration of this issue, focusing on locally significant clusters and trends of cancers and congenital malformations over time. The conclusions of the profile are presented in Table 13.1. The PCT advised in relation to those conclusions that:

“it should be noted that studies from elsewhere do not currently suggest a link between landfill and cancers and the evidence on the association between landfill and congenital malformations is inconsistent and inconclusive”.

13.44 The Neighbourhood Health Profile concludes that:

“People living in the Bishop’s Cleeve area generally experience levels of ill-health which do not differ markedly from people living in other areas of Gloucestershire when a range of

established health indicators and other less robust sources of evidence are compared”.

13.45 The PCT recommends in the profile that, given a lack of conclusive evidence on actual risk, continued working with the Environment Agency, the operators and the Liaison Group in terms of emission monitoring is the best way to protect public health.

13.46 Neighbourhood health statistics underpinning the health profile were taken from 2001 census data. These have not been updated since the publication of the 2005 Health Profile study. More recent population age profile and life expectancy data has been published, as summarised in Table 13.2.

Community Health Impact Assessment of the Wingmoor Waste Treatment and Landfill Sites (March 2009)

13.47 A Community Health Impact Assessment (CHIA) of the Wingmoor landfill sites operated by Grundon and Cory Environmental was facilitated by the Gloucestershire PCT. The CHIA was co-ordinated by the Bishop’s Cleeve Community Health Impact Assessment Steering Group (referred to below as “the steering group”). The CHIA was reported in March 2009 to the GCC Health Overview Committee.

13.48 In presenting the CHIA work, Gloucestershire PCT stated that *“It is apparent from the evidence available on landfill sites and expert advice from the HPA that well managed and regulated landfill sites should not represent a public health hazard, however it is important that the public is reassured”.*

13.49 The PCT went on to quote the CHIA (paragraph 6.0.1) that *“based on those areas of community health for which data exists, the Steering Group have found no definitive evidence to suggest that the health of the community has been affected by the Wingmoor Farm sites. However, the Group would strongly emphasise that there has often been no definitive data or answers to the areas that have been explored in detail.”*

13.50 The CHIA report identified a series of recommended actions for different agencies, including recommendations for further research and knowledge to inform and establish a baseline of evidence. The Steering Group is seeking the implementation of the actions by the relevant agencies to result in an update to the Wingmoor Liaison Group by 1 March 2010.

Table 13.1 Summary of Bishops Cleeve Neighbourhood Health Profile

Criteria	Conclusion
Population profile	The structure of the population is similar to that of the PCT area, Borough and the County.
Housing, economic and deprivation indicators	Bishop's Cleeve is situated in one of the least deprived areas of the PCT and County, particularly in regard to health deprivation and disability.
Births, pregnancy and life expectancy	The birth rate per 1,000 women in Tewksbury is equal to that of the County. The local rate for low birth weight babies was less than the PCT or County rates in both 1995-1999 and 2000-2003 periods. Average life expectancy for a woman living in the District (81 years) is equal to that of the County also however the average life expectancy for men (77 years) exceeds that of the County (76 years).
Mortality rates	All causes: Markedly lower than that for residents of the PCT and County since 1996. This has changed little over time. Respiratory disease: Rates from all causes (excluding cancer) are similar to that shown county wide. A small excess in the period 2002-2004 was shown, however the overlapping confidence level indicates that this is unlikely to be significant. Cancer: The South West Public Health Observatory (SWPHO) carried out data analysis for the period 1987 to 2002. Types of cancer are linked to lifestyle and there are many 'risk factors'. Wider determinants of health such as smoking, age, family history, affluence, diet or occupation can influence cancer incidence rates. Bishop's Cleeve is no different, statistically, from other areas nationally, regionally or locally. Coronary heart disease: Although this is not linked with landfill sites, it is an important 'health indicator'. Local rates are low for Bishop's Cleeve. Infant mortality: the number of deaths of infants up to 1 year old/1,000 live births exceeded the PCT and County rates in the period 1995-1999. This became less than or equal to these rates in the period 2000-2003. Stillbirths: Based on very low numbers, this does not exceed rates for the PCT or County as a whole for both periods 1995-1999 and 2000-2003.
Hospital admission rates (HAR)	The HAR in relation to respiratory disease for Bishop's Cleeve were lower compared with the PCT and County as a whole. The exception was for the under 75s in 2002-2004.
Other health indicators of key concern for residents	Congenital abnormalities: The South West Congenital Abnormality Register was asked to interpret data. Less than 5 congenital abnormalities were recorded in the period 1998-2002 (in the GL52 postcode area covering Bishop's Cleeve). When compared with the County as a whole (193 recorded cases), this is very low. Analysis of data covering the period 2002-2004 did not indicate unusual 'cluster formation' therefore further investigation was not carried out. Asthma: This illness is difficult to define and record with certainty. Data was obtained from general practices and from the Quality Management Analysis System. Asthma is not an illness directly associated with landfill sites, but can be linked with air pollution from traffic. The quality of the data was not robust enough to draw solid conclusions however. Air Quality: Using data obtained from Tewksbury District Council, it was concluded that the monthly Nitrogen Dioxide monitoring readings (recorded since 2003) show that the site has not exceeded levels which would trigger concern and a requirement for further monitoring.

Source: Bishops Cleeve Neighbourhood Health Profile, Oct 2005 www.chelttewpct.org.uk/pdf/publications/Bishopcleo05.pdf (accessed August 2008).

Table 13.2 Update to Bishops Cleeve Neighbourhood Health Profile

Criteria	Conclusion
Population profile	Data for 2007 from the Office of National Statistics indicates that the number of residents aged between 0 and 24 years has risen by an average of 2.1%, while the number aged between 25 and 74 years has decreased by an average of 5%. This indicates a shift towards a younger population.
Life expectancy	Data for 2007 from the Office of National Statistics indicates that life expectancy has increased from 81 to 83 years for women, and from 77 to 78 years for men.

Source: www.statistics.gov.uk (accessed August 2008)

Wingmoor Farm Task-Group

13.51 With the support of Gloucestershire County Council's Health Overview and Scrutiny Committee, the "Wingmoor Farm Task-Group" was set up on 30th January 2006. The task-group is made up of elected members with the aim to understand:

- existing emissions monitoring schemes at the site;
- responsibility of those carrying out emissions monitoring at the site;
- potential health effects of the emissions being monitored;
- any evidence which supports a link between landfill sites and adverse health effects;
- the local health profile and its relationship with the landfill site; and
- the way in which monitoring results are reported.

13.52 Six meetings took place between February 2006 and February 2007. The production of a final report was then delayed by the Group as it was informed that the Primary Care Trust was undertaking a CHIA on the Wingmoor Farm site, and that this would be completed by June 2007. The group therefore decided to delay reporting until it had examined the findings of the CHIA.

13.53 The Task Group report was presented to the Gloucestershire County Council's Health Overview and Scrutiny Committee on 13th March 2009. The conclusions of the report to the committee are as follows:

'At the end of phase 1 in February 2007 the task-group was able to reach the following conclusions:

- *SWARD [Safety in Waste and Rubbish Disposal] had expressed considerable concerns about the site and had argued that a lack of evidence of harm should not be taken as evidence of no harm. The disposal of waste, particularly hazardous waste, is an emotive issue and so residents concerns are understandable.*
- *A great deal of monitoring was being undertaken at the Wingmoor Farm site, and whilst it would be possible to*

call for additional monitoring, it was clear that the monitoring arrangements met, and in some cases exceeded, all of the minimum requirements.

- *Organisations including Grundons, the Primary Care Trust, the Health Protection Agency, and the Environment Agency consistently noted that the evidence available suggested that Wingmoor Farm had no discernable off site impact.*
- *The Neighbourhood Health Profile suggested that Wingmoor Farm was not adversely affecting the health of local residents and national research on the impact of landfill sites on health was inconclusive.*
- *There was not any strong evidence to suggest that the site was causing harm, although this did not necessarily prove that the site was harmless.*
- *Further evidence was required to help the group reach a firm conclusion and at the time of the last meeting in February 2007, members looked forward to receiving the findings of the Primary Care Trust Health Impact Assessment.'*

(Paragraph 3.5.1)

13.54 At its meeting in March 2009, the Health Overview and Scrutiny Committee also considered the findings of the Community Health Impact Assessment report in more detail. It was agreed that the HOSC would follow up on the recommendations in the CHIA report.

IMPACT IDENTIFICATION

13.55 Health and well-being is subjective in nature, which makes it difficult to measure impact significance. However, as described in detail in Chapter 7 of this ES, the predicted effects of the Scheme have been considered against two scenarios:

- (i) the notional do-nothing scenario, with the site closing 13 May 2009 and no further operations taking place at the site, and

- (ii) the minimum engineered scheme required to leave the site in a safe and suitably managed form.

13.56 The available indicators show that the health of the community surrounding the Wingmoor Farm Landfill Site is generally better than for residents of Gloucestershire as a whole. This is likely to reflect low levels of deprivation and/or good environmental quality in the local area. While this does not confirm that the landfill site is not having a low-level effect on the health of the local community, it does indicate that there are no health problems sufficient to give rise to unexpected patterns of ill-health in the local area.

13.57 The outcomes of the CHIA confirm that there is no data to suggest that the health of the community has been affected by the Wingmoor sites. It can therefore be reasonably assumed that a continuation of the current operations on the site, with the ongoing implementation of measures to avoid, manage and mitigate any potential effects arising from those operations, the health profile within the study area is unlikely to be significantly different from the existing situation.

13.58 Whilst the theoretical potential exists for adverse health effects to occur from both the non-hazardous and hazardous landfill operations at the site, as stated in PPS10 Paragraph 30 “Modern, appropriately located, well-run and well-regulated, waste management facilities operated in line with current pollution control techniques and standards should pose little risk to human health.” This is supported in general terms by the finding of a detailed review carried out for Defra in 2004. (“Review of Environmental and Health Effects of Waste Management: Municipal Solid Waste and Similar Wastes,” Report Ref. PB9052A prepared for Defra by Enviro Consulting Ltd, University of Birmingham and others, March 2004) This study considered a wide range of potential health issues including those listed in paragraph 13.12, and found that properly designed, located and operated waste management facilities do not give rise to significant adverse effects on health or the environment.

13.59 Any theoretical potential or residual risks need to be managed using a combination of in-process controls supported by appropriate environmental monitoring and regulation. The key aspects requiring consideration are the control of emissions to air (including odours and dusts); noise control; management of risks to groundwater and surface water; landscape and visual impacts; and management of risks relating to road traffic.

Air quality, odours and dusts (chapter 11)

13.60 The air quality assessment has assessed levels of substances released from the proposed development. It is concluded that levels of released substances will comply with the relevant health-based air quality standards and guidelines. The proposals would allow ongoing improvements in control of odour and dusts. On this basis, it is concluded that the proposals will not give rise to a significant risk to health due to exposure to airborne pollutants and dusts. Health and quality of life issues with regard to odour would continue to improve if the proposed scheme proceeds because of ongoing improvements in the control of landfill gas.

Noise (chapter 10)

13.61 The impact of the proposed scheme in terms of noise is described as low at most locations. Noise impacts without mitigation could be “moderate to high” at a limited number of locations, and consequently the construction of bunds to reduce these impacts is proposed. With these bunds in place, it is concluded that noise impacts would be low at all locations:

“With the above bund heights in place on the north western boundary of the site, the calculated site noise levels for clay extraction and restoration operations will comply with the suggested site noise limits for daytime for the nearest dwellings against the notional do nothing baseline.” (paragraph 10.114)

Groundwater and Surface Water (Chapter 12)

13.62 The assessment of groundwater (hydrogeology) and surface water (hydrology) includes an assessment of risks to groundwater and surface water. A wide range of mitigation measures are set out in the chapter. It is concluded that there would be no significant residual impacts on groundwater or surface water, provided the proposed mitigation measures are implemented. The chapter states:

“Overall, it is concluded that, with respect to the geological, hydrological and hydrogeological environment, there are no significant residual impacts or cumulative effects associated with the continuation of operations at Wingmoor, with proposed mitigation measures in place. The development proposals constitute a time extension only and will not increase footprint of mineral workings or subsequent landfill and waste operations from that previously consented. Waste management activities at the site would continue to operate under the requirements of the site’s Environmental Permits to ensure compliance with the Groundwater Regulations.” (paragraph 12.135)

Landscape and Visual (Chapter 8)

13.63 If the proposals are implemented, there would be a slight increase in impact during the operational phase of the development, but benefits in terms of the visual profile of the scheme once the restoration of the site has been completed. It is concluded that

“... the operational phase of the proposed development is assessed as having temporary long-term adverse effects on landscape character of slight-imperceptible significance. Once completed, the restored site would have permanent beneficial impacts on landscape character of slight significance at a regional level, and substantial significance at a local level.” (paragraph 8.170)

Road traffic (Chapter 9)

13.64 The assessment of traffic generated by the proposals considered a range of impacts which included severance, pedestrian / cyclist amenity, fear and intimidation, accidents and safety, and dust and dirt. The assessment concludes that the traffic generated by the proposals will not have significant adverse impacts on the safety, health or amenity of the local community. The assessment states:

“Overall, it is considered that the proposals and possible increases in traffic associated with them in the future case would have an insignificant residual impact in terms of traffic and transport.” (paragraph 9.112)

Comparison with do-nothing scenario

13.65 The potential impact of the proposals was assessed against the do-nothing scenario. It was concluded that there could be slight increases in noise, traffic, air quality and visual impacts during the operational phase compared with the do-nothing scenario. Noise impacts can be readily addressed via appropriate mitigation, and traffic impacts are not significant. The proposals would result in slight improvements in other air quality aspects, and more significant improvements in long-term visual impacts in comparison with the do-nothing scenario.

Comparison with Minimum Engineered Scheme scenario

13.66 The potential impact of the proposals was assessed against the Minimum Engineered Scheme scenario. It was concluded that there could be slight increases in noise, traffic, air quality and visual impacts during the operational phase compared with the

minimum engineered scheme scenario. Noise impacts can be readily addressed via appropriate mitigation, and traffic impacts are not significant. The proposals would result in slight improvements in other air quality issues, and more significant improvements in long-term visual impacts in comparison with the minimum engineered scheme scenario.

MITIGATION MEASURES

13.67 It is important that the mitigation measures set out in this Environmental Statement and laid down in the Environmental Permits for the site continue to be implemented. The operator will continue to manage the site so as to minimise, eliminate and monitor potential emissions which could theoretically pose a risk to the health or wellbeing of the local community. This will also ensure that the recommendations of the CHIA are met.

13.68 Through the work to date by GCC and the PCT, and through the ongoing operation of the site, the site operator will continue to communicate carefully and accurately with the local community on matters relevant to perceived risk to public health through the continuation of regular planning liaison meetings. This will build on the recommendations of the CHIA, and is the most appropriate means of ensuring that public perception of risks to health is effectively managed throughout the remaining life of the landfill site. This will also enable the community to understand the plans and actions being implemented at the site; provide a means for the local community and stakeholders to discuss their concerns and ideas with the site operators; and facilitate the rapid resolution of any problems.

SIGNIFICANCE OF THE RESIDUAL IMPACTS

13.69 There is no data to suggest that the health of the community has been affected by the past operation of the Wingmoor sites. A continuation of the current operations on the site, with the ongoing implementation of measures to avoid, manage and mitigate any potential effects arising from those operations is unlikely to result in a significant change from the existing situation. In general, properly designed, located and operated waste management facilities do not give rise to significant adverse effects on health or the environment. The site specific assessments described in this Environmental Statement indicate that there are no significant adverse residual impacts associated with the proposals.

CUMULATIVE EFFECTS

13.70 The assessments of the effects of the proposals on the local environment described elsewhere in this Environmental Statement have taken account of potential cumulative effects, and not identified any significant adverse cumulative impacts. In view of this, it is concluded that there are unlikely to be any significant adverse cumulative effects on health or wellbeing.

SUMMARY

13.71 The available information relating to the health of the local community identifies that there is no definitive data to suggest that the operation of the Wingmoor Farm sites has given rise to public health impacts in the local communities. The proposed development has been designed to provide effective control of the key issues which could potentially affect health and well-being in the local community. These are all managed through proposed mitigation measures identified throughout this ES and will be regulated by appropriate planning conditions and Environmental Permitting. The key issues identified comprise:”

- Control of emissions to air (including odours and dusts);
- Noise control;
- Management of risks to groundwater and surface water;
- Landscape and visual impacts;
- Management of risks relating to road traffic.

13.72 In each case, it was found that the proposed development would have no significant adverse effects. In some cases, the potential effects of the scheme would be beneficial by comparison with the main alternatives. On the basis of research into the health effects of landfill sites; the findings of the Community Health Impact Assessment; and the findings set out elsewhere in this statement, it is concluded that the Wingmoor Farm site is an appropriate location for the proposed development.

13.73 The perception of a risk to public health is material to the determination of the planning application. This is necessarily subjective in nature and not entirely within the control of the developer. Through the work to date by GCC and the PCT, and through the ongoing operation of the site, the site operator will continue to

communicate carefully and accurately with the local community on matters relevant to perceived risk to public health.

13.74 It is concluded that the potential and perceived health issues can be properly managed via the proposed mitigation measures set out within this ES. The operator will continue to manage the site so as to minimise, eliminate and monitor potential emissions which could theoretically pose a risk to the health or wellbeing of the local community. This is the most appropriate means of ensuring that the public perception of risks to health is effectively addressed throughout the remaining life of the landfill site.

13.75 Finally, if planning permission is granted, a good dialogue will need to be maintained between the developer and the local community in relation to the management of the site.