INTRODUCTION

Background

1.1 On the 19th October 2009 Oxfordshire County Council refused planning permission for the development of an EfW and subsequent revisions to the landfill restoration scheme at Ardley for the following reason:

"The development proposed would represent a large permanent building in the countryside which is contrary to policies C7, C8 and C9 of the Cherwell Local Plan and policies EN30, EN31, EN34 and D10a of the Non Statutory Cherwell Local Plan. The Council as Planning Authority is not persuaded that the need for a facility on this scale to divert waste from landfill is sufficient to outweigh the effects of the proposal on the countryside in this locality. "

1.2 The applicant, Viridor Waste Management Ltd (Viridor), has appealed this decision, but they also consider that there a number of material considerations that were not taken into account by the County Council when they refused planning permission together with some new material considerations. Viridor has therefore decided to submit a fresh planning application in order that the following material considerations can be considered by the County Council:

- rather than being a permanent facility, the EfW has a design life of between 30 and 35 years, ensuring that it will satisfy the requirements of the Oxfordshire municipal waste contract and provide capacity for commercial waste arisings. Viridor would not therefore object to a planning condition that limits the life of the facility to this period of time;
- the recent Secretary of State appeal decision at Ince Marshes in Cheshire which confirms the Government's view that a diverse mix of energy technologies, including energy from waste generation, will be required to combat climate change and provide secure, clean and affordable energy;
- the supplement to Planning Policy Statement 1 on Eco-towns, identifies NW Bicester as one of the locations for an eco town and seeks to ensure that consideration is given to the use of locally generated waste as a fuel source for CHP;
- the draft National Policy statement on Energy, which confirms that there is an urgent need to deliver significant amounts of new energy infrastructure over the next 10 to 15 years and as such the Government considers that the national need for new energy capacity has been demonstrated and that energy from waste will have a role to play in meeting that need;
- the proposed EfW will provide the equivalent of 21% of the electricity currently consumed by homes and businesses within the Cherwell area;
- consultation has commenced on a draft PPS on Planning for a Low Carbon Future in a Changing Environment, which seeks to sharpen policy on locating renewable and low carbon projects and states that

applications for cutting edge, well designed buildings should not be turned down simply because they do not look familiar;
- adoption of the South East Plan and the status of local planning policies;
- a revised and updated needs analysis for the proposed development;
- a revised energy plan to take into account the proposed NW Bicester eco town and the potential for the provision of combined heat and power;
- additional property searches have not identified any additional alternative sites for the proposed development;
- revised landfill phasing and landscaping details to provide a more natural style of planting; and
- the preparation of a virtual model to demonstrate how the proposed development will be viewed in the landscape.

1.3 In addition the design of the EfW has been reviewed and this has confirmed that the proposed dimensions of the building are the minimum necessary to enclose the plant and equipment and that the building is set as low as possible within the existing quarry. The design of the proposed EfW is therefore unchanged.

1.4 Consideration was also given to reducing the size of the facility but this would not have provided the required capacity that Oxfordshire needs to deliver to divert both municipal and commercial and industrial waste away from landfill and would have reduced the renewable energy generation capacity of the plant. Both of which are considered contrary to the aims of Government policy on diverting waste from landfill and generating energy from renewable sources.

1.5 It is also noted that neither national nor regional policy on energy and diverting waste from landfill place a rigid cap on the development of new capacity because Government is seeking to promote this type of development, not restrict it, in order to address the challenge of climate change.

1.6 Viridor is therefore re-applying for planning permission for the following development at Ardley waste management facility in Oxfordshire;

> "*The construction and operation of an Energy from Waste (EfW) and combined heat and power facility, together with associated office, Visitor Centre and bottom ash recycling facilities, new access road and weighbridge facilities and the continuation of landfill operations and landfill gas utilisation with consequent amendments to the phasing and final restoration landform of the landfill, surface water attenuation features and improvements to the existing household waste recycling facility*".

1.7 The application is supported by an Environmental Statement (ES) which reports the results of an Environmental Impact Assessment (EIA), undertaken by SLR Consulting Ltd. The EIA has assessed the potential environmental impacts of the proposed development.

1.8 This supporting statement contains the completed planning application forms and certificates. It then proceeds to give a description of:

- the site and the proposed development;
- a summary of the potential environmental effects;
- the need for the development and the alternatives considered;
- a review of relevant planning policies for the development; and
- a summary of the benefits of the proposed development.

PLANNING APPLICATION FORMS AND CERTIFICATES

SUPPORTING STATEMENT

SITE DESCRIPTION

1.9 The application site is located at Ordnance Survey Grid Reference 454 200 225 900, with access being gained from the B430, which leads north to J10 of the M40 and south to the A34 towards Oxford. Drawing No.2/1 Site Location Plan identifies the location of the site in context of the surrounding area.

1.10 The application site area comprises 95 hectares and includes the entire existing Ardley Waste Management site. The proposed EfW will be located in the south eastern corner of the application site. The existing landfill site will be rephased to wrap around the EfW site whilst the existing civic amenity site in the north of the site will be slightly extended to incorporate improvements. The existing gas utilisation plant will be retained unchanged.

1.11 The site is located at Viridor's existing waste management facility, west of the M40. The Banbury to High Wycombe railway line and Gagle Brook form the northern and eastern boundaries of the wider landfill site respectively. The western site boundary is the B430.

1.12 The nearest settlement is Ardley village, approximately 1 km north of the current site access. The village of Middleton Stoney is located 1.7 km to the south and Bucknell, 1.2 km to the east. The settlement of Upper Heyford is located over 2km to the west, adjacent to the former airfield.

1.13 The southern boundary of the site is a diverted public bridleway and to the south of the bridleway is a newly commenced mineral extraction site. A bridleway also runs along the eastern boundary of the site. Proposals for the permanent diversion of the southern bridleway and for improvements to the wider rights of way network are included as part of the planning application.

1.14 The site is not covered by any statutory landscape or ecological designations.

DESCRIPTION OF THE DEVELOPMENT

Introduction

1.15 This planning application has three main elements to it and as such each one is described in turn:

- Energy from Waste Facility with combined heat and power capability;
- Landfill Amendments and Restoration;
- Household Waste and Recycling Centre Improvements; and
- Ancillary development (mainly in respect of a new access to serve the proposed EfW and landfill facility).

Energy from Waste Facility

1.16 The main aspect of the proposed development is the construction of an Energy from Waste facility (EfW) that would generate energy and heat from the combustion of residual waste. Residual waste is that which remains following removal of waste which can be recycled or composted.

1.17 The EfW facility will combust up to 300,000 tonnes of residual Municipal Solid Waste (MSW) and Commercial and Industrial (C & I) waste per annum. All waste will be non hazardous.

1.18 It is understood that the facility will generate over 180,000 MW hours of electricity annually. A proportion of the electricity will be used to power the EfW facility but the majority will be exported to the National Grid via an underground connection to the Bicester sub station. The applicant is also proposing that the EfW will be CHP enabled to allow the use of heat and power in the nearby NW Bicester eco town proposals.

1.19 The EfW facility will be enclosed within a purpose designed building, 229 metres long, varying from 38 to 70 m in width and a maximum of 36 metres high. The chimney stack will be 82m high. The facility will be set at 100m AOD with the waste bunker within the main building at 12.5 m below base, 87.5 AOD. All reception and treatment of waste will take place within the building. Full details of the proposed design of the facility and the materials to be used are provided in the Design and Access Statement, see Appendix 1.

1.20 The construction of the facility is likely to take 2 years and once complete, the EfW facility will operate 24 hours a day, seven days a week.

Operation of the EfW Facility

1.21 A detailed description of the EfW facility can be found in Chapter 3 of The Environmental Statement. The EfW process will be contained within two

production lines, each with a 150,000 tonnes per annum capacity. In brief, the EfW has 4 key elements;

i) Waste Reception;
ii) Waste Combustion;
iii) Energy Recovery; and
iv) Flue Gas Treatment

1.22 **Waste Reception (i)** – residual waste will be delivered by HGVs and refuse collection vehicles (RCVs) via the weighbridge to a dedicated handling area within the EfW building. Waste is discharged from the vehicles into a collection pit or hopper. A grab crane is used to transfer the waste to two parallel process lines, before it enters the combustion chambers. The cranes mix and break up the materials to ensure homogeneity of feed to the combustion chambers.

1.23 **Waste Combustion (ii) –** Primary combustion takes place on a moving mechanical grate to promote the mixing of burning and unburnt waste. The combustion gas from the primary stage will be heated in the secondary combustion chamber to reach its specified temperature (850 degrees for a minimum of 2 seconds). The burnt waste from the primary combustion is removed as incinerator bottom ash (IBA). This IBA is then treated and recycled to produce secondary aggregate by the on site plant.

1.24 **Energy Recovery (iii) –** Heat from combustion is recovered initially to form steam and ultimately electricity at approximately 180,000 MW hours a year. A proportion of the electricity produced will be used to power the facility itself but the majority will be exported to the National Grid and will provide the equivalent of 21% of the electricity currently consumed by homes and businesses in the Cherwell district. In addition the plant will have the potential to provide heat from the process to surrounding uses such as the eco town.

1.25 **Flue Gas Treatment (v) –** An air pollution control system will treat all flue gas prior to emission so that human health and amenity guidelines on emissions are not exceeded. Fly ash from the heat recovery system can be combined with the flue gas treatment residues and will be transported off site in sealed tankers for disposal at a hazardous waste landfill near Cheltenham.

Landfill Amendments and Restoration

Landfill Amendments

1.26 The existing landfill at Ardley accepts in the region of 300,000 tpa of municipal, commercial and industrial (including asbestos) waste (50,000 tonnes municipal and 250,000 tonnes industrial and commercial). Current permitted voidspace at Ardley is estimated at 2.65 million tonnes, March 2008.

1.27 As part of the proposed development the landfill landform has been re-modelled to accommodate the EfW development in the south eastern corner

of the site. The eastern side of the existing Ardley landfill has a requirement for a 100m wide strip where only inert waste may be deposited so the location of the EfW has been selected in order to minimise the loss of non inert void space. In addition the contours of the revised restoration landform have been increased in order to recover voidspace lost to the EfW development. The revised phasing plans for the landfill (Drawings 3/4 to 3/9) identifies that there will be approximately 2.06 million tonnes of non inert void space, resulting in the loss of an estimated 600,000 tonnes of void space as result of the EfW development.

1.28 Phase 1 of the revised landfill, see Drawing 3/4, corresponds approximately with phases E3 and E4 of the existing approved landfill, see Drawing 3/1. The northern half of the landfill has therefore already been completed and will not be affected by the revised landfill proposals other than during the infilling of the central valley which is already approved and will occur anyway under the existing landfill permission.

1.29 The revised landfill arrangements will therefore only introduce revised restoration contours to the southern half of the landfill. Post settlement contours will remain at the currently approved 128m AOD in the northern part of the site. In the southern half revised landfill contours will increase from the approved 122m AOD to 127m AOD (post settlement).

1.30 Landfilling of the site will continue in a phased manner as illustrated on Drawings 3/4 to 3/9.

Installation Engineering

1.31 The landfill has been formed by the extraction of the Massive Limestone, which is an oolitic limestone that overlies the Upper Flaggy Limestone. A marl horizon (the Upper Marl) separates the two and inhibits the vertical movement of water between the two units. Whilst the base of the quarry coincides with the base of the Massive Limestone, the Upper Marl has been removed prior to the construction of the landfill.

1.32 With regard to the need for a groundwater management system:

- The base of the existing and proposed landfill cells is designed to lie above the groundwater level of the Upper Flaggy Limestone and so no groundwater underdrainage is required.
- The base of the landfill lies below the groundwater that is perched within the Massive Limestone, which is exposed around the perimeter of the site, a temporary sideslope groundwater management system is therefore required in order to control groundwater seepage and to facilitate the construction of the landfill cells.

Basal Lining System

1.33 The landfill will operate under the classification of a non hazardous landfill, as defined by the Landfill regulations. The minimum requirements of the basal lining system are a geological barrier at least equivalent to that resulting from

1m thick of maximum permeability of 1x10 to the minus 9 and an artificial sealing liner.

1.34 Prior to the placement of the lining system cell construction work is carried out to ensure that the basal elevation is above the level of the groundwater in the Upper Flaggy Limestone and to produce a nominal unsaturated zone, as well as producing a minimum basal gradient 0f 1V:50H.

1.35 The natural geological barrier does not provide sufficient protection so, as existing, an artificial geological barrier will be established. This will comprise of a minimum 1m thick low permeability engineered clay liner. The artificial sealing liner will comprise of a 2mm thick textured high density polyethylene (HDPE) geomembrane, forming a composite lining system with the clay liner. Individual phases of the landfill will be separated from each other by interphase bunds. The interphase bunds will be constructed from the same material as the basal clay liner, with the HDPE geomembrane extending over the top of bunds. A non woven geotextile protector will be installed above the HDPE geomembrane to prevent damage from the leachate drainage blanket.

1.36 Upon completion of the construction of the basal lining system and associated leachate drainage and collection system a leak location survey will be undertaken to check the integrity of the HDPE liner. If any defects are identified, then remedial works will be undertaken to repair it.

1.37 The installation of all elements of the basal lining system will be subject to construction quality assurance (CQA). The CQA process ensures and documents that the works have been carried out in accordance with the specification. Prior to each stage of works a CQA plan will be submitted to the Environment Agency (EA) and upon completion of works a validation report will be submitted to the EA demonstrating that the construction works and CQA activities have been carried out in accordance with the CQA plan.

1.38 The side slope lining system at Ardley will also continue to comprise of a 1m thick engineered clay liner overlain by a 2mm thick HDPE geomembrane and a geotextile protector as in the base of the cell. This lining system will be tied into the liner of the existing landfill, as appropriate.

Capping System

1.39 Immediately above the final waste cover layer, a 300mm thick regulating layer of granular material will be placed upon which the capping layer will be installed. The granular layer acts as a gas drainage layer immediately below the cap allowing the collection of landfill gas.

1.40 The capping layer is formed by a 1mm thick layer of very flexible polyethylene (VFPE) geomembrane, which will be fully welded. At the boundary of the landfill the geomembrane is to extend over the anchor trench to the side slope lining system and will form the lined base to the perimeter surface water drain.

1.41 Above the geomembrane a 200mm thick granular protection/drainage layer will be placed prior to the placement of restoration sub soils and top soil.

1.42 All elements of the capping system will also be subject to the CQA process referred to above.

Leachate Management

1.43 The leachate drainage system shall comprise of a granular drainage blanket with a system of herringbone drainage pipework falling to extraction sumps. A 300mm layer of clean suitably sized granular material will be used to form the drainage blanket. Leachate would be extracted from leachate extraction points located within each cell and two leachate monitoring points would also be located in each cell.

1.44 Leachate will be extracted by pumps (set to maintain leachate below the appropriate compliance level) and will be routed to the on site treatment plant from where, following treatment, discharge will be made to the foul sewer. No changes to the existing leachate treatment plant are required as a result of the proposed development.

Landfill Phasing and Restoration

1.45 The revised scheme is described in Table 1 below. Based on an EfW development not becoming operational until the final quarter of 2013 it is assumed that landfilling at existing rates will continue up until the EfW becomes fully operational. Thereafter it is assumed that landfill inputs will decrease to approximately 200,000 tpa and would be a mix of industrial (including asbestos) and commercial waste and inerts.

1.46 This small loss in potential non-inert landfill through re-phasing will not have a significant bearing on the projected life of the landfill which is estimated to be completed by 2019.

1.47 The existing gas utilisation plant at Ardley will also be retained unchanged as part of the proposed development, see drawing number 3/16.

1.48 The main aim of the landfill restoration is to produce final and interim landforms/land uses which maintain and enhance the landscape character and ecological value of the site, while mitigating the proposed EfW development and providing long term agricultural land, ecological habitats and woodland planting.

1.49 The table below provides a rough guide showing how the eventual completion of the landfill and implementation of the EfW will evolve over time.

Table 1 - Landfill Restoration Phasing Plan (see Drawings 3/4 to 3/9)

Stages	Activities
Stage 1 (2010-12)	Groundworks to prepare the EfW site and construction; Completion of landfill operations in Phase 1 comprising of non inert and inert fill operations and restoration;

	Formation of cell for Phase 2 and commencement of landfilling operations; Construction of new site access; Mineral extraction to the south.
Stage 2 (2013-2015)	Completion of construction of EfW, commissioning and operation; Landfill phase 1 restored; Landfilling in phase 2 completed and under restoration; Formation of cell for Phase 3 and landfilling New southern access in use; Relocate Landfill offices to the south and upgrade the HWRC; Mineral extraction to south continues.
Stage 3 (2016 – 2019)	EfW operational; Landfilling in phase 3 complete and restored Landfilling in phase 4 completed; Formation of cell for Phase 5 and landfilling completed c2019; and Mineral extraction to south continuing.
Stage 4 (2020 onwards)	EfW operational; Landfill complete and restored with planting established.
Note: HWRC	To remain operational throughout period

Household Waste Recycling Centre (HWRC)

1.50 The existing HWRC operates a split level site with five skip bays at the lower operational area of the site and nine parking spaces on the upper public area. As a result of the space to be created by re-locating the landfill offices and weighbridge to the proposed new southern access it is proposed to extend the HWRC to provide a further four skip bays and six additional public

parking spaces (see drawing 3/14). The proposed extension works will involve:

- Construction of new reinforced concrete retaining walls to tie into existing;
- Relocation of site offices;
- Removal of the site weighbridge and foundations;
- Construction of new concrete hardstanding;
- Additional site drainage, fencing and bollards; and
- New signage and road markings.

1.51 Waste will be deposited into containers located in one of the 9 bays identified for specific waste types (e.g. green waste, metal, wood, cardboard, non-recyclable waste), or one of the dedicated recycling containers located in the centre of the site. When full, the bins will be removed either for recycling elsewhere or for disposal at the adjacent landfill. There will be no waste processing on site.

1.52 The proposal will provide additional bays for the public to deposit waste in segregated containers, which will maximise the opportunity to reuse and recycle the material rather than dispose of it to landfill.

Reception Facilities

1.53 The site layout is shown on Drawing No` 3/14. Members of the public will enter the site via the existing entrance from the B430 Ardley Road and drive into the site on a one-way system.

1.54 On the one way circulatory route the parking areas are located on either side providing access to either the 40yd^3 roll on-off containers (9 in no`) or the recycling bins. Once parked, members of the public will carry their waste to the appropriate container and deposit the material into the appropriate (signed) container.

1.55 On site operatives are on hand to assist the public with any difficult or heavy loads and also to assist disabled customers.

1.56 Once all materials are deposited, the public will drive out of the site following the one-way circulatory site, to exit the site onto the B430.

HGV (service) Vehicle Manoeuvring

1.57 The bins, when full, are removed by RORO tractor unit and experience suggests that the vehicle will need to make on average two trips per day to and from the site for this purpose. All HGV movements will be undertaken within the operational area of the site which is at a lower level and separate from the public area.

1.58 As shown on Drawing No` 3/14, whilst HGV`s and private cars will both continue to use the existing access on to the B430 they soon separate into the dedicated public and operational areas minimising the potential for conflict.

1.59 Within the operational area and away from public access areas, the HGV`s will load, manoeuvre replace any containers and transport off site any full containers for recycling or disposal, as appropriate.

1.60 A new portacabin and staff parking area will be provided to the south of the existing access for office and welfare facilities for members of staff.

Ancillary Development

1.61 In addition to the EfW facility, the proposed development includes a range of ancillary services. These are as follows;

- Bottom Ash Recycling Facility;
- Visitor Centre;
- Offices and ancillary buildings including weighbridges and gatehouse;
- Staff and visitor's car park;
- New access for EfW and landfill onto the B430;
- Surface water attenuation measures;
- Additional ecological habitats;
  Proposed improvements to the rights of way network; and
- Substantial new landscaping and planting

Details of these are provided below:

1.62 **Bottom Ash Recycling Facility** - The bottom ash recycling facility will be located at the base of the EfW and is approximately 176m long and 60m wide. The bottom ash will be removed from the EfW by conveyor and will be discharged under cover at the base of the EfW. The bottom ash will be processed (crushed if required and screened) on a "campaign" base by mobile plant as stock accumulates to produce a secondary aggregate. Once processed the aggregate will be stockpiled, awaiting sale, within the two uncovered areas on either side of the EfW.

1.63 **Visitor Centre** - The Visitor Centre would have meeting rooms, an audio visual seminar room, exhibition space, viewing gallery and canteen. The Centre would also provide information about the dinosaur footprints which have been found at Ardley Quarry.

1.64 **Offices and ancillary buildings** - Offices, workshops, storage and control rooms and a weighbridge will be required to accommodate the day to day operation of the EfW facility. Separate offices will be provided to serve the landfill.

1.65 **Staff and Visitor's carpark** – There will be 52 parking spaces at the EfW, 4 of which will be disabled spaces. A lay-by will be provided for coach/minibus parking. Separate staff parking will be provided at the landfill offices.

1.66 **New access to EfW and Landfill off B430** – A new priority T junction access from the B430, incorporating a ghost right hand turn will be created to serve the EfW facility and landfill. Vehicles leaving the public highway, to access the EfW facility and landfill will proceed to the gatehouse and weighbridge located adjacent to the southern boundary of the site via a

redesigned junction and newly formed access road. From the gatehouse entry vehicles will proceed to the roundabout. A separate spur road before the roundabout will provide access to the landfill.

1.67 Vehicles bound for the EfW will proceed from the roundabout along a two-way road along the southern boundary of the incinerator bottom ash facility and then around the eastern end of the facility to enter the tipping hall at its southeast entrance and continue through the hall before returning to the weighbridge via the roundabout prior to leaving the site. This movement arrangement allows the natural safe reversing of right hand drive vehicles depositing waste into the bunker.

1.68 Vehicles for the loading and transporting of incinerator bottom ash off site will proceed again from the roundabout around the southern and eastern end of the facility to enter the IBA facility at its east entrance and continue through the plant before returning to the weighbridge via the roundabout prior to leaving the site.

1.69 Vehicles for the residue silo's, the flue gas treatment area and plant maintenance will proceed from the roundabout along the two-way road around the southern and eastern side of the facility, continue around a single lane road to the east of the air-cooled condensers, turn south around the northern tip of the EfW to enter the building at the north west entry.

1.70 Loading and unloading will take place inside the building. The vehicles will then leave the facility and proceed south picking up the two lane road to the south of the air cooling condensers and proceeding around the southern boundary of the IBA facility to the roundabout and then to the weighbridge

1.71 The HWRC will retain the existing access to the north of the site.

1.72 **Surface water attenuation -** A number of attenuation ponds are proposed to ensure surface water drainage does not exceed the greenfield rate, therefore mitigating any potential increase in downstream flooding. It is proposed that all runoff is intercepted by perimeter drains which convey surface water to one of five ponds linked by open drainage ditches. The discharge from each pond is routed to the next pond downstream with the discharge from the final pond into the Gagle Brook. These new wetland areas will provide opportunities to enhance the ecological value of the site.

1.73 **Additional ecological habitats –** Wildlife corridors will be created to provide links to and from the surface water attenuation lagoons to areas of open countryside and to the restored landfill that will provide suitable commuting and foraging habitat for amphibians and reptiles including the provision of suitable hibernacula. Further consideration to habitat creation and enhancement has been made through the landscaping proposals for the site, see Drawings 3/10, 3/11 and 3/12.

1.74 **Rights of Way -** Viridor will submit an application for the permanent diversion of bridleway 27 and are prepared to enter into an agreement to provide funding for a range of onsite and offsite improvement measures to the surrounding rights of way network, see Appendix 4 for details.

1.75 **Landscaping -** The aim of the restoration scheme is to create a landform which is in keeping with the surrounding landscape character, and enhances the ecological value of the site. A key part of the scheme will be to integrate the EfW facility into the surrounding landscape, see Drawings 3/10, 3/11, 3/12 and the virtual model.

Grid Connection

1.76 An underground grid connection to the sub station in Bicester has been identified and details of the provisional route are contained in Appendix 7. As this route has not been confirmed it is not included within the planning application and in the event that the connection is installed by a statutory undertaker it is considered that the works would be permitted development, see Part 17 Class G of the General Permitted Development Order.

Hours of Operation

1.77 The proposed EfW facility operation will be a continuous 24 hour operation, however waste deliveries will be restricted to:

- 0700 to 2000 Monday to Sunday

1.78 The hours of operation of the landfill will remain as permitted, as follows:

- 0700 to 1800 Monday to Friday
- 0700 to 1300 Saturdays
- Specific exceptions for receiving waste from the HWRC site

1.79 The hours of operation of the HWRC will also remain as currently permitted, which are:

- 0830 to 1730 Monday to Friday
- 0830 to 1600 Saturdays
- 1000 to 1600 Sundays

Employment

1.80 The proposed EfW facility would create in the region of 40 new full time posts. Employment at the landfill and HWRC would remain as existing (10).

SUMMARY OF POTENTIAL ENVIRONMENTAL EFFECTS

Highways

1.81 An assessment of the potential impacts of the proposed development on the local highway network has been undertaken.

1.82 The proposed EfW facility is designed to deal with around 300,000 tonnes of waste per annum, arising from the Oxfordshire area. It is proposed that traffic serving the EfW facility and existing landfill would access the site via a new junction and access from the B430 (Drawing Number 3/15). The existing access to the Household Waste Recycling Centre would remain the same.

1.83 It is anticipated that the EfW facility and landfill together would generate 404 HGV movements per day which will reduce to 222 movements a day upon completion of the landfill. In addition, the development would generate a small number of light vehicle movements from staff and contractors. The two junctions in close proximity to the site are Junction 10 of M40 and the Middleton Stoney Crossroads each would only be subject to a marginal percentage increase over existing traffic movements, which is not considered significant from a highway point of view.

1.84 No increase in throughput is predicted as a result of the proposed changes to the HWRC which are about improving internal circulation and improving the facilities available to existing users.

1.85 The safety record of the B430 in the vicinity of the site has been reviewed and it was concluded that there is no pattern of accidents to suggest a highway layout deficiency or a capacity difficulty.

1.86 The impact of generated traffic on the operation of the highway network has been calculated using computer modelling techniques. As traffic generated by the proposed development will be spread throughout the day, rather than concentrated at peak times, the modelling exercise demonstrated that the proposed development would not have a bearing on the capacity of the road network, particularly at peak times.

1.87 The site is well located in respect of the strategic and high capacity road network and has good access from the main centres of population, from which the waste will be imported. The site is not readily accessible by means other than the car due to a lack of pavements and bus stops on the B430.

1.88 Overall, it is considered that the development proposals for the EfW, Landfill changes and the extension to the HWRC are acceptable in terms of highway amenity safety and capacity.

Noise

1.89 A noise assessment was undertaken to determine the following:

- the existing noise levels at noise sensitive receptors around the site;
- the impact of site clearance, preparation and construction;
- impact on the noise sensitive receptors; and
- the noise impact of the operation of the EfW facility, landfill and HWRC.

1.90 The noise levels from on site noise sources have been assessed against standards appropriate for each noise source. The predicted operational noise levels were then assessed against the existing noise levels at each noise sensitive receptor. It is predicted that there will be no significant increase in noise at each noise sensitive receptor as a result of the proposed development, therefore, no mitigation measures are necessary.

Air Quality

1.91 An assessment of the potential impacts of the proposed development on air quality during the construction and operational phase was undertaken. The assessment was based upon a comparison of the current situation against the air quality impacts resulting from the proposed development. An assessment of finer particles (PM_{10}) has also been carried out as part of the stack dispersion modelling for the EfW facility.

1.92 The potential impacts on sensitive receptors, human receptors and ecological receptors were considered. Sensitive receptors include any persons, locations or systems which may be susceptible to changes as a result of the proposed development. Human receptors are locations where members of the public are reasonably likely to be exposed to air pollution for the duration of the relevant objective. For example, short term standards such as the 1 hour standard for NO_2 should apply to footpaths at site boundaries. Longer term standards such as the 24 hour PM_{10} should apply at houses or other locations expected to be occupied on a continuous basis.

1.93 Ecological receptors include Sites of Special Scientific Interest (SSSI) or European sites e.g. Special Areas of Conservation (SAC) within 10 km of major emitters. A radius of 10 km has been applied in this assessment, as advised by the Environment Agency.

1.94 In terms of wind blown dust being deposited outside of the site, it is common to use a distance of 100-200 m from major sources as the radius within which there is the potential for significant air quality impacts from deposition of dust. Landfill and HWRC activities will be no closer to residential properties than existing and there are no residential properties within several hundred metres of the proposed EfW, therefore, the potential for dust impacts at residential receptors are considered to be negligible with the following mitigation measures proposed:

- damping down stock piles and haul roads;
- controlling the speed of site traffic; and
- a road sweeper will be employed on the public highway if necessary.

1.95 The impact of traffic on air quality was also calculated. The additional Nitrogen Dioxide ($NO_{2)}$ and PM_{10} generated by construction vehicles was considered to represent an 'extremely small' change according to the air quality National Society for Clean Air (NSCA) impact criteria. In accordance with the NSCA significance criteria, whereby the predicted environmental concentration is compared with the air quality objective, it is demonstrated that the development would result in a 'negligible' impact at the assessed locations.

1.96 In terms of dust and litter during operation of the proposed development all waste handling activities associated with the EfW would be inside the waste reception building, the risk of fugitive dust and litter is considered to be insignificant and no mitigation measures are required. As waste would be present at the facility for no more than few days pending treatment, the potential for odour and bio aerosol formation would be minimal. As all operations will be enclosed within the building, no mitigation to control bioaerosols or odours are required. Existing measures such as use of daily cover and the regular emptying of bins would continue at the landfill and HWRC to control these impacts.

1.97 Emissions from the EfW stack were calculated from design data provided by the manufacturer. The significance of impacts of predicted long term Predicted Environmental Concentrations (PEC) for all pollutants have been classified as 'negligible'. The predicted process contributions (PCs) of both nitrogen oxides and sulphur dioxide at all of the identified sensitive ecological receptors have been classified as insignificant and no further assessment is required.

1.98 In summary, the air quality impacts of pollutants from vehicles, the EfW stack, dust and litter and odour and bioaerosols have been assessed. The assessments concluded that the impacts of these emissions would not give rise to significant adverse air quality effects for human or ecological receptors in either the short or long term.

Geology, Hydrology, Hydrogeology and Flood Risk

1.99 The potential impacts of the proposed development upon the geological, hydrogeological and hydrological environments have been identified and assessed in the ES. The application site is located on a Major Aquifer but not within a groundwater source protection zone. There are no private groundwater abstractions within 3km of the site.

1.100 A small part of the south eastern corner of the site lies within the floodplain of the adjacent Gagle Brook. However, the Environment Agency has confirmed they do not hold any records of historic flooding at or adjacent to the site.

1.101 The site has already been considered and found appropriate for landfill and HWRC development and the changes proposed to these activities represent no greater risk to the water environment than the existing approved schemes.

1.102 Construction and operation of the EfW facility will increase the area of hardstanding on the site but the surface water attenuation scheme has been

designed to manage run off from the entire site in accordance with the latest Environment Agency guidelines.

1.103 The increase in hardstanding and impermeable buildings has the potential to reduce the amount of groundwater recharge, potentially affecting groundwater flows to the Gagle Brook. The groundwater assessment calculated that due to the relatively small size of the area affected (in relation to the outcrop area of the aquifer), the overall risk of reducing groundwater discharge will be 'low'. In addition, surface water run off from the development will be discharged to an unlined pond in the south east of the site, from where it will infiltrate to the groundwater. This will reduce the 'low' significance to 'near zero' thus no mitigation is considered necessary.

1.104 The development and operation of the EfW site could lead to contaminated runoff. Without mitigation, the probability of fuel and lubricant spillages are considered to be 'medium'. The magnitude of the impact is considered to be 'moderate' given the limited volume of contaminative liquids on site. In addition, there is potential for sediment erosion to the Gagle Brook during the construction phase. Mitigation measures are therefore required to reduce impacts to an acceptable level.

1.105 In order to minimise the potential for spills of potentially contaminating material during the construction phase of the project, environmentally hazardous material used during the operational phase of the site will be kept in dedicated stores and storage tanks will have appropriate secondary bunding.

1.106 The potential for leachate generation and discharge to groundwater or surface water will be minimised by the design of the facility. The waste would be delivered to a dedicated handling area using bulk transfer and street refuse collection vehicles (RCV's). All vehicles delivering residual waste will discharge their waste directly into a pit or storage hopper. This will minimise the potential for the generation and discharge of leachate.

1.107 Existing leachate management controls will be continued for the landfill and HWRC developments.

1.108 To minimise the risk of sediment build up in the Gagle Brook during earthworks, a range of appropriately designed surface water management measures will be implemented including:

- Erosion control measures – these aim to prevent runoff from flowing across exposed ground and becoming polluted with sediments.
- Sediment control measures – these aim to slow runoff and allow for settlement of sediment as close to the source as possible.
- Site Measures – these aim to provide end of pip treatment for polluted water, for example reed beds or settlement ponds

The implementation of appropriate surface water management measures outlined in the Flood Risk Assessment will reduce the risk of surface water quality impacts from the development to 'Low'.

1.109 It is concluded that, with respect to geology, groundwater and surface water, there would be no significant impacts. The proposed development will utilise the same controls and mitigation as that employed by the landfill therefore no adverse impacts on the water environment or increased risk of flooding are considered likely as a result of the proposed development.

Ecology

1.110 An Ecological Impact Assessment (EcIA) was conducted to determine the potential impacts of the development on the ecology of the application site and surrounds.

1.111 A preliminary desk based study was undertaken to obtain data on statutory and non statutory nature conservation sites within a 10km radius of the application site (a distance considered appropriate with respect to controls required by the Waste Incineration Directive for aerial deposition).

1.112 Field surveys were also undertaken. These surveys included:

- Extended Phase 1 Habitat Survey;
- Breeding bird survey;
- Great crested newt survey; and
- Reptile survey

1.113 No statutory protected or notable plant species were recorded in or directly adjacent to the survey area. Protected and notable plant species were recorded within 2 km of the proposed development but none were identified within the application site. The site is not considered likely to be key for any of these species.

1.114 Records of protected and notable fauna within a 2km radius around the site were obtained from Thames Valley Ecological Records Centre (TVERC).

1.115 No evidence of badger activity was observed within the survey area, however, badgers are known to be active on the restored parts of the landfill and it could be reasonably expected that badgers cross the southern corner of the quarry site.

1.116 There are no historical records for any bat species at or in close proximity to Ardley Quarry. The closest records are for brown long-eared bat (*Plecotus auritus*) at Bucknell Churchyard approximately 1.7km east of Ardley Quarry.

1.117 The application site offers very low bat roosting opportunities. Whilst, there is potential for bat species to utilise the area for foraging purposes, with the quarry linked to surrounding countryside by well defined features (i.e. Gagle Brook) offering suitable commuting routes, it is unlikely that this site is important or critical for bats.

1.118 The habitat types within and around the survey area provide suitable habitat for a range of breeding bird species typical of woodland, farmland and wetland habitats. The breeding bird survey identified a number of species using the site for breeding purposes with the large pond providing the main feature for breeding birds. Of the species recorded only little ringed plover is listed on Schedule 1 of the Wildlife & Countryside Act 1981 (as amended).

1.119 The application site supports a large population of both common lizard (*Lacerta vivipara*) and grass snake (*Natrix natrix*). A mitigation strategy for this species, including trapping, relocation and exclusion, is currently in process as part of the permitted landfill development.

1.120 In addition to great crested newts, the site supports a 'large' population size class of smooth newts (*Triturus vulgaris*) as well as common toad (*Bufo bufo*) and common frog (*Rana temporaria*) with these two latter species listed as priority species in the UK BAP.

1.121 A number of butterfly and moth species as listed in the UK BAP as Priority Species have been recorded in close proximity to the application site (these are detailed in Chapter 10 of the ES). The survey area provides potentially suitable habitat for a diverse range of invertebrate species but none of the aforementioned species or other notable species were observed during any fieldwork carried out on the site.

1.122 The proposed mitigation measures that will be incorporated into the proposed development to prevent, reduce or offset any adverse effects on ecology and nature conservation although it should be noted that the proposed location of the EfW already has planning permission to be landfilled and these areas will be lost whether or not the proposed EfW is implemented. In general, mitigation measures include minimising land take and disturbance by reducing the footprint of the works so that adjacent habitats are not impacted, avoiding key habitat and areas used by protected species and minimising pollution of watercourses. Habitat creation is also an important aspect to ensure that key habitats are reinstated and wherever possible enhanced through use of seed sources on the site and through selective planning using locally sourced native species that are appropriate to the locality.

1.123 The layout of the EfW facility has been designed to minimise the land take in the existing quarry that is already consented for landfill operations. All works will be undertaken in a sensitive manner and in accordance with agreed mitigation plans for protected species.

1.124 A series of air pollution controls are included in the design of the EfW facility as standard including gas scrubbing to remove heavy metals and other contaminants, bag filters to remove dust and particulates and non-catalytic reduction measures to reduce NOx and other gasses. The air pollution modelling detailed in Chapter 5 of the ES, suggests that the effect of emissions from the EfW facility on designated sites is negligible and therefore it is not intended to provide any further mitigation other than that already incorporated into the design of the facility.

1.125 All work to remove scrub and other vegetation shall be avoided during the bird breeding season between the middle of March and the end of August,

wherever practicable. If any clearance works need to be carried out during this period they will only proceed after the vegetation to be removed has been checked and deemed free of active nests by a suitably qualified ecologist. If active nests are found then no clearance works will begin at the nest site and buffer zone around the nest site until the young birds have left the nest.

1.126 Although not currently active on the site, areas to be cleared will be inspected for any badger setts inside, or within 30m of, these areas. If badgers are found, an appropriate mitigation plan will be produced and all works will be carried out under licence from Natural England.

1.127 Suitable site management will be implemented to avoid and/or minimise the generation of excessive human disturbance, dust, noise and light during the construction works.

1.128 Wildlife corridors will be created to provide links to and from the surface water attenuation lagoons to areas of open countryside and to the restored landfill that will provide suitable commuting and foraging habitat for amphibians and reptiles including the provision of suitable hibernacula. Further consideration to habitat creation and enhancement will be made through landscaping proposals both within the application site and in the wider context of the landfill site.

1.129 No statutory or non-statutory designated nature conservation site will be directly or indirectly affected during the construction phase of the EfW facility.

Landscape and Visual Impact

1.130 The potential landscape and visual impacts of the development have been assessed and full details are provided in Chapter 6 of the ES.

1.131 The site has no statutory landscape designations, however, due to the size and height of the development, there will be a visual impact. Therefore, mitigation strategies and compensation/enhancement measures have been integrated into the development scheme.

1.132 The main aim of the restoration is to produce final and interim landforms/land uses which maintain and enhance the landscape character and ecological value of the site, while mitigating the proposed EfW and Landfill development and providing long term agricultural land. The main aim of the landscape proposals are to integrate the EfW into the surrounding landfill restoration and landscape character of the area, while providing a setting and complimentary design form to the built development. To assist in this process the proposed building has been designed to be as low as possible having regard to the plant that it must enclose and it has been set as low as possible on the quarry floor.

1.133 The landscape of the proposed development can therefore concerns a number of basic elements as outlined below, each with different constraints and potentials:

- the continued restoration and management of the existing landfill development;
- the design of the proposed landfill landform and its integration into the existing completed landfill landform;
- the design of the proposed landfill land uses (including seeding, hedgerows and woodland planting) and their short and long term management;
- the more detailed design of the proposed building setting in terms of style and relationship to the proposed buildings;
- the more intensive and detailed management required to ensure the successful establishment of the landscape setting of the building; and
- treatment of the application area boundary, and how this merges with the surrounding landscape character.

1.134 Modifications to approved landfill levels are proposed to maximise screening and minimise landfill void lost to the location of the EfW facility. The proposed new contours are illustrated in the restoration masterplan and include a 5m high increase to the southern landfill from 122m AOD to 127m AOD. The northern section of the landfill is permitted to a post settlement height of 128m AOD so there would not be an increase in the height of the landfill overall.

1.135 It is proposed to revise the field pattern and woodland planting on the restored landfill area to reflect the amended landfill levels. Planting would also be increased to provide greater levels of screening to the north and west. Planting around the EfW facility would be extended onto the landfill to help integrate the building into its surroundings. The proposed planting is based on the permitted landfill restoration scheme and would blend with the local landscape hedgerow and woodland character.

1.136 Materials used in the design of the EfW facility have been chosen to create a light coloured building, which will reduce the visual impact of the bulk and scale of the development. Translucent materials, greys, browns, pale greens and other natural colours would all be used to blend the building into the agricultural background.

1.137 In terms of the connection of the EfW facility to the National Grid, a preliminary route has been identified for the undergrounding of the connection to the Bicester sub station. Whilst this may cause some loss of hedgerows and visual impact in the short term, it is considered preferable to permanent overhead power lines.

1.138 Cut and fill operations will be required to adjust the base levels in the quarry to 100m AOD, to form a base level for the proposed EfW. A surface water management scheme will include the development of a number of surface water attenuation lagoons to the south east of the EfW facility. Wetland habitats would be created within these areas, adding to wetland habitats linked to the Gagle Brook.

1.139 The most visible elements of the development would be the buildings and chimney stack. The stack would consist of 2 flues with a simple steel tube.

1.140 The proposed mitigation measures in relation to landscape are as follows:

- the creation of a rolling landfill landform;
- a building base level close to the base of the quarry floor;
- large blocks of woodland planting;
- a natural type landscape around the EfW ;
- a high standard of building design, including careful choice of materials;
- preservation of existing boundary trees and hedges;
- a curved access road to reduce views into the development area; and
- a landform screened access road, gatehouse and weighbridge area.

1.141 The general restoration objectives for any mineral or waste site can be listed as:

- Restore the site area to a suitable landform and after use;
- Ensure suitable landscape features and land cover are introduced to the site;
- Establish vegetation through suitable aftercare; and
- Maximise the landscape and ecological potential of the resultant habitats.

1.142 In the case of the proposals these objectives have been developed within the constraints and opportunities listed above to create the following specific objectives:

- successfully merge and integrate the proposed landfill landform with the existing landfill landform;
- integrate surface water management for the landfill and building development into the overall landscape design;
- locating the EfW development close to the base of the quarry at 100m AOD;
- ensure ground water conflicts are avoided or resolved;
- take into consideration proposed new landfill phasing and ensure any revisions are practical;
- design revised landfill landform to maximise EfW building screening potential;
- include native woodland planting to boost long term screening levels;
- utilise the permitted mineral development to the south in mitigation and landscape strategies;
- ensure final landfill restoration design is in character with field pattern and scale of the surrounding landscape; and
- use biodiversity and existing ecological management aims as basis for range of final land uses.

1.143 No designated landscapes would be directly affected by the proposed development, however, the buildings will have an inevitable landscape impact. Landform, landscaping, building design and careful use of materials will all be used to reduce the visual impact of the buildings. As the building cannot be entirely hidden, the aim has been to create a high quality, landmark building, which will have a positive effect on views and the landscape of the area.

Socio - Economic Impacts

1.144 The potential benefits and costs of the development have been assessed and mitigation measures provided where relevant.

1.145 This assessment is based on a 5km study area from the proposed development site, incorporating the lower layer super output areas of the Cherwell District (Cherwell 10C, Cherwell 10D, Cherwell 11B and Cherwell 16A).

1.146 The main positive impact of the facility on the socio economic situation in the local area is the provision of 150-200 jobs during the 2 year construction of the facility. Upon operation, 40 permanent jobs would be created. The EfW facility may also create jobs indirectly, for example waste separation jobs in waste transfer stations. The facility will also help Oxfordshire meet its landfill directive targets and avoid costly penalties, which may otherwise have to be met by increasing council tax. Existing employment will be maintained at the landfill and HWRC.

1.147 An Energy Plan setting out details of the proposed energy generation benefits, in terms of power and heat, has been prepared and confirms that the proposed plant will be a significant source of energy generation and has excellent potential to supply heat and power to the nearby NW Bicester eco town and other energy hungry development in the area.

Cultural Heritage

1.148 The potential impact of the development on the area's cultural heritage has been assessed. Cultural heritage includes below and above ground archaeology, historic buildings and conservation areas and their settings.

1.149 As the application site has been previously quarried, the development will have no direct impacts on cultural heritage. The settlements within the vicinity of the site include conservation areas, a registered park, and a scheduled castle. Given the location of the application site, it is considered that the EfW facility would create a negligible to moderate indirect visual impact on the cultural heritage of the area.

Palaeontology

1.150 Due to the existing paleontological interest at Ardley Quarry and the potential for the proposed development to impact on this resource, a stand alone

assessment of the potential impacts of the proposed development has been undertaken.

1.151 The dinosaur footprints and trackways found to date at Ardley Quarry have provided an important insight into how two species of dinosaur that lived 168 million years ago moved. There is a low possibility that further trackways remain in a horizon of the Upper Flaggy Limestone under the proposed EfW facility site that could be exposed during construction works. Therefore prior to start of all groundworks, contractors will be fully briefed on the paleontological features to look out for when undertaking excavations on site. During groundworks through the horizon where dinosaur trackways have been found, care will be taken to strip this horizon in layers and if any dinosaur footprints are exposed all works within that area will stop and Natural England will be contacted for advice. Where any footprint and/or trackway is deemed worthy of protection these will be removed and preserved under the guidance of suitable palaeontologists as advised by Natural England and the County Council.

1.152 It is concluded that with the above mitigation measures, the proposed development is not likely to have a significant impact on the potential paleontological resource at Ardley Quarry.

NEED FOR WASTE MANAGEMENT CAPACITY

Introduction

1.153 Whilst Oxfordshire does not have an up to date Waste Local Plan, a substantial amount of data relating to waste arisings, capacity and future management requirements has been generated by the preparation of the South East Plan and work undertaken by ERM on behalf of Oxfordshire County Council. In addition the committee report on the previous application set out the County Council's current understanding in respect of the need for waste recovery facilities within Oxfordshire.

1.154 It should also be noted that recent appeal decisions have confirmed that Government policy does not set a cap on the development of waste management capacity and that any targets should therefore be seen as the minimum to be achieved. The delivery of waste recovery capacity is therefore generally supported by Government policy as it will provide capacity to drive the management of waste up the waste hierarchy away from landfill and it will provide a source of renewable energy.

The South East Plan

1.155 Policies W3 and W4 of the South East Plan (SEP) provide for regional and sub regional self sufficiency. Although it is important to note that within the supporting text to policy W4 (paragraph 10.18) it is recognised that within the aim of sub regional self sufficiency it is accepted that the movement of waste between sub regions will occur and that the level of self sufficiency capable of being achieved will depend on:

- The characteristics of the sub region for example the proximity of major settlements and opportunities to use sustainable forms of transport;
- The nature of the waste stream, with greater control being capable of being influenced over municipal waste than industrial and commercial waste; and
- The type of facility, with wider catchment areas necessary to justify more specialised facilities.

1.156 The above criteria are considered relevant to Ardley because the site is located close to the borders of Northamptonshire and Buckinghamshire and therefore cross boundary flows of waste already occur and will be expected to continue because of the proximity of the site to the motorway network which provides a fast and efficient transport link for bringing the waste to Ardley. In respect of municipal waste the plant is designed to provide recovery capacity for Oxfordshire's municipal waste, however additional capacity has been provided to ensure that commercial and industrial waste can also be recovered in accordance with government policy of diverting waste from landfill and as SEP acknowledges less control can be exercised over the source of this waste because of the commercial nature of the contracts that govern this trade. On the final point the delivery of Ardley is expected to be one of the first recovery facilities in this part of the South East and therefore in its early years it is anticipated to be the nearest appropriate

facility for recovering energy from waste for a wider catchment area until other areas develop their own facilities. It is therefore anticipated that the Ardley waste management facility will continue to manage waste from outside of Oxfordshire because of the factors outlined above.

1.157 Policy W5 of SEP sets targets for the diversion of waste from landfill and also seeks to ensure that there is sufficient landfill capacity to process the residues and waste that cannot be recovered and it is considered that the submitted scheme provides for both of these elements.

1.158 Policy W7 then sets out the waste management capacity requirements for the individual sub regions in the South East and seeks to ensure that planning authorities provide an appropriate range of facilities to achieve the targets set out in the SEP. The supporting text to policy W7 states that there is an immediate and acute shortfall in capacity required to meet the ambitious targets for recycling, composting and recovery and there needs to be a rapid increase in waste management capacity. The SEP recognises that this urgency is being compounded by the long lead in times for such facilities and the difficulties in obtaining planning permission.

1.159 To deliver the necessary capacity policy W7 provides targets for tonnages to be managed in each sub region and then, to illustrate the scale of need, a table is provided to give an illustration of the additional capacity required to meet the waste management requirements of SEP up to 2015. With regard to Oxfordshire this table identifies that by 2015 there will be a shortfall in recovery capacity of 102,000 tpa.

1.160 It is understood that the modelling work for the SEP was undertaken by ERM who have been subsequently engaged by the County Council to undertake further modelling work specific to Oxfordshire. The results of this additional work are set out in the section below and highlight how the capacity gap will grow in the period up to 2020 and beyond. Also it is considered likely that ERM used similar assumptions about existing waste recovery capacity in Oxfordshire in their work on the SEP and that estimates of the capacity gap up to 2015 could therefore be a significant under estimate.

Waste Arisings, Capacity and Future Requirements Study for Oxfordshire County Council

1.161 This study was carried out by ERM in January 2008 on behalf of Oxfordshire County Council to provide an assessment of the planned and existing capacity of waste management infrastructure within the County. The study was a follow on from the work that ERM had carried out to inform the waste capacity requirements within the South East Plan and was intended to provide a County level analysis of waste capacity up to 2020 and beyond.

1.162 The study considered three scenarios for establishing existing capacity as follows:

- Scenario 1 maximum capacity;
- Scenario 2 operational capacity; and

- Scenario 3 minimum capacity.

1.163 In respect of existing waste recovery capacity within Oxfordshire the study produced an estimate of 150,000 tonnes of existing capacity under scenarios 1 and 2 and an estimate of 75,000 tonnes under scenario 3.

1.164 Then having regard to future waste arisings and recycling/recovery rates the study estimates that there will be a capacity gap for new recovery capacity of between 170,000 tpa by 2022 under scenarios 1 and 2 and of 245,000 tpa by 2020 under scenario 3.

1.165 However in arriving at the estimates of existing capacity within the study only two treatment facilities are identified within Annex A which lists the sites used in the capacity modelling. These sites are named as Harwell Waste ss-processing and Sutton Wick Leachate Treatment plant. The Harwell facility is understood to be a waste water treatment plant and no explanation is provided as to why only one waste water treatment plant and only one leachate treatment plant are included within Annex A as there are other facilities of this nature within the County. Also as waste water treatment plants they are considered to deal with a waste stream that is not normally included within the waste capacity assessments.

1.166 It is therefore considered that this study provides an over estimate of available recovery capacity within the County and that the capacity gap is likely to be 320,000 tpa, which more closely accords with the most recent estimates provided by the County Council below.

Need Assessment in the Ardley Committee Report

1.167 Work undertaken by Oxfordshire County Council in the preparation of the committee report for the previous Ardley planning application lead to the report stating that the County need to deliver 291,000 tpa of recovery capacity in order to meet the South East Plan targets and that a significantly greater quantity (in the order of 430-460,000 tpa) of waste could be diverted from landfill if sufficient waste treatment capacity is available. This is the most up to date statement on the need for new recovery capacity issued by the County Council.

1.168 Work undertaken by Oxfordshire County Council's Waste Management Team has identified a likely need for 150,000 tpa of capacity to manage Oxfordshire's residual municipal waste arisings, see Appendix 10 of Volume 1. The remainder of the proposed capacity will be available to manage commercial and industrial arisings.

Landfill

1.169 Current permitted non inert voidspace at Ardley was estimated at 2.65 million tonnes in 2008. Based on existing tipping rates of 300,000 tpa the existing permitted landfill at Ardley has an anticipated life of 9 years (2016). Whilst

classed as a non inert landfill Ardley does have a requirement for a 100m wide inert strip along its eastern boundary.

1.170 The OCC Minerals and Waste Annual Monitoring Report 2009 confirms in Table 8 that Oxfordshire currently has 11.8 million tonnes of permitted non inert void space and the South East Plan confirms that this is in excess of the landfill capacity required for the period 2006-15.

1.171 Beyond 2015, as a result of the likely delivery of waste recovery capacity, future landfill requirements for non inert void space will be lower and the loss of less than 10% of Oxfordshire's permitted non inert void space to accommodate an EfW facility is not considered significant.

Household Waste Recycling Centre

1.172 The existing site at Ardley is already meeting a need for this type of facility within this part of Oxfordshire and this would continue to the case under the proposed development. The proposed improvements will not significantly effect the capacity of the site so no increase in throughput is predicted although the additional bins may allow for greater segregation of waste types which could improve recycling rates on the site.

Summary

1.173 The above three sources of analysis on the need for new recovery capacity within Oxfordshire clearly establish that there is a need for between 170,000 tpa and 460,000 tpa of new capacity to be delivered between the period 2015 to 2020. The assumptions used in arriving at the estimates for the lowest capacity gap are considered to be lacking in justification and do not accord with the most current assessment carried out by Oxfordshire County Council themselves, which places the need for new recovery capacity at 291,000 tonnes. The proposed 300,000 tpa capacity is therefore considered appropriate to ensure the waste recovery requirements for Oxfordshire are met and that the diversion rates of Municipal and Industrial and Commercial Wastes are maximised.

1.174 The existing landfill and HWRC already contribute to the disposal and recycling capacity available within the county and this would continue to the case with the proposed development.

NEED FOR ENERGY GENERATION CAPACITY

1.175 The Government White Paper - Meeting the Energy Challenge was published in May 2007 and it and at page 6 sets out that the government's long term energy challenges are tackling climate change by reducing carbon dioxide emissions and ensuring secure, clean and affordable energy. At page 7 it identifies a need in the UK for around 30-35GW of new electricity generation capacity over the next two decades, with around two thirds of this capacity required by 2020. Page 8 then identifies the key elements of the Government's strategy as establishing an international framework to tackle climate change, legally binding carbon targets, energy saving and providing support for low carbon technologies.

1.176 Given the continuing need for energy and the need to reduce carbon dioxide emissions the need to deliver low carbon energy generation capacity, such as that proposed at Ardley, is considered a crucial element of the Government's strategy and having regard to the above timescales the need to deliver that capacity is becoming increasingly urgent. At page 16 it is confirmed that Government policy is to encourage a wide range of low carbon technologies.

1.177 The supplement to Planning Policy Statement 1 (PPS1) 'Planning and Climate Change' sets out how planning should contribute to reducing greenhouse gas emissions and stabilising climate change and is considered to represent an important development in Government policy in establishing the national need for low carbon/renewable energy projects. It also confirms within the glossary that the Government considers energy from waste to be a form of renewable /low carbon energy.

1.178 This message has been further reinforced by the recent publication for consultation of the PPS Consultation on Planning for a Low Carbon Future in a Changing Climate. Part 2 of the consultation documents sets out the Government's objectives and plan making policies. In respect of objectives (page 14), addressing climate change is identified as the Government's principal concern for sustainable development and all planning strategies must reflect the Government's ambition to help businesses and communities build a low carbon future. Part of this will be actively supporting and driving the delivery of low carbon and renewable energy. Policy LCF4.1 identifies that local planning authority policies should support and not unreasonably restrict low carbon and renewable developments and ensure that local approaches for protecting landscape that will be used to assess applications for low carbon and renewable energy provide appropriate safeguards to ensure adverse impacts are addressed but do not preclude the development of specific technologies other than in the most exceptional circumstances and are informed by the approach and policies set out in the National Policy Statements on Energy Infrastructure.

1.179 Government policy has also been set out in the recent Secretary of State appeal decision letter at Ince Marshes in Cheshire, where the Secretary of State confirmed the view that a diverse mix of energy technologies, including energy from waste generation, will be required to combat climate change and provide secure, clean and affordable energy.

1.180 Finally the draft National Policy Statement on Energy Infrastructure, on which consultation has recently closed, confirmed that there is a significant need for major new energy infrastructure which will have to be delivered quickly if Government targets on green house gas emissions are going to be met. Government's view is that the national need for energy capacity has already been demonstrated and it is not necessary to consider this for each application. Also it is not necessary to consider the relative advantages of one technology over another given the Government's view that companies should be permitted to determine the individual projects to bring forward.

ALTERNATIVES

Alternative Sites

1.181 Additional commercial property searches have been undertaken but no further sites for the EfW facility have been identified beyond those by ERM.

1.182 The 8 sites with the potential to locate a strategic waste management facility identified by consultants ERM, for Oxfordshire County Council therefore continue to provide the alternative sites to be considered. These were as follows:

- Gosford Grain Silos
- Former Quarry, Shipton on Cherwell
- West of M40, Banbury
- Culham Science Centre
- Land at Banbury Cross Business Park, Banbury
- Sutton Courtenay Landfill
- Ardley Landfill
- Land at Palmer Avenue

1.183 The advantages and disadvantages of each of these sites were considered with regard to Green Belt, access and highway network, proximity to centres of population, proximity to international nature conservation sites and deliverability.

1.184 The three best performing sites were considered to be Sutton Courtenay, Palmer Avenue and Ardley. However as a MOD site which is not currently available to the market the Palmer Avenue site was not considered to be available to the waste management industry and is therefore not deliverable. In respect of the remaining two sites Ardley is considered to outperform Sutton Courtenay on the basis of better access to the strategic road network and the proximity to international conservation sites. In addition WRG's decision not to pursue either an appeal or a re-submission for their EfW proposal would indicate that this site is no longer available for this development.

Alternative Technologies

1.185 The Environment Agency life cycle assessment software 'Waste and Resource Assessment Tool for the Environment (WRATE) was used to model the environmental impacts of the EfW facility.

1.186 The environmental burden of processing 300,000 tonnes of waste through the following waste treatment processes was calculated:

- Landfill;
- Energy from Waste;
- Advanced Thermal Treatment (ATT);
- Mechanical Biological Treatment with refuse Derived Fuel to EfW and;
- Mechanical Biological Treatment with refuse Derived Fuel to landfill.

1.187 The treatment processes are assessed in terms of their potential impacts on the following

- Abiotic Resource Depletion;
- Global Warming Potential (GWP100);
- Human Toxicity (HTP inf.);
- Freshwaster Aquatic Ecotoxicity (FAETP inf.);
- Acidification (AP); and
- Eutrophication (EP19912).

1.188 The WRATE modelling results indicates that when considering the six environmental impact criteria in WRATE, the best performing options are Energy from Waste and Advanced Thermal Treatment. Energy from Waste scores highest on 3 criteria (abiotic resource depletion, global warming and freshwater aquatic ecotoxicity) and ATT scores highest on 1 criterion (eutrophication), but close to the top scoring technology on two other criteria (abiotic resource depletion, human toxicity).

1.189 Although scoring comparably to EfW on the life cycle impact assessment it should be considered that ATT is not currently a bankable solution for the treatment of municipal waste, and there are no full scale operational plants in the UK. It is also unclear if ATT is a viable technology for quantities of waste as large as 300,000 tonnes per annum.

1.190 In conclusion, through the use of the WRATE life cycle assessment software, it can be demonstrated that Energy from Waste yields an environmental impact that is comparable to Advanced Thermal Treatment, and better than other competing technologies. On this basis it is concluded that the proposed Ardley EfW facility will result in a negative environmental footprint, that is, an overall reduction in environmental impacts such as global CO2 emissions.

REVIEW OF PLANNING POLICY

1.191 This section reviews the national, regional and local planning policy which has been considered in the preparation of this planning application

National

1.192 The period from 2005 onwards has been an important time for the development of Government policy on sustainable waste management and energy and key statements of Government policy were published during this time changing the national policy framework for the consideration of energy from waste development proposals. These documents are as follows:

- PPS Consultation on Planning for a Low Carbon Future in a Changing Climate, March 2010;
- NPS Consultations on Energy and Renewable Energy Infrastructure, December 2009;
- PPS Eco-towns – a supplement to PPS1, July 2009;
- Waste Strategy 2007;
- Meeting The Energy Challenge 2007;
- Planning Policy Statement: Planning and Climate Change (supplement to PPS 1) (2007);
- PPS 10 – Planning for Sustainable Waste Management (2005);

1.193 In addition the following national planning policy documents have been considered with regards to the proposal:

- PPS 1 Delivering Sustainable Development (2005);
- PPS 7 Sustainable Development in Rural Areas (2004);
- PPS9 - Biodiversity and Geological Conservation (2005);
- PPS22 – Renewable Energy (2004);
- PPS23 - Planning and Pollution Control (2004); and
- PPS 25 - Flooding (2004).

PPS Consultation on Planning for a Low Carbon Future in a Changing Climate, March 2010

1.194 The Government's reason for proposing a new PPS to combine and replace the PPS1 supplement on Climate Change and PPS 22 on Renewable Energy is based on the large amount of new legislation and guidance that has been published on climate change and energy, as follows:

- The Climate Change Act 2008 has introduced a statutory target of reducing carbon emissions by 80% below 1990 levels by 2050, with an interim target of 34% by 2020;
- EU Directive 2009/28/EC on the promotion of use of energy from renewable sources, where the UK has committed to sourcing 15% of its energy from renewable sources by 2020. renewable energy accounted for 2.25% in 2008;

- The Energy Act 2008 introduced powers for a Feed In Tariff and the Renewable heat Incentive aimed at driving an increase in renewable energy generating capacity;
- National policy statements on energy will have read across to the planning system for applications of less than 50MW; and
- Government commissioned studies looking at renewable energy targets at the regional level have found that there was a large delivery gap in respect of achieving targets for 2010.

1.195 Paragraph 4 confirms that the National Policy Statements (50MW+ schemes) will have read across to the planning system. Paragraphs 5 to 8 refer to Government studies having identified a large delivery gap on renewable targets in regional strategies and the need for a standard regional methodology for calculating capacity. A further study has identified that the implementation of the PPS supplement on climate change has been patchy and there is a need to improve the skills of planners in this area.

1.196 Paragraph 9 identifies one of the central challenges for planning is to respond to and integrate with the Government's ambitions to tackle climate change. As part of this paragraph 11 identifies the need to develop an understanding of the potential for supply and demand for low carbon/renewable energy in an area is an essential step in moving to low carbon communities and vital for other priorities such as energy security and waste management. Proposed policy LCF1.4 of the consultation document looks to ensure sources of heat and demand are mapped to help identify strategic opportunities, such as the proposed development and the NW Bicester eco town. Paragraph 14 emphasises the importance of local energy planning supporting new development in meeting demanding green house gas emission targets and paragraph 16 confirms that planning for new low carbon and renewable energy development should be at the heart of good planning.

1.197 Paragraph 17 identifies that the consultation document seeks to sharpen policy on locating low carbon and renewable energy projects. It makes no judgements on choice of technology but confirms that, subject to scale and impact, these projects should be capable of being accommodated in most locations. It also confirms that applications for cutting edge, well designed buildings should not be turned down simply because they do not look familiar.

1.198 Part 2 of the consultation documents sets out the Government's objectives and plan making policies. In respect of objectives (page 14), addressing climate change is identified as the Government's principal concern for sustainable development and all planning strategies must reflect the Government's ambition to help businesses and communities build a low carbon future. Part of this will be actively supporting and driving the delivery of low carbon and renewable energy. Policy LCF4.1 identifies that local planning authority policies should support and not unreasonably restrict low carbon and renewable developments and ensure that local approaches for protecting landscape that will be used to assess applications for low carbon and renewable energy provide appropriate safeguards to ensure adverse impacts are addressed but do not preclude the development of specific technologies other than in the most exceptional circumstances and are

informed by the approach and policies set out in the National Policy Statements on Energy Infrastructure. It is considered that this approach should be applied to the proposed development.

1.199 Policy LCF14.1 (page 25) seeks to ensure that local authorities do not prevent, inhibit or delay proposals for low carbon and renewable energy. LCF 14.2 sets out what local authorities should consider when determining applications for low carbon and renewable energy generation and the key points considered to be relevant to the application are as follows:

- Expect applicants to have taken appropriate steps to mitigate adverse impacts through careful consideration of location, scale and design – this approach has been applied to the proposed development;
- Give significant weight to the wider environmental, social and economic benefits of low carbon and renewable energy whatever their scale – to date no weight has been attached to these benefits;
- Not require applicants to demonstrate the overall need for low carbon and renewable energy.

Draft National Policy Statements on Energy Infrastructure and Renewable Energy Infrastructure

1.200 Consultation on these documents closed in February 2010 and whilst they are primarily aimed at the nationally important infrastructure projects which will be dealt with the by the IPC they acknowledge that they will also be material considerations for planning applications and local authority decision makers should seek to apply the policy and guidance in these documents as far as practicable.

1.201 NPS EN-1 is the overarching policy statement for energy and it sets out the key elements of the Government's Energy and Climate Change Strategy as follows:

- To deliver UK obligations to reduce green house gas emissions;
- To ensure investment provides a security of supply through a diverse and reliable mix of fuels; and
- To contribute to sustainable development by seeking energy infrastructure that reduces climate change impacts.

1.202 The NPS identifies the major challenge of moving to a low carbon economy means that industry needs to deliver significant amounts of new energy infrastructure over the next 10 to 15 years and that because of the long lead in time of these projects they need to be coming through quickly. The NPS therefore advises that the national need for new energy capacity has already been demonstrated and applicants do not need to demonstrate this. In addition it is not considered necessary to consider the relative advantages of one technology over another given the Government's view that companies should be allowed to determine the individual projects to bring forward, taking into account the clear benefits of having a diverse energy mix.

1.203 The Government statements on need for new energy capacity and the choice of technology being left to the industry are considered to be equally applicable to applications being dealt with by local authorities and therefore relevant to the determination of the Ardley scheme.

1.204 NPS EN-3 deals with renewable energy infrastructure and paragraph 2.1.1 of the draft NPS confirms that it covers energy from waste. Paragraph 2.1.2 makes it clear that it is for the market to decide what applications to bring forward and the Government does not intend to direct applicants to particular sites for renewable energy infrastructure. All the IPC has to consider is whether the proposal is in line with the NPS and satisfies the impact considerations, which is considered to be the approach that should be applied to this application.

1.205 Section 2.5 of the draft NPS deals with Biomass and Waste Combustion and paragraph 2.5.3 again confirms that combustion plants which generate electricity using waste, possibly including non-renewable sources of waste, are covered by this NPS. It is therefore considered to have direct read across to the application. Paragraph 2.5.11 confirms that the IPC should not be concerned about the type of technology proposed and paragraph 2.5.18 recognises the energy recovery and waste treatment roles of waste combustion plants.

1.206 The section on factors influencing site selection (page 11) identifies three factors:

- Grid connection – a grid connection has been agreed in principle for the proposed development, see Appendix 7;
- Links to transport network – the site is considered to have excellent access being in close proximity to junction 10 of the M40; and
- Combined heat and power – the close proximity of the proposed NW Bicester eco town offers excellent CHP potential.

1.207 In respect of local and regional waste management, paragraph 2.5.53 confirms that waste combustion plants need not disadvantage re-use and recycling initiatives where the development accords with the waste hierarchy. Paragraph 2.5.54 refers to national, regional, local and municipal strategies and there is a recognised need for this waste treatment capacity within Oxfordshire and that it will be part of an integrated local strategy for dealing with Oxfordshire's municipal waste.

PPS on Eco-towns – supplement to PPS1, July 2009

1.208 The PPS on Eco-towns both identifies locations for these developments, of which NW Bicester is one, and the standards that the Government expects that they will adhere to. Such as enabling opportunities for infrastructure to make the best use of technologies in energy generation as well as conservation and reducing the carbon footprint of these developments. The

Government therefore expects that the plans for eco-towns will make a significant contribution to achieving its green house gas emission targets and help address the serious threat of climate change.

1.209 Specific policy areas relevant to the proposed development at Ardley are considered to be ET7, the achievement of zero carbon in the eco-towns which will need to consider emissions from locally produced energy against emissions associated with the production of energy imported from centralised networks. The proposed EfW will be an important local source of renewable/low carbon energy that can make a significant contribution to this important objective for eco-towns. Section ET15 considers landscape and historic environment and confirms that planning applications should demonstrate that they have adequately considered the implications for the local landscape and historic environment to ensure the development compliments and enhances the existing landscape character. It is noted that in supporting this development both the County Council and Cherwell District Council do not consider this development conflicts with the local landscape policies in the Cherwell Local Plan, whereas they have been used to refuse a much smaller development at Ardley.

1.210 Section ET17 considers waste and states that eco-towns will need to set targets for diverting waste from landfill and demonstrate how the development has been planned to achieve these targets. Developers must also provide evidence that consideration has been given to the use of locally generated waste as a fuel source for CHP generation for the eco-town and it is considered that the Energy Plan, which accompanies this application sets out the potential advantages of locating the eco town where it is also proposed to locate the energy recovery facility which will deal with Oxfordshire's residual municipal waste.

Waste Strategy 2007

1.211 Waste Strategy 2007 sets out the Government's vision for sustainable waste management. The key objectives of the strategy are as follows:

- The need to decouple waste growth from economic growth – the proposed visitor centre will include sections on the importance of waste prevention and re-use;
- To meet and exceed landfill diversion targets – the proposed EfW will deliver the waste management capacity requirements for Oxfordshire, as set out in the South East Plan;
- Increase the diversion of non-municipal waste from landfill and secure the better integration of treatment of non municipal and municipal waste – the proposed EfW provides capacity for Oxfordshire's residual municipal waste and for industrial and commercial arisings so it will deliver both of these objectives;
- Secure investment in infrastructure needed to divert waste from landfill – the proposed EfW will deliver this objective; and
- Get the most environmental benefit through increased recycling and recovery of energy from waste – the EfW will only treat residual waste

remaining after recycling has taken place and will maximise the recovery of energy by the generation of electricity.

The proposed development is therefore considered to comply with the objectives of national waste management policy.

1.212 WS 2007 also recognises that EfW is an essential component of a well balanced energy policy. EfW is expected to account for 25% of municipal waste treatment by 2020, compared to 10% today. In addition there is still a continuing need for landfill particularly for commercial and industrial residual wastes.

1.213 WS 2007 also confirms that on the basis of research carried out to date there is no credible evidence of adverse health outcomes for those living near to incinerators.

Meeting the Energy Challenge

1.214 The Government White Paper - Meeting the Energy Challenge was published in May 2007 and it and at page 6 sets out that the government's long term energy challenges are tackling climate change by reducing carbon dioxide emissions and ensuring secure, clean and affordable energy. At page 7 it identifies a need in the UK for around 30-35GW of new electricity generation capacity over the next two decades, with around two thirds of this capacity required by 2020. Page 8 then identifies the key elements of the Government's strategy as establishing an international framework to tackle climate change, legally binding carbon targets, energy saving and providing support for low carbon technologies.

PPS 1 and Climate Change Supplement

1.215 PPS1 states that planning should facilitate and promote sustainable patterns of urban and rural development by making land available for development in line with economic, social and environmental objectives and protecting and enhancing the natural environment. PPS1 also stresses the importance of ensuring high quality development through good design and the efficient use of resources.

1.216 The supplement to Planning Policy Statement 1 (PPS1) 'Planning and Climate Change' sets out how planning should contribute to reducing greenhouse gas emissions and stabilising climate change and is considered to represent an important development in Government policy in establishing the national need for low carbon/renewable energy projects. It also confirms within the glossary that the Government considers energy from waste to be a form of renewable/low carbon energy.

1.217 The supplement set out key planning objectives for planning authorities to deliver, as follows:

- *Make a full contribution to delivering the government's climate change programme and energy policy and contribute to global sustainability* – the proposed EfW will deliver 24MW of renewable energy making a significant contribution to Government energy policy by reducing carbon emissions and providing security of supply. It will also divert waste from landfill in accordance with Government policy;
- *In providing for homes, jobs and infrastructure needed by communities secure the highest viable resource and energy efficiency and reduction in emissions* – energy from waste will deliver a significant reduction in emissions when compared to current waste management practices, will provide a source of renewable energy to communities and businesses and a potential source of heat to the NW Bicester eco town proposals as well;
- *Deliver patterns of sustainable growth and transport* – the site is well located to the strategic route network serving Oxfordshire and rail transport would not be economic for the distances waste would be travelling to the facility;
- *Secure new development in places that minimise their vulnerability and provide resilience to climate change* – the site is an existing waste management facility and incorporates sustainable drainage systems to meet EA requirements;
- *Conserve and enhance biodiversity* – the proposed development will have no adverse impacts on biodiversity and Viridor have already made substantial contributions to conserving the dinosaur footprints found on the site. The restoration proposals will retain access to a geological face and provide longer term gains in biodiversity through the variety of habitats to be created;
- *Reflects the needs and interests of communities and enable them to contribute to tackling climate change* – this is where the approach set out in the White Paper, Meeting the Energy Challenge is relevant as it acknowledges that the benefits of renewable projects are not always visible to the specific locality in which it is sited but they do provide crucial national benefits which are shared by all communities and must be accorded significant weight in the planning process.

1.218 Paragraphs 38 to 40 of the Climate Change Supplement deal with the determination of planning applications. These stress that it is important that local planning policies are up to date and reflect latest Government policy and where they do not Government policy takes precedence. Finally paragraph 40 confirms that where applications are in accordance with the Key Planning Objectives they should expect an expeditious and sympathetic handling through the planning system. It is considered that the proposed development complies with the Key Planning Objectives.

1.219 SLR has completed a Life Cycle Assessment, using the Environment Agency's modelling tool 'Waste and Resource Assessment Tool for the Environment' (WRATE), to assess the environmental impacts, including global warming potential, of the proposed EfW plant compared to a number of other waste management technologies.

1.220 The WRATE assessment (see Appendix 4 of the ES) concluded that the proposed EfW facility will result in an environmental footprint that has an overall reduction in environmental impacts such as global CO_2 emissions. In

accordance with PPS1, the EfW facility has been designed to minimise energy use and carbon emissions during construction and operation. In diverting residual waste away from landfill to a treatment facility higher up in the waste hierarchy, the proposals will have a positive impact on the environment.

1.221 The existing landfill gas utilisation plant which recovers energy from the landfill operations will also be retained and so will continue to contribute electricity to the grid.

1.222 The site has also been designed to attenuate surface water runoff and not give rise to additional surface water runoff or down stream flooding.

1.223 The EfW facility will have the potential to provide heat and energy to existing and future development in a 5km area. New development in the vicinity of the EfW facility could be future proofed by ensuring the infrastructure is in place to allow CHP system to be retro fitted. Having regard to the above, it is considered that the development proposals will not have an adverse effect on climate change and therefore the proposals meet the sustainable development objectives set out in PPS1 and the Climate Change supplement.

PPS 10

1.224 PPS 10 – Planning for Sustainable Waste Management sets out the latest Government policy on planning for waste management facilities and objectives for sustainable waste management. The proposed development has been considered against these objectives in order to demonstrate its compliance with national waste policy.

1.225 Annex E of PPS 10 sets out the main factors waste planning authorities should take into account when testing the suitability of a site for waste management purposes. The development at Ardley is considered to comply with them as follows:

- protection of water resources, considerations will include the proximity of vulnerable surface and groundwater. For landfill or landraising, geology conditions and the behaviour of surface water and groundwater should be assessed both for the site under consideration and the surrounding area. The suitability of locations subject to flooding will also need particular care – The assessments undertaken demonstrate there would be no adverse impacts on water resources.

- land instability, locations, and/or the environs of locations, that are liable to be affected by land instability will not normally be suitable for waste management facilities – there are no stability issues at Ardley.

- visual intrusion, considerations will include (i) the setting of the proposed location and the potential for design-led solutions to produce acceptable development; (ii) the need to protect landscapes of national importance (National Parks, Areas of Outstanding Natural Beauty and Heritage Costs) – the landfill has been re-modelled to accommodate

the proposed EfW and a high quality landmark building is proposed, the site is remote from landscapes of national importance and will not have an adverse impact on them;

- nature conservation, considerations will include any adverse effect on a site of international importance for nature conservation (Special Protected Areas, Special Areas of conservation and RAMSAR sites) or a site with a nationally recognised designation (Site of Special Scientific Interest, National Nature Reserve) – the assessments undertaken demonstrate there would be no adverse impacts on nature conservation;

- historic environment and built heritage, considerations will include any adverse effect on a site of international importance (World Heritage Sites) or a site or building within a nationally recognised designation (Scheduled Monuments, Conservation Area, Listed Buildings, Registered Historic Battlefields and Registered Parks and Gardens – the assessments undertaken demonstrate there would be no adverse impacts on the historic environment;

- traffic and access, considerations will include the suitability of the road network and the extent to which access would require reliance on local roads – the site has excellent access to the strategic route network serving Oxfordshire and the assessments undertaken demonstrate that there would be no adverse impacts on the highway network;

- air emissions, including dust, consideration will include the proximity of sensitive receptors and the extent to which adverse emissions can be controlled through the use of appropriate and well maintained and managed equipment – the assessments undertaken demonstrate there would be no adverse impacts on air quality;

- vermin and birds, considerations will include the proximity of sensitive receptors. Some waste management facilities, especially landfills which accept putrescible waste, can attract vermin and birds, and may be influenced by the distribution of landfill sites – the existing, effective controls employed at the landfill would be maintained;

- noise and vibration, considerations will include the proximity of sensitive receptors. The operation of large waste management facilities in particular can produce noise both inside and outside buildings. Intermittent and sustained operating noise may be a problem if not kept to acceptable levels and particularly if night-time working is involved – the assessments undertaken demonstrate there would be no adverse noise or vibration impacts;

- litter, can be a concern at some waste management facilities – existing litter management systems would be maintained; and

- potential land use conflict, likely proposed development in the vicinity of the location under consideration should be taken into account in considering site suitability and the envisaged waste management

facility – the site is an existing waste management facility and adjoins a quarry.

1.226 Developing the EfW facility at Ardley together with the landfill and HWRC will be key to meeting the targets in national and regional waste management strategies and its considered appropriate to make maximum use of existing waste management facilities when they are well located and do not have any significant adverse effects on the environment or local communities.

1.227 The EfW facility would be located within an existing landfill site with no significant physical or environmental constraints. The site is well located in terms of the primary highway network and the facility would divert a significant proportion of Oxfordshire's waste from landfill. At the same time the redeveloped HWRC will continue to support and encourage the achievement of higher recycling rates.

PPS 7

1.228 PPS 7 sets out the Government's key principles for development in rural areas as follows:

- Should be based on the principles of sustainable development;
- Good quality, carefully sited, accessible development in towns and villages should be allowed;
- Accessibility is key;
- New buildings in the open countryside should be strictly controlled;
- Favour brownfield land; and
- All development should be well designed, inclusive and in keeping with the scale of its location and sensitive to the character of the countryside.

1.229 The proposed development is considered to comply with the principles of sustainable waste management as set out in PPS10 and is therefore considered to be sustainable. It also enjoys excellent access to the strategic route network which serves Oxfordshire. With regard to new building in the countryside this must be considered against the need to deliver waste management infrastructure and the specific locational criteria for that development and in particular policy W17 of the recently adopted South East Plan. It is also accepted that the site is not brownfield land but it is an existing active waste management site which adjoins an active mineral working and again the criteria established in policy W17 of the South East Plan are considered relevant. Finally it is considered that the proposed building is of a high quality design and the surrounding landfill is proposed to be substantially re-modelled in order to create a landform within which the proposed EfW can sit in keeping with the scale of the proposed landform and providing a landmark building capable of having a positive effect on the surrounding area.

1.230 The proposed development does not adversely affect any designated features or sites of landscape, wildlife or historic value.

PPS 9

1.231 PPS9 states that developments should conserve and enhance biological and geological diversity. Although the site is not covered by any statutory geological or ecological designations and the Ecological Assessment confirmed that the development would not have a significant adverse impact on the ecology of the area, a range of mitigation measures and enhancements are proposed to improve the biodiversity of the site.

PPS 22

1.232 PPS22 sets out the Government's policies on renewable energy and the key principle is that it should be promoted and encouraged not restricted. The subsequent publication of the PPS1 supplement on Climate Change further reinforced and strengthened this message and widened it to include reference to low carbon energy as well, which is considered to be applicable to the proposed development. In addition the Government is currently consulting on a new PPS which will replace PPS22.

PPS 23

1.233 PPS23 provides advice on planning and pollution control to land, air and water and the potential impacts to human health. The assessments undertaken as part of the EIA found no significant adverse impacts on human health or the environment arising from the construction and operation of the EfW plant as well as the continuing use of the existing landfill. At the same time the redeveloped HWRC will continue to support and encourage the achievement of higher recycling rates.

1.234 PPS23 also advises planning authorities not to duplicate the role or controls of the relevant pollution control authority and confirms that development should be considered on the assumption that the relevant pollution control requirements will be properly applied and enforced.

PPS 25

1.235 A small section of the application site is within the floodplain of the Gagle Brook. PPS25 states that developments should take account of flood risk at all times in the planning process. A Flood Risk Assessment was undertaken and an appropriate surface water management scheme has been designed to protect both landfill and the EfW facility from flooding, and to ensure that its presence will not increase flood risk in other areas.

Regional Policy

SOUTH EAST PLAN

1.236 The South East Plan was formally adopted and became part of the Development Plan for Oxfordshire in 2009. It represents up to date planning policy which has been developed with regard to the above national policy

statements and its policies should therefore be accorded considerable weight. The relevant policies to this development have been identified and the proposals have been considered against them.

1.237 Policy CC1 on Sustainable Development requires all developments to have regard to achieving sustainable levels of resource use; to conserve and enhance the physical and natural environment; to reduce green house gas emissions; to be prepared for climate change and to achieve safe, secure and socially inclusive development. It is considered that the proposed development will assist in achieving sustainable levels of resource use by diverting waste form landfill and providing a source of low carbon energy this will also make a substantial contribution to reducing greenhouse gas emissions. By siting the proposed development on an existing waste management facility it is re-using land already consented for waste management development and therefore conserves other areas of the physical and natural environment and the proposal incorporates the latest sustainable drainage requirements as set out in PPS25 which are designed to cope with the effects of climate change.

1.238 Policy CC2 deals specifically with Climate Change and requires local authorities to achieve a reduction in CO2 emissions, the policy provides 5 criteria where this reduction in CO2 emissions will be achieved and 1 of them are directly relevant to this development in respect of reducing the amount of biodegradable waste going to landfill. The provision of low carbon energy is also considered relevant to the aim of this policy which is to tackle climate change.

1.239 Policy CC4 deals with sustainable design and construction and the submitted Design and Access Statement covers these points. Policy CC6 deals with Sustainable Communities and Character of the Environment and seeks to ensure that development respects and, if appropriate, enhances the character and distinctiveness of landscapes throughout the region and as previously stated the development has been designed to create a landform within which the proposed EfW can sit in keeping with the scale of the proposed landform and providing a landmark building capable of having a positive effect on the surrounding area.

1.240 The plan policies on natural resource management have also been considered and the relevant assessments in the accompanying ES demonstrate how the proposed development is not considered to conflict with the following policies NRM1 Sustainable Water Resources and Groundwater Quality; NRM2 Water Quality; NRM4 Sustainable Flood Risk Management; NRM5 Conservation and Improvement of Biodiversity; NRM7 Woodlands; NRM 9 Air Quality and NRM 10 Noise.

1.241 As the PPS1 supplement on climate change confirms that energy from waste is low carbon energy policies NRM 11 and 12 are also considered relevant and the development has been considered against them. Policy NRM 11 on Development Design for Energy Efficiency and Renewable Energy requires that local authorities promote and secure greater use of low carbon energy and that they actively promote the use of renewable energy where opportunities such as with eco towns. The low carbon power this development will provide and its proximity to the NW Bicester eco town

therefore indicates that this scheme should be actively promoted by the local authorities to accord with policy NRM11. Policy NRM 12 on Combined Heat and Power encourages the integration of CHP in all developments and again the proximity of the development to the eco town proposals means that this is eminently deliverable.

1.242 The section on Waste Management within the South East Plan states that the total waste managed in the South East is estimated to rise to nearly 35 million tonnes by the year 2025. The existing waste management facilities in the South East cannot deal with this growth in waste. Landfills will be full within a decade, creating a management problem but also representing a waste of potentially valuable resources. There is an immediate and acute shortfall in facilities to deal with ever increasing amounts of waste thus a more sustainable waste management system needs to be developed, which increases the proportion of waste from which value can be recovered.

1.243 Significantly reducing the amount of waste which is landfilled will require a switch to industrialised waste handling and processing, including energy recovery plants. In relation to EfW facilities, the plan states that these represent a proven technology, which is strictly regulated and whose emissions of pollutants have declined dramatically in recent years. As evidenced by many more plants being approved in the UK.

1.244 Policies W3 and W4 establish the principles of regional and sub regional self sufficiency requiring each sub region to deliver the waste management capacity equivalent to the waste arisings within their area. Importantly it does not direct planning authorities to only deal with waste arising within their area and the supporting text acknowledges that cross boundary movement of waste has always and will continue to take place especially at sites such as Ardley which are close to county boundaries. Policy W5 sets a target of diverting 86% of waste from landfill by 2025. Policy W7 states that Waste Planning Authorities will have to provide the waste management capacity required to achieve the targets set out in the Plan. The average tonnages which will have to be managed by Oxfordshire by 2025 are 571,000 tonnes Municipal Solid Waste (MSW) and 791,000 tonnes of Commercial and Industrial Waste.

1.245 It is noted that the policies on delivering the required waste management capacity to divert waste from landfill do not place a rigid cap on the development of new capacity because it is Government policy to drive the management of waste up the hierarchy not to restrict it. In addition the development of energy recovery capacity also contributes to the generation of renewable energy which enjoys similar support in Government and regional policy.

1.246 Policy W12 states that the Regional Assembly, the South East England Development Agency (SEEDA), the Environment Agency and the regional partners will promote and encourage the development and demonstration of advanced recovery technologies that will be expected to make a growing contribution towards the delivery of the regional targets for recovery, diversion from landfill, and renewable energy generation over the period of the Plan. Waste Development Documents and municipal waste management

strategies should only include energy from waste as part of an integrated approach to management and include measures to ensure that appropriate materials are recycled. The Joint Waste Management Strategy for Oxfordshire makes clear that the proposed recovery facility is just part of an overall strategy from managing Oxfordshire's waste and the facility will only deal with residual municipal waste remaining after recycling and composting has taken place. Commercial and industrial will primarily be delivered from waste transfer station where facilities to remove recyclable material and therefore minimise the amount of waste that requires further treatment or disposal are increasingly be installed. The policy also aims to ensure that CHP is incorporated wherever possible and the proximity of the Ardley proposals to the NW Bicester eco town proposals means that there is excellent potential for this to happen if it is actively promoted by the relevant planning authorities as required by national and regional policy guidance.

1.247 The plan identified that Oxfordshire, along with all other Counties in the South East region has a shortfall in capacity requirement for Municipal Solid Waste and Commercial and Industrial Waste recycling, recovery and composting. In addition more recent work undertaken by Oxfordshire County Council establishes that they need to deliver 291,000 tpa of recovery capacity in order to meet the South East Plan targets and that a significantly greater quantity (in the order of 430-460,000 tpa) of waste could be diverted from landfill if sufficient waste treatment capacity is available.

1.248 Policy W17 deals with the location of waste management facilities. The policy states that priority should be given to expanding suitable sites with an existing waste management use and good transport connections and compatible land uses, namely active mineral working sites; and previous or existing industrial land use. Ardley is considered to comply with the locational requirements of W17 because it is an existing waste management use with good transport connections and adjoins an active mineral working. It also enjoys good accessibility to other urban areas within the county courtesy of the M40 and it will be in close proximity to an area of planned new growth at Bicester. The proposed development is therefore considered to fully comply with the locational requirements of policy W17.

1.249 Policy W13 deals with landfill requirements and seeks to husband this resource to ensure that adequate capacity is maintained. Whilst the proposed development will result in a small loss of permitted non inert void space this will not impact on Oxfordshire's ability to deliver their local and regional commitments because of the high level of permitted void space that is available in the county. Policy W14 seeks to ensure high quality restoration is achieved and the proposed scheme for Ardley offers substantial biodiversity and rights of way improvements in comparison to the existing consented scheme.

1.250 In summary, regional waste planning policy recognises that increasing amounts of waste cannot be landfilled if waste management is to become more sustainable but that there will be an ongoing need for landfill. Local Planning Authorities will be required to provide the capacity to manage waste sustainably and this is likely to include technologies such as EfW, if targets to divert waste from landfill are to be met. The plan states that it is essential sites are safeguarded in Local Development Frameworks and identified in

Waste Development Frameworks. It is considered that Ardley Landfill site complies with the location criteria set out in policy W17 and that the EfW facility will make a significant contribution to Oxfordshire's target for managing its residual waste and diverting waste from landfill without compromising landfill capacity in the county.

Local Policy

Introduction

1.251 Local policy in Oxfordshire consists of the following documents:

- The Oxfordshire Minerals and Waste Local Plan, 1996;
- The Cherwell Local Plan, 1996;
- The non statutory Cherwell Local Plan, 2004; and
- The Oxfordshire Joint Municipal Waste Strategy, 2007.

1.252 The Minerals and Waste Local Plan and the 1996 Cherwell Local Plan still form part of the Development Plan for the area as replacement documents under their Local Development Frameworks have not yet been adopted. As both plans were adopted in 1996 they take no account of the latest national or regional policy (PPS10, PPS1 supplement on climate change, Waste Strategy 2007 and the South East Plan) on planning for waste management and renewable energy. It is therefore considered that the policies in these plans should be accorded very limited weight because they are now out of date. In respect of the non statutory Cherwell Local Plan, the Council suspended work on this document in 2004 and the policies have not been subject to a Public Local Inquiry. This document also pre-dates the latest national and regional policy guidance on waste management and renewable energy and again it is considered that the policies should be accorded very limited weight.

1.253 The Joint Waste Strategy was prepared in 2007 and reflects Government policy as set out in Waste Strategy 2007 and, whilst not a planning policy document, this is considered to provide an up to date context for how Oxfordshire's municipal waste should be managed in the future and provides an integrated approach of measures for waste minimisation, recycling/composting, recovery and final disposal requirements for the County's municipal waste.

Oxfordshire Minerals and Waste Local Plan 1996 – saved policies

1.254 The Minerals and Waste Local Plan (MWLP) was adopted in 1996. The relevant saved policies are considered to be W2, W5, W7, PE11, PE12, PE13, PE14 and PE18.

1.255 Policy W2 deals with the need to make provision for waste arisings from London and other parts of the South East, however it is considered that this policy has been superseded by policies W3 and W4 of the South East Plan and the proposed development is not considered to conflict with the requirements of these policies. Policy W5 deals with the need to screen

waste development and for that to be in place before the development commences. EfW facility will be visible due to its chimney stack. However, amendments to the height of the landfill, proposed planting and careful choice of materials will ensure that the buildings and chimney have as little impact on the landscape as possible. The main part of the building, offices, car parking etc will be set down within the quarry void which will reduce their visibility from outside of the site. The proposed development incorporates a substantial re-modelling of the existing landfill to accommodate the EfW and to ensure that the building fits within the landform that has been created. The proposals are also accompanied by a comprehensive landscaping scheme. It is accepted that these measures do not screen the building entirely from views but the high quality architectural design proposed is considered capable of having a positive effect on these views.

1.256 Policy W7 seeks to control the release of landfill to ensure that satisfactory restoration takes place and sets a number of tests for proposals to meet. However Ardley is an existing permitted landfill site which has already been considered against these tests and found to be acceptable. The proposed development is not extending the footprint of the landfill, it is only seeking an amendment to the phasing and final restoration of the landfill to accommodate the EfW. It is therefore considered that the landfill element of the proposals continues to meet the tests in policy W7 in that there is will be a continuing need for landfill, there is no material harm to the environment or local amenities, no harm to floodplain, SSSIs, heritage assets, AONBs, Green Belt, water resources, visual amenity and the site has a suitable access.

1.257 Policies PE11, 12, 13, 14 and 18 have also been reviewed but there is not considered to be any conflict with the proposed development and the ES concluded that the facility represented no significant adverse risk or nuisance to the amenity of local people, the local environment or the water environment.

Oxfordshire Joint Municipal Waste Strategy

1.258 The Oxfordshire Waste Partnership (OWP) is a partnership of the County and District Councils of Oxfordshire who are working together to improve waste management services within the County. In January 2007, the OWP agreed a Joint Municipal Waste Management Strategy ‘No Time to Waste’ which sets out plans for dealing with Oxfordshire's municipal waste to 2030.

1.259 The Strategy states that Oxfordshire’s households produced 300,000 tonnes of household waste in 2005-06 and this is forecast to grow to over 450,000 tonnes a year by 2035. Of this tonnage, 67% was sent straight to landfill. The OWP aims to reduce waste going to landfill and recover value from residual waste, to create new products or produce energy.

1.260 The OWP recognises that despite increasing efforts to reduce, reuse, recycle and compost Oxfordshire’s rubbish, the County will still be short of meeting the requirements of LATS targets. In order to meet these targets, the OWP states that some form of ‘waste treatment’ including high temperature incineration will be necessary. Policy 9 of the Strategy states that the OWP

will provide a system for recovering value from residual wastes in order to meet LATS targets.

Cherwell Local Plan 1996

1.261 Policies C1 and C2 of the Local Plan deals with protecting sites of nature conservation value and protected species and it is considered that the ecological assessment work demonstrates that there will be no adverse effects on either. Policy C10 seeks to protect historic parks and gardens but no adverse effects on these designations have been identified as a result of the proposed development. Policies ENV1, 7 and 12 deal with pollution, water quality and contaminated land respectively and again no adverse effects on these interests have been identified by the assessment work undertaken.

1.262 Policies C7, C8 and C9 on Landscape Conservation were quoted within the reason for refusal, however these policies should be viewed in light of later Government policy, especially in respect of renewable energy, which requires that the approach to protecting landscapes does not preclude the supply of any type of renewable energy other than in exceptional circumstances. Policy C7 states that development will not normally be permitted if it would cause demonstrable harm to the topography and character of the landscape. In respect of these proposals the current topography and character of the site is one of a former quarry and an active landfill which offer substantial benefits in respect of siting a building because it can be set down below the surrounding area and the landform being created by the landfill can be shaped to provide a landform for the building to sit within. Therefore whilst visible the building has been designed to sit within and flow with the landform being created around it. Policy C8 seeks to prevent sporadic development in the open countryside but, in respect of siting much needed waste management facilities, it is considered that this approach does not accord with policy W17 of the South East Plan which provides locational guidance for waste management facilities. The proposed development is considered to fully comply with the requirements of W17, which as the later more up to date policy should be accorded greater weight in the decision making process. Policy C9 seeks to resist development of a type, size or scale that is considered incompatible with a rural location, however the proposed development would be located on an active waste management site where the adjacent landfill has been re-designed to provide a landform which will accommodate the proposed EfW.

Non Statutory Cherwell Local Plan, 2004

1.263 As previously stated this plan does not form part of the Development Plan for this area but it has been approved by Cherwell District Council to use for development control purposes. However due to it being superseded by later Government and regional policy, particularly in respect of tackling climate change, and as the policies were never tested at public inquiry it is considered that they should be accorded very limited weight and that they do not represent material considerations sufficient to outweigh the up to date development plan policies contained in the South East Plan.

1.264 Policy R4 seeks to safeguard and enhance public rights of way and if appropriate a suitable diversion should be secured. The permanent diversion of bridleway 27 is proposed but it is considered that a suitable alternative route within land under the applicant's control can be provided and in the event this were not successful it would be possible for the bridleway to revert to its original route. In addition a substantial package of enhancements to the surrounding rights of way network is proposed as well. The application is therefore considered to comply with policy R4.

1.265 Policy TR1 seeks to ensure that developments contribute to achieving the objectives of the Local Transport Plan and by proposing development which has ready access on to the primary route network for HGV traffic this is considered to comply with the policy. TR3 requires a transport assessment and travel plan to accompany developments likely to generate significant levels of traffic and these documents have been provided. TR4 requires that appropriate mitigation measures are identified and provided such as highway improvements and improving pedestrian accessibility and this has been done with the proposed new access and improvements to the rights of way network. Policy TR5 seeks to minimise the conflict between vehicles and pedestrians and not to compromise the safety and free flow of traffic and it is considered that the proposed new access, which has been subject to a safety audit, achieves this. Policy TR8 requires that development should not prejudice the pedestrian and cycle circulation or route provision and it is considered that the proposed improvements to the rights of way network will substantially improve facilities for cyclists and pedestrians in the area. Policy TR11 seeks to ensure that all turning and servicing requirements can be provided on site which will be the case and also to minimise the visual impact of vehicles and parking which will be achieved because the facility will be located on the quarry floor at a lower level than the surrounding land. In respect of car parking requirements there are no standards for waste management development but having regard to the Travel Plan it is considered that adequate spaces have been provided. Finally policy TR16 requires that development which generates frequent HGV movements through residential areas or on unsuitable rural roads should be refused. However it is considered that the transport assessment that the proposed routes are not unsuitable for HGV movements and that the proposed level of HGV use will not have an adverse impact on the small number of residential properties that are situated directly alongside the B430.

1.266 Policy EN1 takes account of the likely impact on the natural and built environment and states that unacceptable environmental impacts will be not be permitted. The assessments undertaken on the development indicate that no significant effects are likely in respect of traffic, air quality, noise, water, ecology and cultural heritage. Significant effects in respect of landscape have been identified because the proposed building would be visible. However having regard to the high quality of the proposed architectural design, the need for waste treatment capacity in Oxfordshire and the need for renewable energy generation to address the effects of climate change it is considered that the landscape effects of the proposed are not unacceptable and that the development does not conflict with this policy.

1.267 Policy EN2 allows for exceptional circumstances where there would be demonstrable harm for essential development to be permitted where there is no acceptable alternative and compensation is provided for the resource lost. This policy is not considered applicable to the proposed development which is considered to comply with the locational requirements of policy W17 of the South East Plan and the proposed building is considered capable of having a beneficial effect on views because of the high quality design.

1.268 Policy EN3 states that development that will have materially detrimental levels of noise, vibration, smell, smoke, fumes or other pollution will not be permitted, however the assessments that accompany this application demonstrate that the proposed development complies with the requirements of this policy.

1.269 Policy EN5 has regard to the likely impact on air quality and again the assessments undertaken demonstrate there will be no significant impacts on air quality. It should also be noted that Waste Strategy 2007 states that on the basis of research carried out to date there is no credible evidence of adverse health outcomes for those living near to incinerators.

1.270 Policy EN6 seeks to avoid unnecessary light pollution requiring that only the minimum lighting required is provided and that its impacts are minimised to prevent adverse effects on local amenity, landscape, nature conservation and highway safety. Whilst the proposed EfW will be a 24 hour operation night time operations will be limited to within the building and only low levels of external lighting will be required around doorways and walkways to comply with health and safety requirements. Lighting of the new access and access road will be provided but once into the site the road drops down to a level below the surrounding land and lighting would be designed at this lower level. It is therefore considered that the limited amount of lighting that is required will be the minimum necessary and it will be located and designed to minimise its effect beyond the site and that there will be no adverse effects on amenity, landscape, nature conservation or highway safety.

1.271 Policies EN11, 12, 13, 14 and 15 seek to ensure that there are adequate water resources to serve the development and to protect ground and surface water quality, river corridors, flood plains and to ensure that surface water is controlled and managed. Once operational the proposed EfW will have only a small requirement for water as it will be recycled and re-used within the plant. Comprehensive assessments on ground and surface water quality and a flood risk assessment and surface water management plan have been provided and attenuation capacity in accordance with PPS25 has been provided. The proposed development will not have any adverse impacts on water resources, quality or flooding.

1.272 Policy EN16 deals with the best and most versatile agricultural land but as the proposed site is a former quarry this is not considered relevant to the proposed development. Policy EN17 deals with contaminated land but there are no known contamination issues at the Ardley site as the existing landfill is run in accordance with its Environmental Permit from the Environment Agency and the location of the EfW is on a part of the site which has not yet been landfilled. Policy EN18 deals with unstable land but there are no stability issues at Ardley so this is not considered relevant.

1.273 Policies EN22, 23, 24, 25 and 27 deal with biodiversity but as the proposed development is located wholly within the boundary of an existing permitted landfill and the proposed site of the EfW already has planning g permission to be landfilled there are considered to be no direct impacts on nature conservation interests as a result of the proposed development. Off site impacts have been considered and shown not be significant and the proposed landscaping and restoration schemes incorporate biodiversity improvements beyond that provided by the currently consented restoration scheme. The proposed development does not therefore conflict with the nature conservation policies.

1.274 In respect of landscape policies EN30 and EN31 re-state the tests in policies C8 and C9 of the 1996 Cherwell Plan which have already been considered. Policy EN34 seeks to conserve and enhance the character of the landscape and does not permit development which will cause undue visual intrusion in the open countryside, cause undue harm to natural landscape features or topography, be inconsistent with local landscape character, harm the settings of settlements, buildings or other features or would harm the historical value of the landscape. The overall aim of the proposed development is to produce a final landform which maintains and enhances the landscape character and biodiversity value of the site, while mitigating the visual impacts of the proposed EfW. The landscape proposals are designed to integrate the EfW into the surrounding landfill providing a setting and a complimentary design form to the built development. Increased planting is proposed to the north and west to improve screening and planting around the EfW will be extended on to the landfill to integrate the building with its surroundings. The proposed planting has been designed to blend with the local landscape hedgerow and woodland character. The materials for the proposed building have also been chosen to create a light coloured building to reduce its bulk and scale. The proposed development does not harm the setting of any settlement or building or the historical value of the landscape. The local landscape character is that of an active landfill with a mineral extraction site to the south, but the landscaping and restoration proposals have been designed to reflect the surrounding hedgerow and woodland character. The principal issue is therefore considered to be the extent of the visual impact and here it is considered that the mitigation provided in terms of the landform created, proposed planting and high quality building design capable of having a positive effect on views means that the development does not cause undue harm and given the clear national and regional policy for waste recovery and new low carbon energy generation capacity this clearly outweighs the what impacts are considered to remain.

1.275 Policy EN35 deals with the retention of woodlands, trees, hedges and ponds but as the proposed development is wholly within the confines of a permitted landfill site there will be no loss of these features other than a small part of the woodland screen planting for the proposed new access which will not significantly affect views into the site.

1.276 In respect of design policy D4 states that the District Council will require high quality contemporary architecture that expresses its use and importance and possesses visual interest. The proposed EfW is considered to comply with this policy. Policy D9seeks to ensure that energy efficiency measures are

incorporated in to the design including measures to minimise energy loss, maximising natural solar heating, lighting and ventilation and minimising energy consumption. The Design and Access Statement sets out the measures incorporated in to the proposed building in this regard and as a source of renewable energy itself the building has been designed with energy efficiency in mind. Finally policy D10a deals with tall buildings and requires that they relate well to their context, which in this case is an existing active waste management facility that is proposed to be significantly re-modelled in order to provide a landform setting in which the proposed building has been designed to fit. Given this has been a major part of the early design work the proposed building is considered to relate well to the setting that has been provided for it. The policy also requires that there should be damage to listed buildings, conservation areas, open spaces or sky line and important views. The cultural heritage assessment considers the settings of heritage assets in the area and no significant adverse effects are identified. In respect of important views the plan does not identify what these are considered to be but the proposed development does not adversely affect the natural landscape features referred to in paragraph 9.69 of the Plan. The policy also requires that the architectural qualities (scale, form, materials) should respect their location and again the building has been designed specifically to sit within the landform created and the materials have been selected to assist in reducing the bulk and scale of the building. In terms of contributing to public spaces the proposals incorporate significant landscaping and improvements to the rights of way network where the proposed EfW will be a feature on interest. Finally the policy requires that the development should not have an adverse impact on the local environment in terms of over shadowing, micro climate effects and night time appearance and no adverse effects in respect of these issues have been identified.

Summary

1.277 Existing and emerging Government policy on energy clearly establishes the urgent and overriding to deliver new energy infrastructure in order for Government commitments on green house gas emissions to be achieved and the most recent draft NPS on energy clearly states that the national need for new energy generating capacity has been demonstrated and that decisions on technology is a matter for the industry. Within that it is clear that as a form of low carbon energy, energy from waste has a key role to play in delivering the Government's policy on energy and as such these policies should be taken into account by the County Council when determining this application.

1.278 National waste management policy and the South East Plan recognise that waste management is facing a period of rapid and radical change and that there is an immediate and acute shortfall in capacity to meet ambitious waste management targets.

1.279 In response to this shortfall in capacity, PPS10 states that Waste Planning Authorities (WPAs) must find sufficient opportunities for new waste management facilities of the right type in the right place at the right time.

1.280 As yet, Oxfordshire County Council has not allocated sites for new or expanded waste management facilities; however, guidance is given in the Minerals and Waste Local Plan on where waste recycling facilities will be permitted. This will be reviewed in the Minerals and Waste Development Framework, which will consider the need for detailed locational guidance for other types of waste treatment facilities, and whether appropriate sites for waste management development should be identified. However in the absence of up to date local policies, policy W17 of the South East Plan is considered to be the most up to date locational policy for waste management development

1.281 The application site is located within an existing quarry void, within a wider waste management complex which includes a landfill site, gas utilisation plant and a Household Waste Recycling Centre. To the south is land currently being worked for minerals. The site has excellent connections to the M40 and is close to the main potential sources of waste i.e. Bicester, Banbury and Oxford. The site is not covered by or close to any statutory landscape or wildlife designations e.g. Area of Outstanding Natural Beauty (AONB) or Special Area of Conservation (SAC) and the long standing landfill and mineral extraction in this location demonstrates that local environmental and amenity criteria for waste development are capable of being met.

1.282 The overriding need for additional waste management capacity in Oxfordshire is accepted by the County Council who identified a capacity gap of 291,000 tonnes per annum for Municipal and Commercial and Industrial waste recovery facilities. Failure to deliver this required waste management capacity will lead to meet national and regional targets on diversion of waste from landfill being missed.

1.283 Eight alternative sites were considered for the EfW facility, however, Ardley was considered to be the most suitable in terms of access, proximity to highways and having the least adverse impacts on the local environment and communities.

1.284 Oxfordshire is a largely rural county and the site selection work carried out by ERM highlights the limited number of sites that may be appropriate for this type of development.

1.285 Ardley is located within an existing waste management site and is well located in terms of the primary highway network and the main potential sources of waste and any adverse environmental impacts can be satisfactorily mitigated, which is in compliance with policy W17 of the South East Plan. Furthermore, there is an overriding need for additional waste management capacity and no more suitable alternative site.

CONCLUSIONS

1.286 This supporting statement has been prepared in support of a planning application by Viridor Waste Management Ltd for an Energy from Waste Facility and associated amendments to the existing landfill at the existing Ardley Waste Management Facility. The scheme will comprise an energy generating plant which utilises residual waste as its fuel source and a bottom ash facility to produce secondary aggregates from the residues of the energy from waste process. It will also allow for the continuation of the existing landfill and household waste recycling operations at the site.

1.287 The proposed development will make a fundamental contribution to waste management in Oxfordshire, particularly as the applicants are the preferred bidder for the Oxfordshire residual waste management contract, which requires the delivery of an energy recovery facility for Oxfordshire. It will provide a source of low carbon energy generation and will result in a move away from a reliance on landfill towards a solution which treats waste as a resource and maximises the recovery of energy and secondary aggregates from material that cannot be recycled or composted in accordance with the waste hierarchy. The process will generate significant quantities of energy which can be exported to meet the Government's aims of securing a Government policy on energy which includes the view that a diverse mix of energy technologies, including energy from waste generation, will be required to combat climate change and provide secure, clean and affordable energy. The process can also generate heat which can be utilised within the proposed eco-town development, offering excellent potential for the co-location of new development and energy infrastructure.

1.288 The Environmental Impact Assessment (EIA) process has considered the full range of environmental issues established during a comprehensive scoping process and the consultations undertaken as part of the consideration of the previous application.

1.289 The findings of the EIA for the development concluded that having taken into account the proposed mitigation for air quality, traffic and flood risk that the development is not considered to have significant impacts as a result of an interative design process and through careful consideration of emissions controls and abatement techniques, site levels and proposed highway improvements.

1.290 The potential impacts on issues such as noise, site conditions, nature conservation and cultural heritage were also subject to detailed assessments. The conclusion in respect of each of these is that the nature of the development and its location has ensured that there are no significant impacts in respect of any of these issues.

1.291 In respect of landscape and visual impact an Architect with an established track record for working on waste recovery buildings has worked with the landscape architect to ensure that the proposed development has been developed to achieve the following specific objectives:

- successfully merge and integrate the proposed landfill landform with the existing landfill landform;
- integrate surface water management for the landfill and building development into the overall landscape design;
- locating the EfW development close to the base of the quarry at 100m AOD;
- ensure ground water conflicts are avoided or resolved;
- take into consideration proposed new landfill phasing and ensure any revisions are practical;
- design revised landfill landform to maximise EfW building screening potential;
- include native woodland planting to boost long term screening levels;
- utilise the permitted mineral development to the south in mitigation and landscape strategies;
- ensure final landfill restoration design is in character with field pattern and scale of the surrounding landscape; and
- use biodiversity and existing ecological management aims as basis for range of final land uses.

1.292 No designated landscapes will be directly affected by the proposed development, however, the buildings will have an inevitable landscape impact. Landform, landscaping, building design and careful use of materials will all be used to reduce the visual impact of the buildings. As the building cannot be entirely hidden, the aim has been to create a high quality, landmark building, which will have a positive effect on views and the landscape of the area.

1.293 The benefits of the proposed development are considered to be as follows:

- The EfW facility will use proven, highly regulated technology to extract energy from residual waste and will make a fundamental contribution to the management of residual waste in Oxfordshire by providing capacity for the waste remaining after recycling and composting has taken place.

- The proposal complies with national and regional policy to promote sustainable methods of waste management and energy generation and maximises the benefits of locating complimentary activities of landfilling, energy recovery and bottom ash recycling at a single location.

- The proposal will drive forward sustainable waste management in Oxfordshire enabling communities and businesses to meet their obligations to reduce the amount of waste sent to landfill.

- The site is well established waste management operation with good transport links and the consideration of potential environmental effects carried out as part of this application did not identify any unacceptable adverse effects on the community, environment or highways as a result of the proposed development.

- It will provide for the diversion of waste from landfill in accordance with national, regional and local waste planning policy and targets whilst ensuring that adequate landfill capacity is maintained;

- It will provide a significant source of low carbon energy in accordance with Government policy on developing new energy infrastructure to meet an urgent and demonstrable national need for new capacity to help deliver Government targets on green house gas emissions and tackle climate change;

- It offers the potential to co-locate the proposed NW Bicester eco-town with a source of low carbon heat and power which will also deal with Oxfordshire's residual waste. There will also be the potential to utilise heat in other planned developments in the Bicester area.

- EfW has a lower carbon footprint than other waste management technologies.

- It will provide a bottom ash recycling facility to create secondary aggregate for use in the construction industry.

- Will provide up to 40 permanent jobs plus further contract/temporary employment.

- Will provide a Visitor Centre to allow a range of groups to find out about the waste hierarchy, EfW technology and the history of the Ardley site including the dinosaur footprints and local ecology.

- The upgraded Household Waste Recycling Centre will provide an improved facility for local people which will eventually benefit from HGV traffic relocating to the new access proposed.

- Will deliver a comprehensive package of improvements to the surrounding rights of way network.