APPLICATION NO:
CON/2000/1845

LOCATION:
Manor Farm Sewage Treatment Works Manor Farm Road, Reading .

APPLICANT:
Thames Water C/O Edaw

PROPOSAL:
Consultation from Reading B C on outline applications for residential development of (1 307 units, roads and landscaping,(2) 1000 uni community centre, local shopping provisions open space, play area, roads and landscaping and (3) full application for new sewage treatment works at Island Road.

EARLIEST DATE FOR DECISION:

APPLICATION WILL HAVE EXPIRED ON:
24/08/2000

NO OBS RAISED

CASE OFFICER: **Simon Lewis**

RAILEX
Marbleboard

EASIFILE EP7

WOKINGHAM D.C. DEVELOPMENT CONTROL

Start date:	29 JUN 2000
Officer: SL	Application No. CON/2000/1845

Map No. ..... Site .....
Easting: ..... Flood Pln .....
Northing: ..... Mineral .....

Level: ☐ Sub Committee ☑ Delegated ☐ Sec. State
☐ Incorrect Fee ☐ Invalid ☑ PD

Description:
(CON) CONSULTATION FROM READING B/C ON OUTLINE APPLICATIONS FOR RESIDENTIAL DEVELOPMENT
(1) - 307 UNITS, ROADS & LANDSCAPING
(2) - 1000 UNITS, COMMUNITY CENTRE, LOCAL SHOPPING PROVISIONS, OPEN SPACE, PLAY AREA, ROADS & LANDSCAPING

Location: MANOR FARM MANOR FARM ROAD

Parish: READING Ward: .....

Applicant: THAMES WATER

Fee Received ..... Required ..... Additional ..... Refund .....

Enforcement Section to be notified ☐ tick if required

* (3) FULL APPLICATION FOR NEW SEWAGE TREATMENT WORKS AT ISLAND ROAD

THIS IS NOT A FORMAL CONSULTATION. WE HAVE NOT BEEN FORMALLY CONSULTED AS "DOES NOT AFFECT US UNDULY" RESOLVED BY READING BC TO GRANT PERMISSION SUBJECT TO S106 AGREEMENT 6 Dec 2000

Additional information required for validation

		Reason	Requested	Received
1	1:2500 OS location plan showing property edged in blue/red			
2	1:500 block plan showing existing & proposed dev. + adj. Properties			
3	Forms unsigned			
4	Correct S 66 certificate			
5	Elevation plans			
6	Floor plans			
7	Metric scale disclaimer			
8	Encroachment letter			
9	Miscellaneous			

CON/2000/1845

EDAW

29 JUN 2000

EDAW LTD

1 LINDSEY STREET

LONDON EC1A 9HP

ENGLAND

TEL (44) 020 7674 0700

FAX (44) 020 7674 0799

www.edaw.com

27 June 2000

Chris Wood
Wokingham Council
Civic Offices
Shute End
Wokingham
Berkshire
RG40 1BN

Dear Mr Wood

Re: Planning Applications - Island Road Sewage Treatment Works and Manor Farm Redevelopment: Reading Borough Council Consultation

On behalf of Thames Water Properties, EDAW recently submitted three planning applications to Reading Borough Council in respect of the above sites. These are summarised as follows:

- **Application A**: Full planning permission is sought for the development of a new sewage treatment works at Island Road, Reading with the associated decommissioning and demolition of the existing sewage works at Manor Farm, Reading;
- **Application B**: Outline planning permission is sought for the redevelopment of Manor Farm Sewage Treatment Works for residential use of 1,000 units; and
- **Application C**: Outline planning permission is sought for the development of 307 residential units along the A33 frontage of the Manor Farm site. The site to which Application C relates is wholly included within the site associated with Application B. The rationale for the two applications is to allow greater detail to be supplied for approval in respect of the important frontage area.

As required, two Environmental Impact Assessments have been carried out. The first relates to Application A whilst the second relates to Applications B and C.

Reading Borough Council has requested that EDAW provide your organisation with a copy of the planning application, the supporting planning statement and a non-technical summary of the Environmental Statement. These documents are enclosed.

EDAW Limited Registered
in England No 2540745
Registered Office
1 Lindsey Street
London EC1A 9HP

EDAW

Reading Borough Council will be contacting your organisation to provide details of the consultation process and period. Should you have any queries regarding this process, please contact Richard Graham (Planning Department) on 0118 939 0417.

Yours sincerely

CHARLES LEDWARD
Director

Enc.

cc: Richard Graham, Reading Borough Council
Sue Aistrup, Thames Water
Tim Simpson, Thames Water

cc:
Encl.



ISLAND ROAD SEWAGE TREATMENT WORKS

Non Technical Summary

in respect of

The Development of a New Sewage Treatment Works

on behalf of

Thames Water

by

EDAW

June 2000

non technical summary

INTRODUCTION

Thames Water is seeking planning permission for the construction of a new sewage treatment works serving Reading on land to the west of the A33 Relief Road at Reading (the Island Road site). The development will also include the decommissioning and demolition of the existing Manor Farm Sewage Treatment Works (the Manor Farm site) and associated sewer diversion works. The planning applications accompanied by an ES, which sets out the results of a full EIA of the proposal. This statement provides a brief summary, in non - technical terms, of the ES and follows the same order of presentation. Tables 1.1 and 1.2 set out the key environmental effects during the construction and operational phases of development.

DEVELOPMENT PROPOSALS

Site Description and Location

The Manor Farm site and the Island Road site are both located in the Lower Kennet Valley, in the south-west of the Borough of Reading. The sites are divided by the newly constructed A33 Relief Road, which connects the Town Centre to the M4 at Junction 11. The Manor Farm site is owned by Thames Water whilst Reading Borough Council (RBC) owns the Island Road site.

The Island Road site comprises approximately 10 hectares of disused sludge beds, which have been in part subject to landfilling of inert and domestic wastes. There are a number of uses surrounding the site including the Smallmead landfill site, the Reading Stadium and the Kennet Valley. A major business park (Green Park) is currently under construction to the south of the site, adjacent to which is the new Madejski Stadium.

The Manor Farm Site measures approximately 25 hectares and lies on the eastern side of the A33 relief road. It is surrounded by the Basingstoke Road employment area to the north, east and south. The Foudry Brook runs along the eastern side of the A33 relief road, separating the site from the main road. A footpath and cycleway, together with recent landscape planting, follow the line of the brook.

Development Proposals

The development consists of four main components: -

- The remediation of land upon which it is proposed to site the Island Road sewage treatment works to an appropriate standard (STW);
- The construction of a new STW to serve the Reading Area on the Island Road site;
- The diversion of all main sewers carrying raw sewage to the site and construction of a new outfalls for the discharge of treated effluent and stormwater flows to the Foudry Brook; and
- The decommissioning and demolition of the existing Manor Farm site.

The Island Road STW

The proposed new Island Road STW is a replacement for the existing Reading STW which is currently located on the Manor Farm site. The new STW has been designed to treat projected flows arising from growth up to 2016. Additional land within the site will allow for further expansion beyond this date. The new STW will consist of three separate elements:

- The effluent treatment process;
- The sludge treatment process; and
- The ancillary and administrative operations.

The Effluent Stream

The effluent treatment process includes the preliminary treatment, settlement, biological treatment and filtration of wastewater. These processes will remove material and break down organic matter prior to discharge of the treated effluent to the Foudry Brook. The settlement and biological treatment leads to sludge being formed, which is then transferred to the sludge stream for subsequent processing.

The main buildings and structures that make up the effluent stream are;

- Stormwater retention tanks;
- A combined storm and foul water pumping station;
- An inlet works building housing the preliminary treatment processes, such as grit removal and screening;
- Primary settlement tanks, housed within a building;
- Aeration tanks;
- Final Settlement Tanks;
- Return Activated Sludge (RAS) and Surplus Activated Sludge (SAS) pumping stations;
- Tertiary filters ; and

- Ancillary plant and equipment.

The Sludge Stream

The sludge treatment process involves the processing of the sludge that results from the effluent treatment process to make it suitable for spreading on farmland as an agricultural soil conditioner or fertiliser. This involves thickening, pasteurisation and digestion of the sludge. Further water is then removed from the resulting treated sludge before it is passed to enclosed silos for storage. The "cake", as it is known, can then be removed from the site by lorry to local farms.

The main buildings and/or structures related to the sludge stream are as follows: -

- A dedicated building which will house the sludge preparation stream;
- covered sludge storage tanks;
- digesters;
- gas storage bags; and
- sludge cake silos.

Additional Buildings and Structures

There are also a number of other buildings/structures that will be located on the site, the most important of which is the power and administration building that will house the control systems and Combined Heat and Power plant. This produces electricity using the gas given off in the digesters as a fuel. Heat given off by the CHP plant is used to heat the sludge in the pasteurisation process.

Access

The site will be served by a single entrance off Island Road, at the north of the site, and will include appropriate car and vehicle parking and a vehicular turning area on-site.

Landscape

Earth bunding and the planting of indigenous tree and shrub species will take place along the boundary of the site to ensure that the STW blends in with the countryside beyond and is generally attractive when viewed from nearby. Two areas of land, in the south and north of the site, will be retained for future expansion of the STW.

The buildings, and the layout of the site, have been designed by a team of architects, engineers and planning and landscape advisors to ensure that they are not only very efficient but are also of a high quality appearance to fit in with new developments along the A33 relief road corridor.

Odour Control Systems

Extensive odour control systems will be put in place throughout the site. All the processes that might give rise to odour have been housed within buildings or otherwise covered to allow the air to be collected and treated before being released to the atmosphere. A summary of the odour assessment is given later in this statement, under the heading "Air Quality and Odour".

Flow Transfer

The Island Road STW will receive flows diverted from the sewers that currently serve the Manor Farm site. Most of these will need to be passed under the Foudry Brook and the A33 relief road in specially constructed tunnels. New outfalls for the discharge of treated effluent and storm water will be constructed on the Foudry Brook close to the existing discharge points.

Site Remediation

The Island Road site has been used in the past for the disposal of sludge and inert and domestic waste. Before any building works can begin, the sludge and waste materials will need to be dealt with in an appropriate manner. This will involve removing most of the material to an appropriate landfill site. A cut-off wall will also be constructed below ground around the site to prevent polluted groundwater from entering or leaving the site. Where polluted water is found on site it will either be treated on site prior to discharge to the Foudry Brook or will be transferred to the Manor Farm STW to be treated.

Construction Activity and Programme

To ensure that treatment continues uninterrupted, the Island Road STW will need to be fully built and operational before the Manor Farm works can be decommissioned and demolished. Demolition work on the Manor Farm STW will not therefore take place at the same time as construction works at the Island Road site, but will take place once the new STW is fully commissioned.

It is proposed that the Island Road STW will be constructed over a period of approximately 32 months, commencing in January 2001. This includes the remediation works and the construction of the plant.

Scheme Development and Alternatives

The new Island Road STW is proposed by Thames Water as the best way of meeting new UK and European quality standards that have been introduced for the discharge of effluent into rivers and streams. These new standards come into operation in 2005.

Few, if any, real alternatives exist to meet these new standards for water quality.

The Manor Farm STW could be upgraded to a satisfactory standard but this option would not give the benefits that a brand new STW would. In particular, the odour control would not be as effective and it would be difficult to improve the appearance of the works substantially or to screen it effectively with tree planting.

In looking for a new site, three broad areas of search were identified. These took into account:

- The inability of STWs to compete with commercial and/or residential uses in terms of land values;
- The importance of the new and existing sites being either close together or having the ability to use existing infrastructure to link the sites; and
- The potentially severe environmental effects if major sewer diversions were to be required throughout Reading.

The three areas looked at were;

The Caversham Area ~ This area is considered to be too heavily constrained in terms of planning policy designations and the floodplain to warrant serious consideration as a potential alternative location for a major STW.

The Existing Wargrave STW ~ The STW does not currently have the capacity to accommodate the additional flows from the Reading works and hence would require significant expansion. The policy and land use constraints mean that the only expansion area is to the south east which would be on greenfield land and take development closer to Twyford thus increasing the threat to local amenity.

The Smallmead Area ~ The Smallmead Farm area is identified within the Waste Local Plan for Berkshire as a preferred area for the accommodation of future waste management uses and so in land use terms a STW would be generally acceptable. The former landfill site does not represent a viable development option, however, because of instability and landfill gas generation and land use. Planning policy restricts development in most other parts of the area.

The application site offers the opportunity to use a site that would otherwise be incapable of being used for a minimum period of 20 years because of previous tipping activities. It is also acceptable in terms of current planning policy and broad environmental and amenity considerations. It is therefore considered that the Island Road site offers the best available option on which to secure a relocation of the Manor Farm STW and realise the potential benefits associated therewith.

PLANNING POLICY CONTEXT

Relevant planning policies are set out in national and regional guidance and County and Borough plans. The relevant County and Borough plans comprise:

- The Berkshire Structure Plan (adopted November 1995)
- The Reading Local Plan (adopted October 1998)
- The Waste Local Plan for Berkshire (December 1998)

Other policy guidance comprises: -

- National Planning Policy Guidance
- Draft Regional Planning Guidance and advice comprising RPG9
- The Revised Planning Brief for South West Reading (April 2000).

The effect of the development is assessed against this policy framework.

ENVIRONMENTAL IMPACT ASSESSMENT CONTEXT

The environmental statement considers all direct and indirect environmental effects arising from remediation and site preparation, construction and operation of the Island Road STW under a range of subject headings. The assessment also considers the related or linked impacts, either beneficial or adverse, short or long term, associated with the decommissioning and removal of the existing Manor Farm STW. These impacts have also been assessed in the light of other planned changes within south west Reading.

In the context of this EIA, it is important to recognise that each of these sites represents a 'brownfield development' on sites where the existing conditions present potential for impact. Consequently, the establishment of baseline conditions has, in many cases, required a risk assessment.

The EIA assesses the:

- Significance of Effects
- Mitigation of Environmental Effects
- Residual Effects
- Reliability of Impact Prediction and future monitoring requirements

GROUND CONTAMINATION AND GROUNDWATER

Both the Manor Farm and Island Road sites were assessed through desk studies and site investigations, to establish the nature and extent of contamination that presently exists on the sites and the potential effects of developing the sites on ground contamination and groundwater.

The Island Road site is presently affected by ammonia, potassium and antimony as the principal contaminants. Of these, it is the ammonia which needs most dilution in order to improve groundwater quality. It is also affected by ammoniacal nitrogen. This is characteristic of both STWs and sites that have a history of waste related use and will be considerably improved following the

removal of the sludge. However, if no action were taken, groundwater beneath the site will continue to be affected by a range of contaminants. The impact of existing contamination on the Foudry Brook, Fobney Groundwater Scheme and Brewery abstractors has been calculated and found to be of low significance.

The remediation phase will remove most of the sewage sludge, the most significant source of contamination at the site, together with some of the domestic wastes. It will also involve putting in a cut-off wall around the site, which prevents contaminated groundwater entering or leaving the site laterally.

Therefore, the development of the Island Road STW will effectively isolate it from the surrounding area, preventing any further contamination of the underlying groundwater. A permanent system to control groundwater levels within the site will also be installed to prevent downward or lateral movement. Once the site is operational, all water arising within the site will be collected and treated as necessary before discharge to the Foudry Brook. An on-going improvement in off-site and underlying groundwater quality will be produced as a consequence of removing the major on-site source of groundwater contamination.

The site investigation of the Manor Farm site was limited by existing buildings and structures and will need to be extended as these are removed during demolition. Where a subsequent risk is identified the contaminated soils will be removed for treatment or disposal as soon as possible after exposure to minimise the possibility of pollutants finding their way into the groundwater.

The Manor Farm site has only a minimal impact upon groundwater at present. In this case it is ammoniacal nitrogen which has been identified as the principal contaminant on the site. The site does not have any observable impact upon the groundwater or lower geological strata. For this reason, there is no significant impact predicted for the Foudry Brook or River Kennet.

WASTE MANAGEMENT

Construction Impacts

The remediation of the Island Road site will entail either the on-site treatment of contaminated materials or their removal from the site for either processing or disposal. Most will be removed to licensed landfill sites, which, due to the specialised nature of the material, may be some distance from Reading. However, these sites can be reached using main roads and so the impact of lorry movements will be limited. The maximum volumes that may derive from the site do represent a significant waste volume, equivalent to approximately eight months volume of household waste arising within Reading Borough. Through the on-site recycling of contaminated material and its re-use on the site as part of the site remediation process, the extent of these effects can be mitigated to some degree.

Operational/Development Impacts

Failure to invest in the new process plant may result in the sludge from the Reading sewage treatment process being unable to be disposed of through its traditional agricultural routes under new EC and Government regulations. The main alternative would be the landfilling of the residual sludge, which would have a significant effect on the quantity of landfill capacity remaining. The new STW will incorporate a pasteurisation process and improved digestion processes sufficient to ensure that the expected new requirements will be met. It should therefore be possible to continue to recycle the sludge to land as a beneficial soil conditioner and fertiliser.

The new STW will bring about significant improvements in the management of wastewater in Reading and the quality of the discharges from the STW to the Foudry Brook. In quantitative terms, the new works will have a capacity sufficient to manage wastewater up to the levels projected for the design year of 2016. This will be sufficient to cater for all known and planned developments.

The current proposals may also contribute towards integrated and sustainable waste management for Reading. The potential for integrating the treatment of solid waste and wastewater will depend on the future of the waste management contract for Reading.

ECOLOGY AND NATURE CONSERVATION

Using the results of field surveys, desk study and consultation, the impacts that can arise through different aspects of the development have been assessed.

Plant communities present are mainly short lasting or transitional in nature, composed largely of common species. The most significant wildlife value of the Island Road site comes from its attractiveness to birds, with a good variety of songbirds and waders. Continuing infilling operations means that the importance of these areas as a wildlife resource is likely to decrease over time.

The most significant feature of the Manor Farm site is the high numbers of pied wagtails foraging over the settlement tanks outside the breeding season.

The majority of habitats found on-site are not rare or particularly valuable and are unlikely to make a significant contribution to local biodiversity. No mammal, invertebrate or plant species of note have been recorded on either of the sites.

Remediation and Construction Operations

Island Road site

Due to the remediation and construction works, all habitats currently represented on the site, except a belt of trees along the southern boundary, will be lost. Therefore, all ecological interest which is immobile, namely plants and

many invertebrates, will also be lost. Black Redstart and Little Ringed Plover, which are both protected under the Wildlife and Countryside Act, have been seen on the site. However, the site is only likely to be a secondary foraging (occasional feeding) habitat for these birds and hence its loss will not significantly affect their populations.

Potential for impact upon breeding bird populations that are listed as "species of concern" is considered to be negligible due to the small size of the site, the lack of substantial trees or scrub cover and the general open nature of the habitat. In general, therefore, the loss of the site will represent no more than a loss of secondary foraging habitat of which there is a significant amount of better quality within surrounding areas.

The widening of Island Road along its southern side and the installation of new sewers will remove all habitats between the A33 and the site entrance. However, these habitats are of poor quality and their loss will not therefore be significant.

Manor Farm Site

Use of the site by large numbers of insect-eating birds is due to the abundance of flies and other invertebrates associated with the settlement tanks. It is likely that these birds and other insect eaters such as bats will move to the Island Road STW, when the Manor Farm site closes down. Whilst there will be a reduction in the area of foraging habitat available, this will be slight.

Operational/Development Impacts

The principal impact that will occur on the Island Road site once the STW is built involves the establishment of semi-natural vegetation over parts of the application site. This vegetation will have a beneficial impact, in particular by providing suitable foraging and breeding habitat for birds and invertebrates.

It is likely that numbers of Meadow Pipit and Pied and Grey Wagtails on the application site will increase dramatically after the Island Road site commences operation, with a corresponding decline on the Manor Farm site. However, there will be an overall reduction in foraging habitat due to changes in the sewage treatment process.

LAND DRAINAGE AND FLOODING

Hydraulic modelling was carried out to determine the 1 in 100 year flood level adjacent to both the Island Road and Manor Farm sites. This is used to assess whether or not development will have any effect on future flooding within the area. The level was established at 38.3 mAOD. Both the Island Road and Manor Farm sites are above this level and hence are outside the floodplain. Their development will not, therefore, affect flooding in the area.

The construction activities that have the potential to affect the Foudry Brook directly are those involving the diversion of the pipelines to the new site and the construction of a new outfall and potential changes to infiltration rates as a consequence of the demolition of the Manor Farm STW.

Construction works for the pipe crossing under Foudry Brook to the new works will have no impact on existing river flows and levels as all the structures associated with this have been sited outside the floodplain. There may be a requirement for the construction of a temporary cofferdam within the Foudry Brook, however, to enable a new outfall to be built. If this reduces the capacity of the Brook significantly, the Brook will be enlarged to the east to compensate. This will ensure that the works do not have any adverse effect.

SURFACE WATER QUALITY

There are no watercourses on either site but there are important surface water bodies around the area including:

- the Foudry Brook;
- Foudry Brook flood relief channel which receives drainage from the Green Park lake system; and
- the River Kennet.

The quality of the rivers in the area varies but is generally good.

Throughout remediation and construction activities, any water that is not of an appropriate quality to be discharged into surrounding watercourses will be collected and disposed of to the Manor Farm STW for treatment. Similarly, during decommissioning and demolition of the Manor Farm STW, polluted run-off may be transferred to the Island Road STW for processing.

Measures to protect against accidental spillages will be put in place both during remediation and construction and once the Island Road STW is operational.

The development of the Island Road STW will result directly in a significant improvement in the quality of the treated effluent discharge from the STW into the Foudry Brook. The result will be some improvement in the Foudry Brook and River Kennet downstream of the effluent discharge. The remediation of the Island Road site will also contribute to better water quality by removing possible pollutants that can enter watercourses through seepage.

Monitoring is being undertaken and will continue to be undertaken during remediation, construction and demolition to ensure that the development does not have any adverse effects on water quality.

AIR QUALITY AND ODOUR

Three possible sources of air quality effects have been assessed – odour, pollutant levels generally associated with traffic emissions, and construction and demolition dust.

Existing odour sources include the Courage brewery, the Gillette factory and the Manor Farm STW. A new odour abatement plant has been installed by the brewery to control emissions while the Gillette factory has limited or no impact.

The odour impact from the Manor Farm STW itself has been identified to extend several kilometres from the site and affects a considerable number of sensitive receptors.

Good air quality exists in the area although elevated levels of pollutants are present in the immediate vicinity of the A33 relief road. Road traffic is the most significant influence on these levels.

Low dust deposition rates have been identified and no significant presence of pollutants with the potential to cause harm to health have been identified associated with this dust. Nearby dust measurements identify the most significant sources of dust in the area to include construction activities in Green Park and the operation of Mould Ltd. The impacts of these sources are, however, localised.

Construction Impacts

During the remediation of the Island Road site there will be the need to remove large quantities of sewage sludge. Odour is unlikely to arise from this operation due to the age and stability of the sludge. Any impact that does arise will be slight and occur for a short time only.

The control of dust will need more assessment once construction and demolition activities have been programmed. Such activities will be covered by a Code of Construction Practice, which will be agreed with RBC. This will ensure that any potential impacts of dust are minimised.

Emissions from construction vehicles will not be significant due to the limited number of lorry movements in comparison to existing traffic flows on the A33 relief road .

Operational/Development Impacts

A significant reduction in total odour emissions will be achieved with the new STW design. The high efficiency of the odour control measures will mean that odour nuisance is unlikely to occur beyond the site boundary of the Island Road STW. This will reduce the number of locations affected dramatically. In particular, the residential areas of Whitley, the Basingstoke Road employment area and the areas associated with the A33 approach to Reading will all benefit from the significant improvement to air quality. Some nearby locations may experience slight odours on a limited number of days when emergency storage of sludge cake is required. Back up systems have been built in to the design to provide additional protection against odour releases.

There will be no increase in Greenhouse gas emissions from the new plant.

Mitigation

The vast improvement in the odour levels from the proposed STW will be further enhanced by the installation of silos to store sludge cake and the enclosure of any trucks once filled with cake for off-site removal.

NOISE

Existing background noise levels within the area are currently dominated by the A33. No other significant sources of noise were identified.

The assessment of noise looked at three possible sources of noise

- construction and demolition activities;
- traffic, either during construction and demolition or after completion of the new STW; and
- noise from the new STW itself.

Construction and Demolition Noise Impacts

High levels of noise are not normally generated by construction and demolition activities for prolonged periods of time. In any event they can be controlled through use of a Code of Construction Practice (COCP). This will be submitted to RBC for their approval before any work starts. It will cover issues such as hours of operation, proposed method of operation and details of traffic routing. In so doing, it will ensure that appropriate measures are employed at all times to minimise disturbance.

There will be substantial traffic movements associated with the site remediation, prior to construction of the Island Road STW, and also during the construction period. However, increases in peak hour flows as a result of construction traffic are insignificant when compared to existing and predicted future flows, and hence any increase in noise as a result will be negligible. Furthermore, this traffic will use the A33 relief road and Island Road to serve the site and so will not cause increases in road traffic, or associated noise, on local roads.

On a large site such as Manor Farm, the greatest potential for noise disturbance would occur where decommissioning and demolition activity was being undertaken close to the perimeter of the site and adjacent to surrounding commercial and industrial uses where some slight adverse impact is predicted. The residential areas of Whitley are several hundred metres from the areas where noisy activities would occur and so would not be directly affected. All these activities will be covered by the Code of Construction Practice referred to above.

Operational/Development Impacts

To predict noise from the Island Road STW noise readings were taken at a similar Thames Water works in south west London. These were used to model likely future noise levels and the effect that these levels might have on surrounding uses. The results demonstrated that for much of the time, noise would not be audible at either Manor Farm Cottages or at the Green Park development, two of the closest neighbours to the new STW. This is due to existing background noise levels from road traffic on the A33 relief road and

from other industrial and waste-related activities in the area being higher than the predicted noise levels from the new STW.

The calculations also show that on both the A33 relief road and Island Road, increases in peak hour traffic resulting from the Island Road STW will occur at a rate of only 1% and 5% respectively. These increases in traffic are not significant and the noise associated with them would not be audible.

TRAFFIC AND TRANSPORTATION

The main traffic impacts considered in the assessment are concerned with the impact at the junction onto Island Road and at the existing left in - left out junction of Island Road and the A33 relief road.

Construction Impacts

Over the full construction period, the development will generate on average approximately 700 vehicle movements per month. This equates to approximately 35 vehicle movements per day or approximately one every 20 minutes based on a 10 hour working day.

In practice, however, traffic will vary from month to month throughout the construction and demolition works. In the peak month vehicle flows will reach 2121 vehicles movements equal to approximately 10 HGVs movements per hour or one every 6 minutes.

Access to the site for both the site remediation and construction will be off Island Road. A separate haul road and temporary junction will be constructed to the east of the site for the remediation works in order that the new site junction works can commence prior to completion of the remediation works. Island Road provides direct access onto the A33relief road via the existing left in-left out priority junction. It is anticipated that the main HGV movements serving the site will be to/from the M4, via the A33 relief road. HGVs will be excluded from using the Basingstoke Road and from travelling through the residential areas to the east of the Basingstoke Road.

The impact of the HGV movements at the junction of the A33relief road and Island Road is minimal. The construction traffic represents, on average, approximately a 10% increase over the existing low flows on Island Road. During the peak month, the 2121 movements to/from the site equates to an impact of approximately 28% over the existing low flows. In relation to traffic using the A33 relief road, this flow represents an increase of only 1% of southbound traffic and 1.5% of northbound traffic. This shows that there will be no significant impact arising out of the construction of the STW.

Operational/Development Impacts

The new STW will have a significantly lower trip generation than that of the existing STW with only 30 people employed on the Island Road site. The traffic impact from the new development is negligible. The impact of the development equates to only 1.2% northbound and 0.3% southbound on the A33 relief road traffic flows in the morning peak.

No significant traffic impacts will therefore arise either during construction or during operation of the proposed development.

One potential problem that has been identified is how to maintain access to the STW when queues form to get into the Civic Amenity site. The proposed solution is to widen Island Road along its southern side. This widening would be in the form of a hard shoulder that would enable STW traffic to bypass any queues for the civic amenity site, thus avoiding contributing to them further.

LAND USE, AMENITY AND RECREATION

Some disturbance will be experienced within the local community as a result of construction activities. Both dust and noise will be generated by the remediation and construction of the Island Road STW and the demolition and decommissioning of the Manor Farm works. The impact will, however, be short lived and will be tightly controlled through a Code of Construction Practice (COCP) which has to be agreed with Reading Borough Council before any works commence.

Operational/Development Impacts

The proposal is clearly a positive response to local planning policies for the area and contributes significantly towards improving the quality of life for local residents.

No footpaths will be directly affected by development although a number of local paths will have views of both construction and demolition activities and of the development itself once completed.

Views will be possible from both Green Park and the Reading Stadium but with the extensive planting scheme, the sculptured bunds and high quality STW design, any adverse visual impact will be significantly reduced. The predicted reduction in odours will also counteract, to a degree, any loss of amenity resulting from changes to views.

Despite moving closer to the Reading Stadium, the Madejski Stadium and the Trail Park, the significant improvement in odour control built into the Island Road STW will mean that these businesses will not be significantly affected.

The entrance to the Brunel retail park is located on the northern end of the site and so there are no views of the existing or new STW. However, the retail park is currently affected on occasions by odours arising from the Manor Farm works. The Island Road STW development will virtually remove this nuisance thereby improving the environment generally for shoppers.

Manor Farm Cottages are located 200 metres to the north west of the Island Road STW. They are currently affected by waste related operations within the area. Any aspirations that residential occupiers might have for future improvement will be further tempered by the area's designation within the Berkshire Waste Local Plan. The impact of the Island Road STW will therefore be limited in practice. The improvement to odour conditions are predicted to benefit the Manor Farm Cottages.

The relocation of the STW to a site significantly further away from Whitley and its construction to a much improved standard will undoubtedly enhance people's enjoyment of their area. This will benefit housing areas, workplaces, schools and other facilities alike.

ECONOMIC EFFECTS

The town of Reading has a population of approximately 150,000 and is the largest urban settlement within the Thames Valley sub-region. The construction sector makes up 2.8% of total employment in Reading, representing a workforce of just over 2000 (1999). The electricity, gas and water sector makes up 2.9% of total employment in Reading, representing a workforce of approximately 2100. This proportion of the workforce is significantly greater than the national and regional averages of 0.6% and 0.8% and highlights the importance and strength of this sector in the Reading economy.

Construction Impacts

Employment is measured in man-years – one man year being the work of one person for one year. The decommissioning of the existing Manor Farm STW will require 15 man-years of employment, whilst the preparation and construction of the Island Road STW facilities will require an estimated 227.5 man years of employment. This is equivalent to 1.5 permanent jobs for the demolition of the Manor Farm STW and 22.75 permanent jobs for the construction of the Island Road STW. This will have a slightly positive impact on unemployment levels in Reading and Berkshire. In addition, a small contribution to the general growth in demand for construction products and services in the area will result.

Operational/Development Impacts

There will be a reduction in on-site employment numbers, reflecting small efficiency savings but more importantly the removal of sub-contractors, currently housed on the Reading site but not directly employed there, to alternative sites. The resulting reduction will be from between 189 and 209 people, currently employed on site, to approximately 30 persons.

It is likely that a significant proportion of the sub contractors that will not be based at the Island Road STW, will be relocated to other Thames Water or alternative sites in the area. All of the remaining Thames Water staff (32 in total) not transferred to the Island Road STW site will be accommodated at Thames Water premises elsewhere in Reading.

Having regard to the buoyancy of the Reading economy, the extremely low levels of unemployment and the demand from new firms entering the town, there will be no discernible impact within the context of the wider economy of Reading.

Other Economic Impacts

The RBC Economic Development Strategy (1999/2000) aims to develop a local economy that is strong, competitive and environmentally sustainable. The new STW site would offer the latest technology and lend increased support to local industry and businesses as well as providing much improved environmental quality.

The impact of improving infrastructure and removing adverse environmental conditions associated with the Manor Farm STW will assist the continued improvement in levels of economic activity in the A33 employment corridor and corresponding environmental upgrading. This is considered to represent a moderate beneficial effect of the Island Road development.

LANDSCAPE CHARACTER AND VISUAL IMPACT ASSESSMENT

The assessment was carried out using a desk top study, field visits, a photographic survey, and computer photomontages to analyse and evaluate any impacts on the landscape character of south west Reading or on views from key points within the area.

The proposed development is located to the south-west of Reading within the Kennet and Holybrook floodplain, which is part of the Thames Valley floodplain. The landscape character is open and consists mainly of trees, hedges and ditch lines. The existing site character is wasteland and it is not visible from the A33 corridor or the Green Park business area.

This western part of Reading is also characterised by urban fringe uses namely, industrial, business parks and large scale leisure and shopping facilities.

The Island Road site itself is raised out of the floodplain and although generally flat, is surrounded by man-made bunds. There are prominent belts of trees both between the site and Green Park and beside the River Kennet. The horizon is formed by the ridgelines upon which sit residential buildings and groups of trees.

Construction Impacts

The plant, equipment and general activity present during the construction period, will have a lesser or similar level of visual impact to that of the final development. However, for a period of 12 months the tower cranes, which will be 30 and 35 metres high, will be more visible than the lower level buildings of the Island Road STW.

Development/Operational Impacts

Landscape Assessment

Many different landscape types exist near to the Island Road site. They range from the large open areas of the floodplain to the more enclosed River Kennet corridor and from the new high quality buildings of the Green Park development and the Madejski Stadium to the poorer appearance of the Smallmead Farm landfill site and the current frontage of the A33 relief road in the immediate vicinity of the Manor Farm site. The new STW has been assessed to see how it might affect all of these.

The largest buildings and structures proposed as part of the Island Road STW are of a similar height to the five-storey office buildings in the adjacent Green Park development, and are lower than the brewery building and structures to the south. They have been designed to be of a pleasing and modern appearance. The earth bunds and tree and shrub planting around the new STW will help to blend the new development in with the existing landscape and the high architectural quality of the buildings will mirror that which is being developed at Green Park. In the light of this, the proposed development will have only a low degree of adverse impact on the overall landscape character of the area.

The proposed development will result in significant improvements to the landscape quality of the site itself. Existing poor quality elements such as the sludge beds will be removed and replaced with modern, architect designed structures, surrounded by gentle mounds with native tree and shrub screen planting.

The removal of the Manor Farm STW will improve the landscape character of the A33 relief road corridor although the extent of this improvement will depend in part on the appearance of the replacement development.

Visual Impact Assessment

The area around the Island Road site is generally flat and so many of the views of the site are partially obstructed by existing vegetation and buildings.

To determine how important views of the new development might be, it was assessed from 9 different viewpoints ranging from locations immediately next to the site to more distant points such as the River Kennet, Prospect Park and surrounding higher ground.

Each of these viewpoints assessed showed a low level impact apart from one location. This means that although the Island Road STW will be visible, it will blend in with what exists at present. The exception is the view taken from Green Park and the Reading Stadium, immediately adjacent to the development, facing north-east towards the site. Due to the size and close proximity of the proposed development, it is from these viewpoints that the visual impact of the proposed development is most significant. However, the

existing belt of mature willow trees lining the southern boundary of the proposed development site and Reading Stadium provide physical barriers and have the effect of filtering views of the buildings and plant structures.

Furthermore, the sympathetic siting of buildings and plant, a high standard of architectural design and the establishment of strategic planting along the boundary of the site will mitigate many of the adverse effects of this view. The resultant visual impact is, therefore, assessed as 'low to moderate', meaning that whilst it may not fit in closely with existing development, the development will not be out of place.

The development has no impact when viewed from the more distant ridgelines.

Mitigation Measures

Measures have been designed to minimise disturbance to views during the construction and demolition periods. These will include control of site lighting and maintaining and planting the earth bunds around the Island Road site.

Where possible, permanent mounding and planting will be installed in advance of completion of the main works allowing planting to be established earlier and mitigation to be more rapidly effective.

CULTURAL HERITAGE

The cultural heritage study assessed the possible effects of development of the Island Road site on archaeology. The decommissioning and demolition of the Manor Farm site will not involve any disturbance to below-ground remains and will therefore have no archaeological impact. Disturbance to the ground during remediation is fully assessed in a parallel application for the redevelopment of the Manor Farm STW.

There are no Scheduled Ancient Monuments or Listed Buildings or known archaeological remains within the Island Road site. However, due to the importance of archaeological finds close to the Island Road site, it can be deduced that the site has a significant potential to contain archaeological evidence.

The assessment seeks to predict the survival of archaeological deposits across the site based upon what is known of its geology and history. Within a narrow band around the perimeter of the site where there has been no construction or major disturbance, there is a chance of survival of archaeological deposits from all periods.

Within the area occupied by the sludge beds, there is some potential for deposits to survive above and within the alluvium and in the surface of the gravel. If, when the sludge beds were formed, the topsoil was stripped and the layer beneath left intact, then it is quite possible that any deposits which may exist below the made ground may still be intact. However, it is also possible that many of these deposits may have been partially or totally truncated by the construction of the sludge beds.

Where peat exists within the alluvium, the archaeological potential of this peat could be high. There is also the possibility that organic remains will be present. If so their archaeological and environmental potential may be high.

Archaeological features dating from the early prehistoric to the Roman period, cut into the gravel and sealed by alluvial layers will have a high chance of survival as they have been protected from later disturbances by the alluvium.

Construction Impacts

The construction of the perimeter cut-off wall will affect any archaeological deposits that may be present along its path, as it will extend below the made-ground. The impact of these works is judged of minor significance due to the narrow width of possible disturbance.

The effects and therefore the significance of changes to the water table caused by the insertion of the cut-off wall are difficult to predict, but waterlogged deposits within the peat or sealed below the alluvium are likely to be affected by drying out. Once these deposits have been affected by drying out, re-hydration will not restore their archaeological potential.

The impact of the site's remediation will depend on the depth to which sludge and waste is removed. As all the sludge and previously deposited wastes will be either removed or disturbed, there is the possibility that the top of the alluvium and gravel will be disturbed and archaeological deposits sealed below or within it might be affected. The impact of these works is considered potentially significant.

Any archaeological features in the top of the alluvium or gravel, which are exposed by the site remediation, could also be subject to weathering damage and/or damage resulting from the movement of plant across the site after their exposure. The impact of this is considered to be slight.

The construction of the main STW structures will have a significant impact on any archaeological deposits which may be present above and within the alluvium and gravel through foundation work.

The pipe trenches dug on-site and those required to divert sewers to the Island Road site will be dug to a depth of 2-5m and may have an impact on any archaeological deposits which may lay within and underneath the alluvium.

Operational/Development Effects

There will be no additional adverse effects caused during the operation of the STW.

Mitigation

Archaeological monitoring of the remediation works will be carried out and any features exposed will be recorded. Where possible damage to the features may occur, hand excavation will be carried out.

Trial trenches will be excavated across the site, after remediation and prior to construction, in order to investigate any archaeological deposits present. Depending on the results of this, further measures may be required to fully mitigate the construction works. It will only be possible to decide what is necessary after trial trenching has been carried out and after further consultation with RBC.

The effects of the temporary lowering of the water-table will be assessed during the trenched evaluation and an appropriate mitigation strategy instigated, if necessary.

An archaeological watching brief will be agreed with RBC to make sure that excavations taking place off-site, such as pipe trenches, will be monitored by professional archaeologists and that any finds are properly recorded or preserved as necessary.

Summary of Environmental Effects

Table 1.1 - Summary of Environmental Effects (Construction Phase)

ASPECT	CONSTRUCTION PHASE		
	Significance	**Nature**	**Impact**
Groundwater and Land Contamination	Significant	Beneficial	Removal of contaminated materials and installation of drainage, thereby reducing migration of contamination to groundwater
	Slight	Beneficial	Improvements to groundwater quality through removal of pathways and installation of cut-off wall to control groundwater flows
	Moderate	Beneficial	Hydraulic isolation of site by constructing a cut-off wall, preventing migration of contaminated groundwater from the site
Waste Management	Slight	Adverse	Requirement to transport waste off site for disposal
	Slight	Adverse	Impact upon the capacity of non-inert landfill sites within Berkshire or surrounding counties
Flooding	No/Negligible impact		
Ecology	Slight	Adverse	Loss of foraging habitat for Little-Ringed Plover
	Slight	Adverse	Loss of foraging habitat for non-breeding waders and wildfowl
	Slight	Adverse	Reduction in foraging habitat for wagtails and bats
	Slight	Adverse	Reduction in foraging and breeding habitat for priority bird species and species of conservation concern
	No/Negligible impact	Adverse	Loss of foraging habitat for Odonata

Ecology (cont)	No/Negligible impact	Adverse	Reduction in area of suitable habitat for nitrophilous flies
	No/Negligible impact	Adverse	Loss of stressed areas for invertebrate communities
	No/Negligible impact	Adverse	Loss of an area of hedge and ruderals along Island Road
	No/Negligible impact	Adverse	Reduction in winter prey source for sparrowhawks
Surface Water Quality	No/Negligible impact		
Air Quality	Moderate	Adverse	Dust generation from remediation and construction activity
	No/Negligible impact		Emissions to air from construction traffic
	No/Negligible impact		Odour from sewage sludge remediation
Noise	No/Negligible impact		Road traffic noise
	Slight	Adverse	Construction activity
Traffic	No/Negligible impact		Slight increase in delay to traffic using Island Road but A33 junction well within design capacity
Land Use	No/Negligible impact		Disturbance to local community during construction and demolition activity
	No/Negligible impact		Effect on community facilities, open space and recreational areas, including public rights of way
Economic	Slight	Beneficial	Direct increase in construction employment and demand for construction materials
Landscape	Slight	Adverse	Effect on landscape character
	Slight	Adverse	Visual impact from around the site
Cultural Heritage	No/Negligible impact		Remediation and construction activities on both the Island Road and Manor Farm sites
	No/Negligible impact		Sewer diversion and construction of chambers
	Moderate	Beneficial	Increased knowledge of the archaeology of the area

Table 1.2 - Summary of Environmental Effects (Operational Phase)

ASPECT	OPERATIONAL PHASE		
	Significance	**Nature**	**Impact**
Groundwater and Land Contamination	Moderate	Beneficial	The use of hardstanding over much of the site and the installation of the cut-off wall will remove contamination pathways and reduce migration of residual contaminants
	Slight	Beneficial	Groundwater quality due to groundwater level control
Waste Management	Significant	Beneficial	Continued recycling of sludge to agricultural land
	Significant	Beneficial	Improvements to wastewater treatment within Reading
	Moderate	Beneficial	Potential to offer synergies between the future management of wastewater and municipal solid waste
Ecology	Slight	Beneficial	Increase in summer prey source for sparrowhawks
	Slight	Beneficial	Increase in breeding habitat for priority bird species and species of conservation concern
	Slight	Beneficial	Increase in suitable habitat for kestrel prey
	Slight	Beneficial	Increase in foraging and breeding habitats for invertebrates
Land Drainage and Flooding	No/Negligible impact		
Surface Water Quality	Significant	Beneficial	Improvement in water quality within the Foudry Brook and River Kennet
Air Quality	Significant	Beneficial	Odour from operation of STW
	No/Negligible impact		Emissions from traffic and on-site combustion affecting local and regional air quality
	Slight	Beneficial	Emissions from sludge digestion and energy generation affecting global warming from improved CHP
	No/Negligible impact		Dust generation from accidental spillage

Noise	No/Negligible impact		Operation of the STW
	No/Negligible impact		Road traffic noise
Traffic	No/Negligible impact		The proportional increase in traffic flows will not be discernible.
Land Use	Significant	Beneficial	Conformity with and contribution towards the objectives of land use planning policies
	Moderate to Significant	Beneficial	Effect on land uses within south west Reading (some highly localised slight adverse effects)
	Moderate	Beneficial	Effect on community facilities
Economic	Slight	Adverse	Minor direct employment loss through incorporation of more efficient processes
	Moderate	Beneficial	Infrastructure improvements and enhanced environmental conditions for business.
Landscape	Slight	Adverse	Change in landscape character and visual impact from Manor Farm site
	Slight to Moderate	Adverse	Visual Impact from Green Park
	No/Negligible impact		Other views from south west Reading
Cultural Heritage	No/Negligible impact		Operation of the STW

MANOR FARM | REDEVELOPMENT

Non Technical Summary

in respect of

The Redevelopment of the Manor Farm Sewage Treatment Works

on behalf of

Thames Water

by

EDAW

June 2000

non technical summary

INTRODUCTION

Thames Water are seeking planning permission for redevelopment of the Manor Farm Sewage Treatment Works site (STW) at Manor Farm Road, Reading for residential use and other ancillary uses. Tables 1.1 and 1.2 set out the key environmental effects during the construction and operational phases of development.

DEVELOPMENT PROPOSALS

Site Description and Location

Owned by Thames Water, the Manor Farm site is located in the Lower Kennet Valley, in the south-west of the Borough of Reading. It is bordered by the A33 relief road on its western side with the Basingstoke Road Industrial Area to the north, south and east. To the east of the A33 relief road, and falling within the western area of the application site, are the Foudry Brook and associated embankments. At the base of these embankments runs a new pedestrian and cycle route alongside the A33 relief road which connects the Madejski Stadium and Green Park business park developments in the south to the Kennet Valley in the north. To the north of Green Park and directly west of the A33 relief road lies the Reading Stadium (greyhound and speedway racing).

The Manor Farm redevelopment site comprises approximately 28 hectares of land and is currently occupied in most part by the main Reading STW. Relative to the new A33 relief road, the level of the site is higher in the south and reduces northwards towards the River Kennet.

To the east of the Basingstoke Road are the residential areas of Whitley and Church.

Development Proposals

The proposed development will comprise a total of 1,000 dwellings on brownfield (previously used) land which will include a 50:50 mix of houses and flats. In accordance with government and local planning policy, 300 of the dwellings will be provided to help meet the local need for affordable housing. Remediation of the site will be carried out to an appropriate standard prior to commencement of construction works. Construction will be phased over an estimated period of 10 years.

Development will exploit the opportunity afforded by the prominent location of the site adjacent to the A33 relief road and provide a new balanced community with a range of dwelling sizes and tenures. Residential development will be complemented by small-scale ancillary uses that add to its attractiveness and provide a community focus for the development.

The scheme will be fully integrated with the surrounding area by providing links both to and within the site, and by improvements to bus services and incorporation of facilities to promote cycling and alternatives to the private car.

An ecology zone is proposed along the east of the Foudry Brook linking into the Wildlife Heritage Area situated in the north of the site. This will be upgraded to provide new aquatic habitats and improve its nature conservation value. Open spaces will be distributed throughout the scheme with public access structured to create high quality pedestrian environment that is varied, safe and interesting.

The height of the buildings across the site will range between three and five storeys. Building heights and topography will be combined to ensure views into and out of the site are maximised. An important principle of the scheme will be to provide a strong urban frontage along the A33 relief road. This will emphasise the function of the A33 relief road as a gateway to Reading and assist in mitigating against potential noise impacts from the relief road. The development will provide an important opportunity to enhance the local environment within the A33 relief road corridor by improving the overall quality of the visual scene. In line with government policy to provide sustainable urban development, average density on site will be approximately 50 dwellings per hectare.

Integration of the built form with open space is a key factor in ensuring a quality living environment within the site. The scheme proposes to provide approximately 9 hectares of open space. This includes areas for passive and active recreation, communal open spaces and nature conservation areas for natural habitats and wildlife to flourish.

The development incorporates high quality walking, cycling and public transport links, both on and off site. These will be designed to encourage the use of alternative modes of transport to the car. Pedestrian footpaths and cycleways will be provided which will connect the development to facilities in the surrounding area. Off site proposals include the provision of a segregated footpath / cycleway along the southern side of the Manor Farm Road, TOUCAN crossings on the Basingstoke Road and A33 relief road, and upgrading of the existing footpath alongside the River Kennet from Rose Kiln Lane to the town centre.

The proposals include the provision of high frequency public transport services and associated infrastructure such as bus shelters. These services will stop at the centre of the site and connect with destinations including Green Park and the town centre. They will also be integrated with rail services.

Buses will have priority for direct movement through the site whilst cars will use a loop road designed to maintain vehicle speeds of 20 mph or less. Traffic generation from the site will be restrained by limiting the provision of parking spaces.

Off site proposals include the improvement of Manor Farm Road and enhancement of its use for cyclists and pedestrians. A large roundabout is proposed at the Manor Farm Road entrance to the site to enable HGVs to safely U-turn without entering the development. It is also proposed that the Commercial Road / Bennet Road junction will be enhanced with a "Ghost Road" to ensure that it will operate safely with the increased flows on Commercial Road.

Ground Re-Modelling and Remediation

Earthworks must be carried out on-site to obtain a 'cut/fill' balance in order to minimise the amount of material to be removed from the site. Material must also be crushed on site during demolition for re-use during development, Surplus material produced on site will be moved to the proposed new STW (Island Road) to fill a large existing void. About 115,000 m3 of material is likely to be surplus. At 60 lorry movements per day this is estimated to take approximately 160 days.

Preliminary site investigation results show that significant contamination is unlikely. Further investigation will be necessary during demolition to prove this further. Careful consideration will be given during the works to the impact on the Foudry Brook and the underlying groundwater to ensure minimum impact. The demolition process will be undertaken in accordance with the Control of Pollution Act to ensure minimum impact on the neighbouring environment.

Phasing of Development

The site will be developed over a period of 10 years with 5 key phases:

- Phase 1 – Construction of the new access onto the A33 relief road, the provision of a public transport link through the site, coupled with improvements to the Manor Farm entrance, and construction of the first 200 dwellings;
- Phase 2 – Completion of the southern section of loop road to allow access from Commercial Road and the closure of the route through the middle of the site for other than buses. Approximately 200 dwellings will be built with the open space provision made in the south of the area;
- Phase 3 – Construction of 200 dwellings to complete the southern section of site and the provision of a community centre at the Manor Farm Road entrance;
- Phase 4 – Completion of the northern section of loop road and construction of 200 dwellings along the A33 relief road frontage and the north of the site; and

- Phase 5 – Completion of scheme with the remaining 200 dwellings and open space provision.

Scheme Development and Alternatives

The Manor Farm site accords well with current and emerging policies on securing sustainable locations for housing development. Sites in sustainable 'brownfield' locations are in scarce supply in Reading. Consequently, there is considerable pressure for development on greenfield sites in the Borough and surrounding area. Therefore, it is not appropriate to look at other possible sites for their potential to accommodate residential development.

In light of this, the consideration of alternatives focuses on other possible uses for Manor Farm. Three options were considered for the site:

- A predominantly residential development incorporating flexible accommodation suitable for home working;
- A business and/or industrial development; and
- A mixed-use development incorporating large-scale intensive leisure use.

Consideration was given to the advantages and disadvantages of each option in respect of: local planning policy, land use planning considerations, deliverability, and wider community contributions. Of the three options, the redevelopment of the Manor Farm site for housing use will:

- Accord best with strategic and local planning policies;
- Contribute most towards achieving the objectives of sustainable development and urban renaissance;
- Be most readily capable of delivery within the stringent timescale set by the need to meet new treated effluent discharge standards and hence best guarantee delivery of the benefits associated with the relocation of the existing STW; and
- Contribute most towards the land use planning objectives set out by the Council for Reading Southern Gateway.

PLANNING POLICY CONTEXT

The planning policy context is set out in national, regional and local plans. The relevant local plans comprise:-

- The Berkshire Structure Plan (adopted November 1995)
- The Reading Local Plan (adopted October 1998)
- The Waste Local Plan for Berkshire (December 1998)

Other policy guidance comprises:-

- National Planning Policy Guidance
- Draft Regional Planning Guidance and advice comprising RPG9
- The Revised Planning Brief for South West Reading (April 2000).

The effect of the development is assessed against this policy background in the remainder of the EIA.

ENVIRONMENTAL IMPACT ASSESSMENT CONTEXT

The environmental impact assessment considers all direct and indirect environmental effects arising from site preparation, construction and subsequent occupation of the residential scheme under a range of subject headings. The decommissioning and demolition of the existing STW is assessed in the Statement covering the development of the new Island Road STW. This assessment also considers the related or linked impacts, either beneficial or adverse, short or long term, associated with such a development. Cumulative impact is considered in respect of other potential developments or changes in use within the vicinity of the site. For example, this includes the full implementation of the Green Park planning permission, the possible redevelopment of the Reading Stadium site, expansion proposals advanced by Gillette and future development of land to the north and west of the Island Road site for intensive waste management uses.

For all effects, the EIA assesses the:

- Significance of adverse or beneficial effects (significant, moderate, slight or no impact);
- Mitigation measures for adverse environmental effects;
- Residual effects following mitigation; and
- Reliability of impact prediction and future monitoring requirements.

SUMMARY OF ENVIRONMENTAL IMPACTS

The following sections summarise the predicted environmental impacts associated with the proposed development. Each topic area is considered in turn.

GROUND CONTAMINATION AND GROUNDWATER

There is potential for the past use of the Manor Farm site, together with other activities at the site to have caused groundwater contamination or have potential to impact on groundwater. The construction of housing may cause disturbance of potentially contaminated materials and alter the risk of these materials causing pollution of underlying groundwater.

Through desk studies and a preliminary site investigation, the Manor Farm site was assessed to establish the nature and extent of contamination that presently exists on the site and the potential effects of the construction phase on ground contamination and groundwater.

At present, the Manor Farm site has a minimal impact upon ground conditions and groundwater. The assessment identified ammoniacal nitrogen as the principal contaminant on the site. The site does not have any observable impact upon the groundwater in the underlying Chalk or Reading Beds. For

this reason, there is no significant impact predicted for the Foudry Brook or River Kennet.

Given that the site is currently operational as an STW, there have been constraints to investigations. Consequently, further investigation will be required once the STW is demolished and the site cleared. This will pay particular attention to near surface soils and any fill materials. It is proposed to undertake a detailed survey investigating the potential risk from existing ground contamination beneath and around structures. Where a risk is identified the contaminated soils will be removed as soon as possible after exposure minimising the potential for leaching and mobilisation.

Development Impacts

Provided appropriate consideration is given to recharge of any site drainage at the remediation stage, there should be no significant impact on groundwater from use of the site for housing. Given that no adverse impacts have been predicted, no specific mitigation measures are proposed. Similarly, no residual impacts are predicted. Monitoring will be carried out before, during and after construction.

WASTE MANAGEMENT

The EIA considered three main issues relevant to potential impacts on the management of waste:

- The requirement for disposal of material off site during the remediation and/or construction phases of development;
- The potential effects that residential development might have on the future use of the Smallmead Farm area for the management of solid waste; and
- The on-going management of waste generated from within the development once constructed.

Construction Impacts

The only potential impact that could arise from the construction phase of development results from the requirement to remediate the site. This will entail either the on-site treatment of contaminated materials or their removal from the site for either processing or disposal.

Most of the material remaining on site following decommissioning and demolition works will be suitable for re-use. Any material that is unsuitable for re-use will be taken to an appropriately licensed landfill site for disposal.

Surplus material requiring transportation and disposal will amount to approximately 115,000 m3. This corresponds broadly to the void created by the proposed development of the new STW (the Island Road site). Consequently, the disposal of surplus material will have no impact on landfill capacity within Berkshire. At an average of 12m3 per lorry and 60 movements per day, the transportation of surplus material will take approximately 160 days. This impact is considered under the heading of transport.

Development Impacts

There is potential that the development may limit the potential for the development of major household waste management facilities within the Smallmead area, particularly an Energy from Waste Facility (EfW). Residential design and landscape planting will ensure that the effects will be insignificant. The possible exception is in terms of visual amenity where the scale of an EfW plant will mean that it will be visible from areas within the Manor Farm site. Therefore, the proposed residential development will have only a slightly adverse impact on the potential for expanding waste related uses on the Smallmead site. A high quality design for any future waste management development will also reduce the significance of this as an effect.

The proposed development will generate the need to manage waste arising from an additional 1,000 dwellings in Reading. It is important to note that these dwellings are likely to assist in meeting identified housing provision targets established by the Berkshire Structure Plan and Reading Local Plan. If the site were not developed then the housing would still require provision but possibly in less sustainable locations.

Based on the application of the average UK figures for per capita waste generation, the proposed residential development will give rise to approximately 1,150 tonnes of household waste per annum. In the context of Berkshire, this represents only 0.5% of current household waste arisings in the County. Consequently, the proposed development is considered to be only slightly adverse in the absence of any mitigation measures. However, mitigation can be achieved through the encouragement of recycling by providing on-site facilities. If this is done, there will be no overall effect resulting from the residential redevelopment of Manor Farm.

ECOLOGY AND NATURE CONSERVATION

Using the results of field surveys, desk study and consultation, the assessment identified potentially sensitive 'receptors' within and beyond the site as the basis for assessment of potential impacts. The removal of the current nature conservation interest is assessed in the statement relating to the Island Road works as it occurs when the existing plant and structures are demolished. The starting point for this assessment occurs after the site has been cleared.

Construction Impacts

The main potential impacts upon ecology during the construction phase are likely to derive from unintentional consequences of works affecting areas outside the site boundary. Potential for accidental damage to areas outside the site will be controlled through use of Best Practice in all works.

Development Impacts

The only adverse potential impacts arising from the development phase will involve accidental contamination of watercourses and disturbance due to human activity around the development. Potential for accidental contamination of watercourses will be controlled through standard measures. No impact upon ecology is therefore predicted.

Proposed open spaces within the site are likely to attract some animals and will provide foraging habitat for species such as song thrush. The landscape corridor will provide a significant increase in the area of land available to wildlife along the Foudry Brook. This will be planted with trees throughout much of its length, but will include areas of grassland and steep banks with poor surface stability. These grassland areas and banks will provide structural diversity within the woodland and, in particular, the banks will provide self-sustaining suitable habitat for plant and invertebrate communities dependent upon stressed, open grassland. This buffer zone will be a significant enhancement of the ecology of the Foudry Brook corridor. It will provide nesting habitat for a number of species of birds that are likely to nest in good numbers. In addition, it will provide shelter for animals such as otter and roe deer as well as habitat for small birds, mammals and invertebrates that do not currently use the corridor.

No significant adverse impacts are predicted. A negligible impact will occur as a consequence of temporary disturbance to wildlife on the Foudry Brook corridor during bridge construction. These will be controlled through Best Practice working techniques. Partly to compensate for lost nature conservation interest on the Island Road site and on the Manor Farm site before demolition took place, the scheme includes proposals to enhance the Wildlife Heritage site through the creation of a series of new ponds and surrounding landscape planting. Linked to this will be an ecological corridor running the length of the application site alongside the Foudry Brook. With these measures in place, the overall impact on the ecology of the site and adjacent habitats is considered to be highly beneficial.

Surveys will be carried out on the Wildlife Heritage Site to assess the effectiveness of enhancement measures. In addition, the site will be visited periodically during the first 5 years following construction, to ensure that water levels and inundation duration conform to the plans.

LAND DRAINAGE AND FLOODING

The proposed redevelopment of the Manor Farm site for housing will significantly alter the surface of the site and its run-off characteristics. In order to assess the impact of this on land drainage and potential for flooding, the topography and run-off characteristics were examined and assessed. Consideration was given to the means by which rainfall on the development might be best accommodated with respect to the protection of the new properties from the effects of flooding, and the means by which this water may be put to use to benefit the ecology and appearance of the area.

Construction Impacts

Potential construction effects could arise from three possible sources:

- Changes to the surface permeability of the site resulting in different run-off characteristics;
- Changes to ground levels within or adjacent to the floodplain that might impact upon the potential for areas of the site to become inundated under flood conditions;
- Obstruction to flows within the Foudry Brook from the construction of bridges and or other structures that might impede flood flows and hence increase flood risk upstream of the development.

Construction activities have been designed and will be managed to ensure they have no impact upon land drainage and flooding.

Development Impacts

Potential permanent impacts may result from changes to the run-off characteristics of the Manor Farm site as a consequence of the construction of houses and associated road and hardstanding areas. Impacts may also potentially result from changes to the flood storage capacity associated with the River Kennet and Foudry Brook. The detailed design of the storm water drainage system will incorporate both source control and attenuation. It will be designed to ensure that the run-off characteristics of the site are managed in such a way as to ensure no greater impact on the adjacent watercourses than at present. The introduction of a system of ponds will increase local flood storage capacity. Although negligible in the context of the wider floodplain, it does represent a slight beneficial effect of development.

No specific mitigation measures are proposed as no significant adverse impacts were identified. Consequently, there are not considered to be any residual impacts in relation to land drainage and flooding arising from the proposed redevelopment. The proposed flow management system is considered to be an environmental enhancement in comparison to the effects of the current site usage.

SURFACE WATER QUALITY

The assessment describes the current water quality within the vicinity of the site and assessed the potential effects of development on water quality. There are no major surface watercourses within the Manor Farm STW, although the Foudry Brook runs within the western boundary of the application site. The main surface watercourses in the area in addition to the Foudry Brook are the Foudry Brook flood relief channel and the river Kennet.

The potential for changes in impact on surface water quality that may arise from the development proposal include:

- Removal of the effluent discharge from the Manor Farm STW to Foudry Brook (this will be replaced by discharge from the Island Road STW);
- Changes in land use at the site.

Construction Impacts

It is not anticipated that any impacts to surface water quality will arise from the remediation and ground engineering aspects of the development proposal nor from construction activities associated with the redevelopment of the site for housing. However, there will be a need to contain runoff either for discharge to the new (proposed) STW or direct discharge to surface watercourses. Any discharge to surface water will only be undertaken under an appropriate consent from the Environment Agency. Treatment to remove contamination may be necessary for any direct discharges. Any potential impacts from accidental spillages will be mitigated by adoption of appropriate working practices, which will be agreed in advance with the Environment Agency.

Development Impacts

Direct rainfall onto the site will be the only source of surface water to the site except for the area in the extreme north of the site, where a series of pond will be created to enhance ecological benefits. Run-off will be controlled through the use of soakways, attenuation ponds and open channels for storm water.

No specific adverse effects have been identified and hence no mitigation measure are proposed.

Monitoring is being undertaken and will continue to be undertaken during remediation and construction to ensure that the development does not have any adverse effects on water quality.

AIR QUALITY AND ODOUR

This aspect of the assessment considered the current air quality and odour conditions within the immediate vicinity of the site, and more generally within Reading. To assess existing conditions, a number of technical surveys were carried out at a series of locations around the site. To assess the potential impacts of the proposed development, a number of established odour and air quality predictive techniques were employed. The results of the modelling exercise were compared with current air quality standards.

Existing Air Quality and Odour

Existing odour sources include the Manor Farm STW, the Courage brewery and the Gillette factory. A new odour abatement plant has been installed by the brewery to control emissions while the Gillette factory has limited or no impact. The odour impact from the Manor Farm sewage treatment works itself has been identified to extend several kilometres from the site and is likely to affect a considerable number of sensitive receptors. Good air quality exists in the area although elevated levels of pollutants are present in the immediate vicinity of the A33.

Construction Impacts

The main potential impacts derived from the remediation of the Manor Farm site and the construction of new residential properties include:

- Dust generated by remediation and removal off-site of potential contaminated soils and fill material;
- Dust generated by construction activities; and
- Emissions to air from construction traffic.

Based on preliminary site investigations, the volumes of sewage sludge and refuse materials are very small. Consequently, material requiring transit will be minimal.

Potential impacts associated with the potential for dust generation during construction will warrant detailed assessment and a well-designed range of mitigation measures is required. These will be incorporated into a Code of Construction Practice in agreement with Reading Borough Council to ensure that any potential impacts of dust are properly controlled.

There are not expected to be any significant adverse impacts arising from construction traffic exhaust emissions.

Operational Impacts

The proposed Manor Farm residential development will result in increased traffic flows on some local road links, but the increases are not considered likely to have any significant effects on local air quality. It is extremely unlikely that the Manor Farm development will lead to any significant increase in gases associated with global warming or other regional air quality effects.

Mitigation Measures

A detailed dust deposition assessment will be carried out once the construction programme and characteristics have been accurately established. This requires information that is not currently available. Likely mitigation requirements have, therefore, been identified in this Environmental Statement. The mitigation measures that will be implemented will include the following:

- The surface of roads around the construction area will be sprayed with water during dry periods;
- Haul roads will be surfaced and road sweepers employed to ensure spillages are swept up and a build up of dust and mud does not occur;
- Speed restrictions will be applied to vehicles travelling on-site and, in particular, in unpaved areas;
- Vehicles will preferentially have upward-directed exhausts to reduce disturbance;

- Vehicles carrying fine materials will remain sheeted for as long as practicable on-site to prevent dust blow and spillages;
- The wheels of all vehicles leaving the site onto the local road network will be washed to ensure mud and dust is not transferred onto public highways;
- Construction of bunds as appropriate to provide a physical barrier between site construction activities and sensitive receptors;
- Open ground will be seeded at the earliest opportunity to reduce dust entrainment by wind passing over the ground;
- The planting of vegetation and landscaping to provide an additional filtering of wind-borne dust, and to reduce near ground wind speeds. Existing tree and shrub lines along with proposed landscaping will also reduce the impact of dust on existing residents;
- A programme of dust monitoring at the site boundary will be specified and implemented.

A dust management plan will be formulated once a full construction programme and method are known and this will be agreed with the relevant authorities. This will identify the specification of effective remedial action if found to be necessary.

Residual Impacts

There are not considered likely to be any significant adverse effect on air quality during the operational phase of the development. Whilst it may not be possible to exclude all potential dust impacts during the construction phase, it is considered that the implementation of an effective set of dust control measures will provide satisfactory control of dust.

Detailed monitoring of airborne dusts will be carried out during the remediation and construction phases of the proposed development to ensure that no nuisance is arising.

NOISE

The proposed redevelopment of the Manor Farm STW for residential use will have the potential to generate noise impacts at existing local sensitive locations, due to noise associated with its construction, and from vehicle movements as it becomes occupied. In addition, the design of the site will need to take into account existing noise sources, particularly road traffic noise from the A33 relief road, which passes the western boundary of the site.

As with the air quality assessment, a range of noise measurements were taken at a series of locations around the site and potential noise impacts evaluated through the use of technical predictions and calculations.

Construction Impacts

It is proposed to control noise from remediation and construction activities through the application of an agreed Code of Construction Practice. This will ensure that even impacts which might otherwise be potentially significant can be readily controlled. Increases in road traffic noise from higher traffic flows have been assessed as slight

Development Impacts

Potential impacts are related to the effect of external noise on the new development itself (particularly from the A33 relief road) and the noise effects of traffic generated by the new housing development.

Noise from sources around the proposed development has been monitored and assessed in accordance with nationally recognised guidance and criteria. This monitoring has established that noise from road traffic has the potential to affect the western frontage of the residential development. Other potential noise sources, such as industrial uses to the east, are less significant and will not constrain the development.

The proposed layout of the residential development has been designed to address traffic noise by employing a substantial set back distance from the road of approximately 60 metres. The outline layout prepared also incorporates a range of other measures, which will ensure that noise levels throughout the built development will be acceptable.

Mitigation Measures

The assessment demonstrates that residential properties can be satisfactorily developed along the A33 relief road frontage to meet the noise thresholds specified in national planning policy guidance (PPG24). The development will, however, need to incorporate certain architectural features within the detailed design to ensure that noise does not adversely affect residential amenity. These measures will ensure that all relevant criteria relating to habitable rooms and are private gardens are met, and that valuable public open space is appropriately protected.

No residual noise effects are predicted as a consequence of the redevelopment of the Manor Farm site.

TRAFFIC AND TRANSPORTATION

A traffic impact assessment was carried out to ascertain the current transport position in south west Reading and assess the potential impact of the development proposal on the local transport network. The assessment was carried out with the aim of developing a balanced transportation strategy for serving the site. A local transport model was constructed to estimate the traffic impacts compared to the existing situation.

Construction Impacts

It is proposed that the development is constructed over about 10 years, with site remediation works commencing in 2004. Building at a rate of 100 dwellings per year will require an average of 14 HGV movements per day. This equates to an average of 1.4 HGVs per hour arriving and 1.4 HGVs per hour departing based on a 10 hour working day. With an average of 80 workers employed on site, approximately 52 trips to and from the site will be generated each day. Half of these will arrive during the peak hour. These results demonstrate that even during the peak periods the impact of construction related traffic is not significant.

Construction access to the site is to be obtained via the proposed A33 relief road junction, which will avoid HGVs using the Basingstoke Road or affecting residential areas. During construction of the houses it is anticipated that materials will be delivered mostly from the direction of the M4.

Development Impacts

One thousand dwellings will generated about 550 trips during the morning peak and 570 in the evening peak. To distribute these, it is proposed that three vehicle access points are constructed including an A33 relief road frontage access, an access onto Manor Farm Road and a third access onto Commercial Road. These access points enable the site to be integrated with the surrounding land uses, minimise the impact of site generated traffic at any one point and minimises vehicle journey length within the local area.

Distribution of journeys onto the highway network has been undertaken using a 'with development' transport model for a design year of 2008. The results indicate that in the morning peak there is generally a marginal decrease in total traffic flow at the junctions around the site. In the evening peak there are some marginal increases in total flows at some of the junctions. Assessment of the wider network has shown that there are no significant impacts on any individual link outside the study area. Hence the overall impact of the development is slight on the local highway network.

Mitigation Measures

Traffic impacts will be mitigated by a combination of measures aimed at discouraging the number and length of motorised journeys through the promotion of more sustainable alternatives in line with local and national policy guidance. The aim is that these sustainable alternatives not only benefit the proposed site, but also benefit the wider community enhancing accessibility for residents of Whitley and for local businesses. These measures will include a comprehensive range of proposals for pedestrians and cyclists, public transport users and vehicle users affording benefit to the wider area. These proposals will be implemented both on-site and off-site.

Residual Impacts

The impact of the development after the mitigation measures are put in place is considered to be slight. These mitigation measures will encourage the use of public transport, cycling and walking. They will also include improvements to Manor Farm Road and the provision of links to the town centre and the River Kennet.

SOCIO-ECONOMIC ASSESSMENT

This assessment sought to evaluate the potential impact of the development on local employment together with consideration of the impact on land-use, amenity and recreational characteristics of the area.

Construction Impacts

The construction of the new development will create an average of 80 full-time permanent jobs on site per year. In addition, there will be a small number of other jobs created as a result of the construction employment. Given the need for a high number of construction workers, it is estimated that approximately half of the workers will be resident in Reading.

Development Impacts

Access to and through the site and the surrounding area will be increased dramatically as a result of the proposed development. This will include both new north-south and east-west public rights of way (footpaths and cycleways). There will be no requirements to permanently close or divert any public rights of way as a result of the new development. The development will also improve the viability of retail outlets in the Whitley area and will complement the Green Park business park development by improving the environmental quality of the area. Moreover, the development of 1,000 dwellings will bring with it a workforce which will have the opportunity to work locally, either at Green Park or the Basingstoke Road Industrial Area. Provision of a wildlife corridor will effectively extend the benefits of the Kennet Valley. In total, the development will add approximately 9 hectares of open space to the area.

The development will provide 300 affordable dwellings to serve local need. This will have a significant impact on reducing social exclusion in Reading. Given that the development will also provide a mix of dwelling types, it will assist in meeting a range of the community's housing needs. As a whole, the development of 1,000 dwellings will have the effect of reducing pressure on the local housing market.

Sufficient capacity in the provision of local health services and schools already exists to accommodate additional needs generated by the development. Therefore, in adding value to these community facilities, the proposed development will include the provision of a family learning centre. This resource will contribute significantly to the development of adult learning in the area.

Overall, the socio-economic and community benefits resulting from the redevelopment of the Manor Farm site for residential use are considerable. These include:

- Creation of a better living environment;
- A significant reduction in odour;
- Reduced pressure on the housing market;
- Introduction of anew local workforce;
- Creation of a more sustainable land use pattern;
- Furtherance of structure and local plan policies for the area;
- Improved connectivity;
- An enhanced nature reserve;
- Promotion of active conservation and education opportunities; and
- General improvement in the area's image.

In the absence of any significant adverse effects, no specific mitigation measures are proposed.

LANDSCAPE CHARACTER AND VISUAL IMPACT ASSESSMENT

The landscape assessment was carried out to evaluate the likely landscape and visual impacts of the proposed development and, where appropriate, recommend mitigation measures to be incorporated into the design. The study area extends from Junction 12 of the M4 in the west, Prospect Park in the north, Spencers Wood in the south and the A327 in the east. Specific locations surveyed within the study area included the River Kennet, Burghfield village, the water bodies within disused gravel pits, the water tower in the Calcot area, Prospect Park, Whitley recreation ground, Three Mile Cross and Spencer Wood village. The assessment involved:

- A desktop study of relevant policies and recorded physical characteristics of the area;
- Field visits to assess existing conditions;
- A photographic survey;
- Analysis and evaluation of construction and development effects based on defined criteria;
- An integrated approach to the design of the site layout, buildings and landscape.

During the construction phase there will inevitably be some impact on both the landscape character of the area and on local views. This has been assessed as slight.

Development Impact

The development of the scheme will present an opportunity to significantly enhance the local environment within the A33 relief road corridor by improving the overall quality of the visual scene. Particular emphasis will be given to the A33 relief road frontage which will feature appropriate building massing and design that is well integrated with the landscape.

The main components of landscape and open space treatment within the site will comprise the following:

- Public open space, including recreation space, will be located in two main blocks within the central parts of the development so as to serve all residents;
- Communal open spaces will include areas within courtyards and central squares for secure relaxation and play;
- The enhancement of the A33 relief road boundary landscape character;
- A linear landscape treatment along the western boundary of the site will act as a continuation of the Waterloo Fields open space to the north of the site;
- The eastern and southern site boundaries will be enhanced with landscape treatment in order to improve the setting of the development in relation to the wider context of the site;
- Manor Farm Road enhancements will include planting and improved pedestrian and cycle use; and
- The character of public spaces within the site will be appropriate to the quality urban environment to be established for the development.

In addition to significantly improved landscape character and visual quality within the site, the development will bring further benefits to the A33 relief road corridor and lesser benefits to the Kennet floodplain and river corridor, Reading Stadium, Waterloo Meadows and surrounding industrial estates.

Visual benefits attributable to the development of the scheme will include views from the A33 relief road at the bridge over the River Kennet, the view looking south east towards the site, and the view from the footpath / cycleway adjacent to Foudry Brook and opposite Island Road, looking east into the site.

Mitigation

Careful consideration has been given to site planning and the location of buildings within the proposed development at the outset of the development process in order to mitigate and reduce the visual impact that the development would have on the surrounding area.

Landscape and visual mitigation measures during construction will comprise:

- Appropriate site lighting; and
- The installation of permanent planting, where it can be carried out in advance of completion of the main works;

Permanent mitigation measures will comprise:

- The careful design of building forms;
- Careful consideration to the site layout;
- The design of a landscape treatment along the western A33 relief road frontage;
- The design of perimeter screen planting;
- Maintenance of buildings and boundary treatments;
- The design of other landscape elements, including walls, fences and ornamental planting; and
- Careful permanent lighting design.

Planting on site will mature fully within approximately 20 years, reaching a height of 14-15 metres. This will provide an effective screen to most of the buildings, where required. The proposed vegetation will complement the existing vegetation located along the Foudry Brook and the River Kennet. The proposed woodland planting includes native deciduous species, indigenous to the local area and will provide continuity with areas of existing woodland.

Residual Impacts

The degree of impact of the proposed development and its construction on the general landscape character of the area, the floodplain of the River Kennet will be low. The impact on the more local character areas around the proposed development site will be moderate or low, although, in the cases of the A33 relief road corridor and the industrial estates, it is also considered to be beneficial.

The impacts on views from the A33 Relief Road and the footpath / cycleway adjacent to the Foudry Brook are moderate but considered beneficial. The impacts on all other views have been assessed as low and from the more distant ridgelines as not significant.

Overall, the proposed development will have low or moderate impacts but beneficial in nature.

CULTURAL HERITAGE

This component of the assessment established the archaeological potential of the site and evaluated the potential impact on the archaeological resource that may result from development. The work builds on a previous assessment, which concluded that the proposed demolition on site involved no disturbance

to below-ground remains and therefore had no archaeological impact. It was also concluded that demolition would not cause any impact below the existing modern made-ground which blankets the site. Further investigations have been carried out by collecting information from a 1km radius around the site (the study area). From this data, it could be established the extent to which any known or potential archaeological features could be affected by the development proposal. This work was carried out in accordance with standards laid out by the Institute of Field Archaeologists, Town and Country Planning Regulations and other government guidelines. A variety of sources were used including historical records, previous site investigation reports, maps, documents, photographs and documentation supplied by Thames Water. The site was also visited to further inform the study.

Impacts

There are no Scheduled Ancient Monuments or Listed Buildings with the development area, or within the vicinity of the site. However, due to the high incidence of known archaeological sites in similar geological and topographical situations close to the site, it can be deduced that the site has potential to contain as yet unknown archaeological evidence, where ground has not been previously disturbed. Three known sites have also been identified as possibly being present on the site: a Bronze Age cemetery, a Roman building and a post-medieval farm, possibly with medieval origins. However, the survival of any archaeological deposits across the site is dependant upon the nature and extent of the existing impacts already caused by the present structures on the site.

Whilst levelling the site, there is not expected to be an archaeological impact as this will mainly involve building up the site with further made-ground. However, there is the possibility that deposits below the made-ground will be disturbed. If this is the case, there may an archaeological impact, which may have a negative effect in localised areas.

Given that the exact nature of contamination on site is unknown, it is not possible to estimate at this time how much soil will need to be removed. If soil below the modern made-ground is removed, it could have an impact on any archaeological deposits that may be present on the site. The effect of this may be significant but cannot be predicted at this time.

The insertion of pile caps, roads and services may have an archaeological impact if they extend below the thickness of the made-ground. The effects of this may be significant but, as with any similar development, cannot be fully determined until excavation begins.

Mitigation

An archaeological strategy, to be agreed with Reading Borough Council, will be prepared to counteract any significant impacts of the proposed development. The strategy will adopt a phased approach to ensure that appropriate investigations are made at each stage of the proposed remediation and development. This will enable any potential archaeological impacts to be identified and mitigated for. As part of this strategy, an archaeological watching brief will be maintained during remediation works, in those parts of

the site where archaeological deposits may survive. The results of this watching brief will be used to help determine the mitigation strategy for the construction phase. Depending on the results, an archaeological evaluation (by trial trenching) may then be undertaken to further establish the presence or absence, and the nature of any archaeological remains in the development area. Appropriate mitigation can then be built into the construction programme. At all times, the evolving archaeological strategy will be fully discussed and agreed with Reading Borough Council.

Summary of Environmental Effects

Table 1.1 – Summary of environmental effects (Construction Phase)

ASPECT	DEVELOPMENT PHASE		
	Significance	Nature	Impact
Groundwater and Contamination	No or negligible impact[1]		
Waste Management	No or negligible impact		Removal of spoil, concrete and filter bed material will be disposed of direct to Island Road site
Ecology	No or negligible impact		Disturbance to wildlife using the Foudry Brook corridor during bridge construction is negligible
Land Drainage and Flooding	No or negligible impact		
Surface Water Quality	No or negligible impact		
Air Quality	Slight	Adverse	Dust generation from remediation and construction activity
	Slight	Adverse	Emissions to air from construction traffic
Noise	Slight	Adverse	Noise from construction activity including associated traffic generation
Traffic and Transportation	Slight	Adverse	Generation of heavy goods vehicle traffic during the remediation and construction phases
Socio Economic and Land Use	Moderate	Beneficial	Creation of jobs within the construction industry
	Slight	Adverse	Potential for disturbance to communities through remediation and construction activity
Landscape and Visual Impact	Slight	Adverse	General impact on landscape character and visual impact for duration of construction activities
Cultural Heritage	No or negligible impact[2]		Remediation and Construction activity
	No or negligible impact[2]		Construction of Wildlife Ponds (subject to further assessment)
	Moderate	Beneficial	Increased knowledge of the archaeology of the area

[1] The post closure survey has the potential to identify remediation which may in turn impact upon groundwater.
[2] This conclusion is based upon existing knowledge and will require additional investigation for verification.

Table 1.2 – Summary of Environmental Effects (Development Phase)

ASPECT	DEVELOPMENT PHASE		
	Significance	**Nature**	**Impact**
Groundwater and Contamination	No or negligible impact		
Waste Management	Slight	Adverse	Impact upon the potential of the Smallmead Area to accommodate major waste management facilities
	Slight	Beneficial	Opportunity to promote recycling within new development
Ecology	Significant	Beneficial	Provision of a broad wooded corridor along the Foudry Brook
	Significant	Beneficial	Creation of new aquatic habitats within the Wildlife Heritage Site
	Slight	Beneficial	Provision of recreation areas within the redevelopment with foraging habitat for BAP species
	Slight	Beneficial	Provision of grassland habitat within the landscape corridor
Land Drainage and Flooding	Slight	Beneficial	Increased flood storage at the confluence of the Foudry Brook and the River Kennet
Surface Water Quality	No or negligible impact		
Air Quality	Slight	Adverse	Impact on air quality from vehicle emissions
Noise	Slight	Adverse	Impact of road traffic noise from the A33 on the proposed residential development
Traffic and Transportation	Slight	Beneficial	Creation of new access to A33 thereby allowing improved traffic management without significant delays to overall traffic flows
	Moderate	Beneficial	Improvements to public transport provision
	Moderate	Beneficial	Improvements to provision for pedestrians and cyclists
	Moderate	Beneficial	Improvements to Manor Farm Road, both in terms of its functioning and appearance
	Slight	Adverse	General increase in traffic
Socio Economic and Land Use	Significant	Beneficial	Public footpath network and local retailers
	Moderate	Beneficial	Green Park business park, Brunel Retail Park, Kennet Valley and Whitley
	Slight	Beneficial	Madejski and Reading Stadia, the trail park and Manor Farm cottages
	Moderate	Beneficial	Creation of a more sustainable pattern of development with enhanced linkages between living, working and leisure areas
	Significant	Beneficial	Conformity with and furtherance of Structure Plan and Local Plan objectives
	No or negligible impact		Provision and adequacy of health and education facilities

Landscape and Visual Impact	Slight	Adverse	Landscape character of the Floodplain, River Kennet and meadow
	Slight	Beneficial	Landscape character of Reading Stadium and Industrial Estates
	Moderate	Beneficial	Landscape character of the A33 corridor and of the site itself
	Slight	Beneficial	Visual impact from A33 RR (south), Whitley Wood Road and Manor Farm Road
	Moderate	Beneficial	Visual impact A33RR (north) and footpath adjacent to Island Road
	No or negligible impact		Distant views from nearby ridgelines
Cultural Heritage	No or negligible impact		

WORK SHEET FOR : Simon Lewis

Application Number : CON/2000/1845

Applicant : Thames Water C/O Edaw.

Location : Manor Farm Sewage Treatment Works, Manor Farm Road, Reading, .

Proposal : Consultation from Reading B C on outline applications for residential development of (1) 307 units, roads and landscaping,(2) 1000 units, community centre, local shopping provisions, open space, play area, roads and landscaping and (3) full application for new sewage treatment works at Island Road.

Site Notice Displayed ? : YES [ ] NO [ ] DATE [ ]

Date of Neighbour Notifications : .....

Date of Site Visit : .....

Date Registered : 29/06/2000

Earliest Date for Decision :

Latest Consultation Date/Site Notice Expiry Date :

This application will have expired on: 24/08/2000. You need to make a decision 1 day prior to this date for this application to count as determined in less than 8 weeks.

Consultation Responses :

TO Par o/s Area — no
obj raised.

Planning Issues :

Application Number: CON/2000/1845

Appraisal :

Recomendation : Approval: ☐ **Refusal:** ☐
(tick appropriate box)

Application Number CON/2000/1845
Conditions/Reasons for Refusal

No	Std Con	Std Reas	Non Std Conditions / Reasons for Refusal

RECORD OF SITE VISIT

SITE ADDRESS: Manor Farm Sewage Treatment Works Manor Farm Road Reading .

APPLICATION NUMBER: CON/2000/1845

OFFICER: Simon Lewis

DATE OF SITE VISIT:.....

1 SITE/STATUTORY NOTICE DISPLAYED ?

2. DESCRIPTION OF SURROUNDINGS

3. DESCRIPTION OF SITE/BUILDING

4. RELATIONSHIP TO ADJOINING PROPERTIES

5. SITE CONSTRAINTS

TREES

ACCESS/PARKING

LEVELS

BOUNDARY TREATMENT

OTHERS

EX SYSTEMS LTD

CON/2000/1845

SOUTHPC
LONDON

MANOR FARM | REDEVELOPMENT

Planning Application Supporting Statement

in respect of

The Redevelopment of the Manor Farm Sewage Treatment Works

on behalf of

Thames Water

by

EDAW

June 2000

manor farm redevelopment

The enclosed submission consists of two inter-linked planning applications. These are described below.

APPLICATION 1

Outline planning permission is sought for the following:

- residential development of 1000 units;
- a community centre;
- local shopping provision;
- open space;
- children's play area;
- roads; and
- landscaping

Details of the access onto the A33 relief road, Manor Farm Road and Commercial Road are included for approval. Siting, design, external appearance and landscaping are reserved for subsequent approval.

The following plans are included as part of this application:

- Manor Farm Redevelopment – Planning Application / Site Strategy and Zoning Plan (Drawing Number 8485/A/100);
- Manor Farm Redevelopment – Outline Application Site Plan (Drawing Number 8485/A/101).

APPLICATION 2

Outline planning permission is also sought for development along the A33 frontage comprising:

- residential development of 307 units;
- roads; and
- landscaping

The application for development on the A33 relief road frontage will include details of siting and access for approval. Design, external appearance and landscaping will be reserved for subsequent approval.

The following plans are included as part of this application:

- Manor Farm Redevelopment – A33 Frontage Application (Drawing Number 8485/B/102);
- Manor Farm Redevelopment – A33 Frontage Application – Outline Application Site Plan (Drawing Number 8485/B/103).

The site to which Application 2 relates is wholly included within the site associated with Application 1. The rationale for the two applications is to allow greater detail to be supplied for approval in respect of the important frontage area.

The inter-linked planning applications are accompanied by a Planning Supporting Statement and an Environmental Impact Assessment (Environmental Statement, Technical Appendices and Non-Technical Summary). These documents support both applications.

LEGAL AGREEMENT

The applicants will enter into a legal agreement covering appropriate issues. This will include the need to link the two outline applications described above in order to ensure that the conclusions of the assessment of environmental effects can be relied upon.

Manor Farm

Redevelopment

Planning Application 1

Reading BOROUGH COUNCIL

Planning Section
PO Box 17, Civic Centre, Reading RG1 7TD
Telephone 0118 939 0450 Fax 0118 958 9770
between 9am and 5pm Monday to Friday

FOR OFFICE USE ONLY

Application No. .....

Date received .....

Date acknowledged: .....

Copy No. 1/2/3/4/5

APPLICATION FOR PLANNING PERMISSION — PART 1

Please read the accompanying **NOTES**. Answer all questions in **BLACK INK AND BLOCK LETTERS** and send **FIVE** copies of the application to the above address.

1. APPLICANT

Name THAMES WATER

Address READING BRIDGE HOUSE, VASTERN ROAD, READING, BERKS

Postcode RG1 8PR Tel. No. 0118 9593309

2. AGENT (if form is completed by agent)

Name EDAW

Address 1 LINDSEY STREET LONDON

Postcode EC1A 9HP Tel. No. 020 7674 0700

3. ADDRESS OR LOCATION OF APPLICATION SITE

MANOR FARM SEWAGE TREATMENT WORKS, MANOR FARM ROAD, READING

4. AREA OF APPLICATION SITE

Hectares 29 OR Acres: .....

5. PLANS AND DRAWINGS ACCOMPANYING APPLICATION

(Please tick)

- Location plan (1:1250 scale — edged red) ☑
- Site plan (1:500 scale) ☑
- Detailed plans (floor plans, sections, elevations, please supply illustrative material) ☐

6. BRIEF DESCRIPTION OF PROPOSED DEVELOPMENT

RESIDENTIAL DEVELOPMENT OF 1,000 UNITS / COMMUNITY CENTRE / LOCAL SHOPPING PROVISION / OPEN SPACE / CHILDREN'S PLAY AREA / ROADS / LANDSCAPING.

7. TYPE OF PERMISSION REQUIRED

(Please tick ONE box only)

A	Outline (building works only)	☑ (Answer Question 8)
B	Change of use only	☐
C	Change of use with building or other work	☐
D	Building, engineering or other operations	☐
E	Reserved matters	☐ (Answer Question 9)
F	Temporary (specify condition if for a 'renewal')	☐ .....
G	Non-compliance with a condition (specify reference no.)	☐ .....

8. OUTLINE APPLICATIONS

The following matters are reserved for future consideration (please tick).

Siting ☑ Design ☑ External appearance ☑ Access ☐ Landscaping ☑

9. RESERVED MATTERS APPLICATIONS

Please state

A Reference no. and date of outline permission .....

B Which reserved matters are applied for .....

.....

10. PRESENT OR LAST USE OF ALL LAND/BUILDINGS

SEWAGE TREATMENT WORKS / OPEN LAND

11. TREES

A Are there any existing trees on site? *~~YES~~/NO

B Are any trees affected by the proposals? If YES, please indicate on plans. *~~YES~~/NO

12. BUILDING MATERIALS ETC. Please state type and colour of materials for:

A External walls PLEASE SEE ACCOMPANYING ENVIRONMENTAL

B Roofs STATEMENT AND PLANNING SUPPORTING STATEMENT

C Walls, fences etc. .....

13. DRAINAGE Please state the method of disposal for:

A Surface/storm water PLEASE SEE ACCOMPANYING ENVIRONMENTAL

B Foul sewage STATEMENT AND PLANNING SUPPORTING STATEMENT

14. ACCESS TO ROADS (VEHICULAR AND PEDESTRIAN) (Please tick **ONE** box)

A *There will be* **NO** *new access to a public road and* **NO** alteration to any existing access to a public road. ☐

B There will be a new or altered access to a public road (specify) NEW ACCESS ☑
TO A33 RELIEF ROAD AND COMMERCIAL ROAD.
UPGRADE OF EXISTING MANOR FARM ACCESS.

15. ACCESS FOR THE DISABLED

Will the proposed development be fully accessible to disabled persons including wheelchair access? *YES/~~NO~~

If NO, where is access provision deficient? .....

16. PROPOSED DEVELOPMENT — RESIDENTIAL The development involves (specify)

Dwelling Type	No. of New Units	No. of Bed Spaces	No. of Habitable Rooms	No. of Units Lost
Houses	500			
Bungalows				
Flats/Maisonettes	500			
Bedsits				
Other				

Please complete PART 2 of this form if the proposed development is non-residential.

17. MINERALS

Is the proposal for the extraction of minerals? *~~YES~~/NO

If YES, please complete PART 3 of the application form.

18. DECLARATION — ACCOMPANYING DOCUMENTS ETC. (Tick **ALL** boxes)

I attach the plans specified in question 5 above ☑

AND I attach a completed Ownership Certificate (Article 7) ☑

AND I enclose a ~~fee~~ of £4,750 by ~~cash~~/cheque/~~P.O. No.~~ ..... ☑

Signed ..... (~~Applicant~~/Agent) Date 21/6/00.

**Please delete as applicable*

Manor Farm

Redevelopment

Planning Application 2

Reading BOROUGH COUNCIL

Planning Section
PO Box 17, Civic Centre, Reading RG1 7TD
Telephone 0118 939 0450 Fax 0118 958 9770
between 9am and 5pm Monday to Friday

FOR OFFICE USE ONLY

Application No. .....

Date received .....

Date acknowledged: .....

Copy No. 1/2/3/4/5

APPLICATION FOR PLANNING PERMISSION — PART 1

Please read the accompanying **NOTES**. Answer all questions in **BLACK INK AND BLOCK LETTERS** and send **FIVE** copies of the application to the above address.

1. APPLICANT

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Postcode RG1 8PR Tel. No. 0118 959 3309

2. AGENT (if form is completed by agent)

Name EDAW

Address 1 LINDSEY STREET LONDON

Postcode EC1A 9HP Tel. No. 020 7674 0700

3. ADDRESS OR LOCATION OF APPLICATION SITE

MANOR FARM SEWAGE TREATMENT WORKS, MANOR FARM ROAD, READING.

4. AREA OF APPLICATION SITE

Hectares 6 OR Acres: .....

5. PLANS AND DRAWINGS ACCOMPANYING APPLICATION (Please tick)

Location plan (1:1250 scale — edged red)	☑
Site plan (1:500 scale)	☑
Detailed plans (floor plans, sections, elevations, please supply illustrative material)	☐

6. BRIEF DESCRIPTION OF PROPOSED DEVELOPMENT

RESIDENTIAL DEVELOPMENT OF 307 UNITS, ROADS AND LANDSCAPING

7. TYPE OF PERMISSION REQUIRED (Please tick ONE box only)

A	Outline (building works only)	A ✓	(Answer Question 8)
B	Change of use only	B	
C	Change of use with building or other work	C	
D	Building, engineering or other operations	D	
E	Reserved matters	E	(Answer Question 9)
F	Temporary (specify condition if for a 'renewal')	F	.....
G	Non-compliance with a condition (specify reference no.)	G	.....

8. OUTLINE APPLICATIONS

The following matters are reserved for future consideration (please tick).

Siting ☐ Design ☑ External appearance ☑ Access ☐ Landscaping ☑

9. RESERVED MATTERS APPLICATIONS Please state

A Reference no. and date of outline permission .....

B Which reserved matters are applied for .....

.....

10. PRESENT OR LAST USE OF ALL LAND/BUILDINGS

SEWAGE TREATMENT WORKS

11. TREES

A Are there any existing trees on site? *~~YES~~/NO

B Are any trees affected by the proposals? If YES, please indicate on plans. *~~YES~~/NO

12. BUILDING MATERIALS ETC. Please state type and colour of materials for:

A External walls PLEASE SEE ACCOMPANYING ENVIRONMENTAL

B Roofs STATEMENT AND PLANNING SUPPORTING STATEMENT

C Walls, fences etc. .....

13. DRAINAGE Please state the method of disposal for:

A Surface/storm water PLEASE SEE ACCOMPANYING ENVIRONMENTAL

B Foul sewage STATEMENT AND PLANNING SUPPORTING STATEMENT

14. ACCESS TO ROADS (VEHICULAR AND PEDESTRIAN) (Please tick **ONE** box)

A There will be **NO** new access to a public road and **NO** alteration to any existing access to a public road. ☐

B There will be a new or altered access to a public road (specify) ..... ☑

NEW ACCESS TO A33 RELIEF ROAD

15. ACCESS FOR THE DISABLED

Will the proposed development be fully accessible to disabled persons including wheelchair access? *YES/~~NO~~

If NO, where is access provision deficient? .....

16. PROPOSED DEVELOPMENT — RESIDENTIAL The development involves (specify)

Dwelling Type	No. of New Units	No. of Bed Spaces	No. of Habitable Rooms	No. of Units Lost
Houses				
Bungalows				
Flats/Maisonettes	307			
Bedsits				
Other				

Please complete PART 2 of this form if the proposed development is non-residential.

17. MINERALS

Is the proposal for the extraction of minerals? *~~YES~~/NO

If YES, please complete PART 3 of the application form.

18. DECLARATION — ACCOMPANYING DOCUMENTS ETC. (Tick **ALL** boxes)

I attach the plans specified in question 5 above ☑

AND I attach a completed Ownership Certificate (Article 7) ☑

AND I enclose a fee of £4,750 by ~~cash~~/cheque/~~P.O.~~No. ..... ☑

Signed C Lakey (~~Applicant~~/Agent) Date 21/6/10

**Please delete as applicable*

foreword

The development of a new, modern sewage treatment works on land to the west of the A33 relief road brings with it an almost unique opportunity to secure the redevelopment of a major brownfield urban site. The redevelopment of the Manor Farm site for housing carries with it significant benefits both for Reading and for the local community who live and work in the area.

The benefit of such a change to the area should not be underestimated. It has the full support of planning policies at all levels of Government. Increasing emphasis is now being placed upon concentrating new development on previously developed sites both to protect our countryside for future generations and to enhance the towns and cities in which we live and work. Best use must therefore be made of available land.

This statement explains in more detail Thames Water's proposals for the site and how they will be implemented to ensure that the benefits to the community are delivered. Firstly, however, it is opportune to describe what the benefits are that we are seeking to achieve.

BENEFITS OF REDEVELOPMENT

- Real improvements to the environment of the area through the removal of a major odour source and the creation of an attractive housing area interspersed with planting and open space areas;
- Better public transport both through direct funding from the development and through having more potential passengers thereby encouraging bus companies to lay on more and different services.
- The creation of attractive footpath and cycle links through the development so opening up the Kennet Valley to the local communities of Church and Whitley
- The formation of a high quality "Southern Gateway" to Reading through the adoption of a high standard of design and layout particularly along the prominent A33 frontage

- Linked to this will be the creation of attractive new green spaces both for the active enjoyment of local people, for the enhancement of nature conservation and wildlife interest and simply to create an attractive landscape framework for residents and passers by alike.
- Lastly, development will contribute towards meeting the need for new housing in Reading in a sustainable way, with workplaces, shops, schools and leisure facilities all close by. Not only does this mean people will not have to rely on cars for daily activities, it also helps in promoting the integration of the new development into the existing community.

1. introduction

This statement has been prepared in support of two outline planning applications for the redevelopment of the Manor Farm sewage treatment works (STW) site at Manor Farm Road, for residential development and associated ancillary uses. The applications include within them the remediation of the site to a standard commensurate with its subsequent residential use.

Both applications are for outline planning permission and hence the detail of the scheme is reserved for subsequent approval. The first seeks permission for the principle of residential development over the whole site. However, because of the need to assess the proposal for its environmental effects and to assist in demonstrating the contribution of the scheme towards meeting relevant development objectives for the area, a more detailed scheme has been prepared for the A33 frontage and forms the basis of a second outline application.

1.1 OVERVIEW OF THE PROJECT

Thames Water are faced with a requirement to improve treated effluent discharge standards and sludge quality from their STWs in order to comply with the implementation of new European and UK standards. The alternatives for achieving this in Reading are an extensive upgrading of the Manor Farm STW or the redevelopment of a new, state of the art works on land to the west of the A33.

To assess the immediate effects and the wider implications of this choice, EDAW was commissioned by both Thames Water and Reading Borough Council in April 1999 to undertake a comparative study. The study sought to assess the strategic land use planning implications for South West Reading associated with the two alternatives.

The resultant report concluded that the relocation of the STW would afford a significantly greater opportunity to:

- Solve the area's odour problems and thereby improve the quality of life for residents within south west Reading;
- upgrade wastewater treatment in Reading to meet the needs and demands of the twenty first century;

- release up to 60 acres of land within the existing urban area to meet Reading's future need for housing;
- improve the appearance and landscape of the area through the return of despoiled land to beneficial use and through high quality development and enhanced landscaping within the A33 corridor; and
- maximise the opportunity for achieving a high quality approach/gateway to Reading.

These two planning applications act upon the conclusions of these studies by seeking permission for a residential development with ancillary uses. In conjunction with this application, a third and parallel planning application has been prepared, seeking full planning permission for the development of a new STW on the Island Road site, to the west of the A33 relief road and Reading stadium. All three of the applications are accompanied by an Environmental Impact Assessment (EIA) and have been prepared in close consultation with both RBC and the Environment Agency (EA).

1.2 STRUCTURE OF THE STATEMENT

The remainder of this statement sets out:

- The opportunities afforded by the site.
- A description of the site and an analysis of existing conditions.
- A description of the land use proposals detailing the form and nature of the proposals.
- Description of the urban design concept, providing an illustrative scheme for the site.
- An outline of the recent planning history and an assessment of the current planning policy framework.
- A summary of the environmental effects of the proposals taken form the Environment Statement.
- Description of how the development will be phased and a description of the form of the planning application.

A list of drawings forming part of this application is included at Appendix 1.

2. objectives and rationale

The main objective of the development is to bring a major area of urban land back into productive use for the benefit of both Reading and the local community who live and work in the area. In so doing the opportunity exists to create a sustainable residential development which accords fully with current objectives to maximise the use of urban land through high quality, high density designs. Central to this approach is the need to ensure that development is well integrated into the surrounding community with close physical and functional links; that it makes best use of sustainable transport modes and does not simply contribute to the proliferation of the private car and that it enhances the urban environment creating a more attractive place in which to live and work. . Through careful planning and design, the Manor Farm site can deliver these objectives.

So how do Thames Water's proposals contribute to these objectives?

- The development will provide a range of dwelling types and tenures and thereby meet a range of needs that exist within Reading. In so doing it will lay the foundations for the development of a balanced residential community;
- It will promote and enhance physical links into the exisitng community both through improvements to Manor Farm road, through new multi-modal transport links to employment and leisure areas west of the A33 and through high quality pedestrian and cycle links through the site;
- It will create major new green spaces serving a variety of needs. The emphasis will vary within different areas from active play to more passive leisure and from promotion of nature conservation and wildlife to the creation of attractive parkland/woodland landscapes;
- It balances on and off-site provision of a range of facilities to foster a greater sense of integration between the new development and the existing residential communities of Church and Whitley. New facilities will be created to attract the existing community into the Manor Farm site. Conversely, where sufficient capacity exists within existing facilities, such as in local schools and health services, their use will be promoted to help forge links with existing local communities; and

- Sustainable transport needs will be met first and foremost through the provision of high quality, safe pedestrian and cycleway links to a range of daily destinations such as workplaces, shops, schools and leisure facilities. Bus services will also be improved giving good access to Reading town centre and to the major employment area of Green Park.

3. site information

3.1 LOCATION

The Manor Farm Site is located in the Lower Kennet Valley, in the south-west of the Borough of Reading. The site is situated immediately to the east of the new A33 relief road and to the west of the Basingstoke Road, both of which connect Reading Town Centre to the M4 at Junction 11. The context of the site is illustrated on Figure 3.1.

3.2 AREA AND BOUNDARIES

The Manor Farm site comprises approximately 28 hectares of land and is bordered by the A33 on its western side and the Basingstoke Road Employment Area to the north, south and east. The Foudry Brook runs along the eastern side of the A33, separating the Manor Farm Site from the main road.

3.3 EXISTING ACCESS

The Manor Farm site is accessed from the east via Manor Farm Road. This forms a junction with the old A33 Basingstoke Road.

3.4 OWNERSHIP

The site is owned by Thames Water, with the exception of a strip of land along the Foudry Brook which is owned by Reading Borough Council. The extent of the respective land ownerships is shown on Figure 3.2

3.5 EXISTING USES

The Manor Farm site is currently occupied by the main Reading STW. Buildings or structures cover the majority of the site and are generally low level although certain structures, predominantly in the east of the site attain heights up to 14 metres. Relative to the A33, the level of the site is higher in the south and reduces in the north towards the River Kennet. The Foudry Brook runs along the western boundary of the site. It has been severely modified in the past and has been subject to severe degradation. Between the A33 and the Foudry Brook runs a steep embankment which has recently been planted with indigenous trees and shrubs. At the base of this embankment runs a new pedestrian and cycle route which connects the Madjeski Stadium and Green Park

developments in the south to the Kennet River Valley in the north and beyond to Reading town centre.

3.6 SURROUNDING LAND USES AND HISTORY

The Basingstoke Road Employment Area contains a large number of traditional industries and storage uses and provides accommodation for a wide range of distribution, industrial and service activities. The employment area also encompasses retail uses comprising the Brunel Retail Park and a Safeway superstore.

To the east of the Basingstoke Road Employment Area lies the Basingstoke Road which, following the completion of the A33 relief road, is to be subject to a number of environmental and accessibility improvements enabling it to become a major public transport corridor linking South Reading to the town centre. Bordering this road to the east is the extensive residential area of Whitley.

Since the construction of the new A33, this area has become a potential major growth corridor which is reflected in the construction of a number of new major developments within this area. To the west of the A33, the Green Park business park development is currently under construction and when completed will comprise 2.25 million square feet of high quality office development. The new Madejski Stadium, opened in August 1998, is located adjacent to Green Park, and provides a 25,000 all-seater Football stadium and conference facilities. It forms a major landmark within the area although its impact has been reduced by the Reading Gateway Retail Park, which has been developed to the west of the A33, partially screening the stadium. A new 140 bed hotel is currently being built as part of the stadium development. The associated car park also houses a Park and Ride site linking this area with the centre of Reading.

To the north of Green Park and directly to the west of the A33 relief road lies the Reading Stadium (greyhound and speedway racing), and the area of Smallmead which is designated in the Berkshire Waste Local Plan as a preferred area for waste management uses. Part of this area is currently being considered for development of the new Island Road STW. Immediately to the north of the Smallmead area, and separated only by Island Road, there is a trail park situated on a former landfill site. To the north of this area lies the Kennet Valley. The Fobney Water Treatment Works lies within this valley.

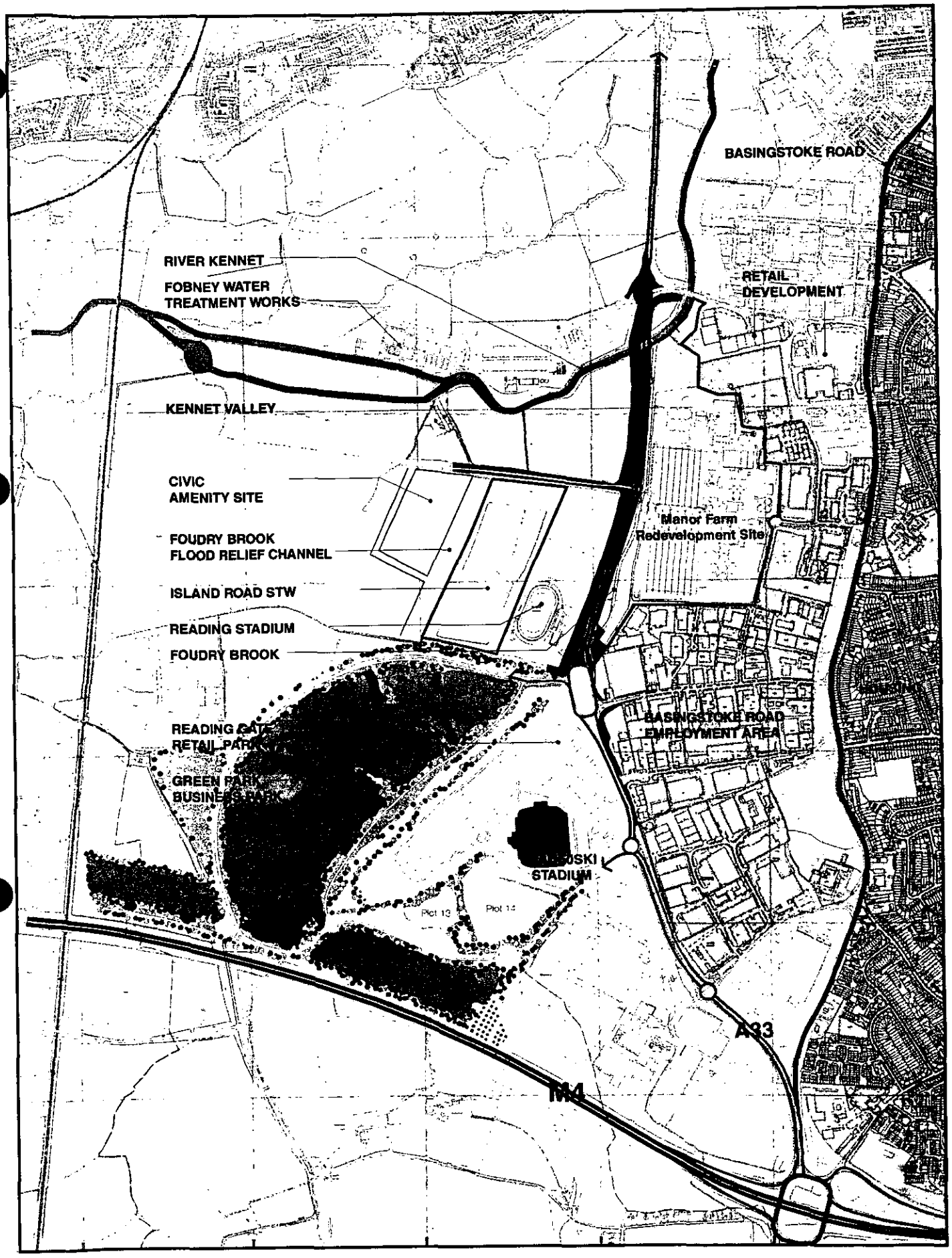
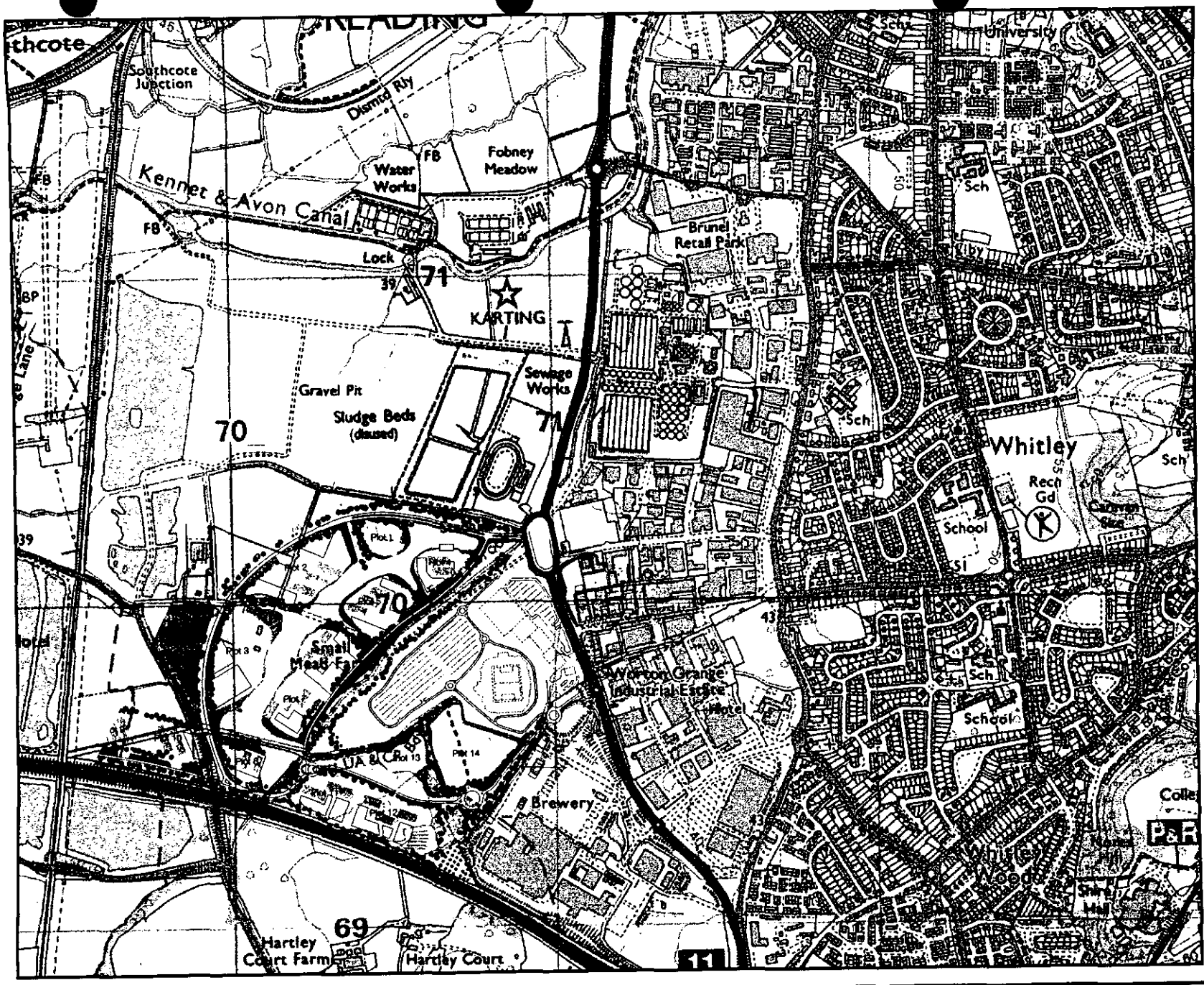


Figure 3.1 Site Context

Reading Southern Gateway - Manor Farm Redevelopment

Scale NTS
Date May, 2000

EDAW



Legend

- Site Boundary
- Thames Water Utilities
- Reading Borough Council

Figure 3.2

Site Boundary
Land Ownership

Reading Southern Gateway - Manor Farm Redevelopment

Scale 1:25000
Date May, 2000

EDAW

4. site analysis and synthesis

4.1 ANALYSIS

The key features of the site and its surroundings considered to be influential in the form of the development can be summarised as follows:

- There is a fall in level across the site from the east to west with the ground level on the A33 frontage being below the level of the Basingstoke Road Employment area by approximately 40m;
- Site access is currently limited to one main access point at Manor Farm Road. Apart from this entrance there are currently no other means of entering the site;
- The site is bounded on three sides by an industrial estate, which consists generally of low-rise industrial buildings ranging in height between four and ten metres. The most dominant is the Gillette building in the north east corner of the site which is located on higher ground and a six storey Berkshire Library Service building on Commercial Road;
- Road noise influences the western edge of the site from the A33 relief road;
- The A33 frontage land is extremely prominent and therefore essential in achieving the 'gateway' effect into Reading;
- The Foudry Brook, which runs along the western boundary of the site, forms an ecological corridor/wildlife link and if it is to be maintained and/or enhanced should support only limited public access.;
- The surrounding levels around the edge of the site vary in height. The western side of the A33 is bordered by a large earth embankment, 3-4 metres high, which is newly planted with trees and shrubs. The north east side of the site is bounded by an embankment of approximately 8 metres in height and the area to the north west is the Wildlife Heritage site which comprises predominantly scrub land. To the south and south east the ground is generally level;
- Views from the site are primarily focused in an east-west direction towards the Kennet Valley;
- Primary views into the site are limited. The principle views are from the A33 relief road; and

- The Fobney Meadows Wildlife Heritage site is located to the north of the site and comprises an area of importance for its nature conservation potential.

4.2 SYNTHESIS

The site synthesis has considered the ways in which the site features suggest appropriate urban forms for the site. The key conclusions that underpin the proposals can be summarised as follows;

- The building heights for development of the south and west sides of the site should be generally compatible with existing building heights;
- Development along the eastern boundary should be of an appropriate height and massing having regard to the scale of the surrounding buildings (e.g the Gillette building) and provide an appropriate backdrop to the residential scheme. Higher buildings will ensure views over towards the Kennet Valley are secured;
- Development along the A33 relief road should be of high urban design, architectural and landscape quality, varied in form and layout and at least four storeys in height, thereby creating a strong urban edge and enhancing the southern approach into Reading. This needs to be balanced against the benefits of providing permeability along the frontage to ensure that development does not isolate itself from its surrounds;
- Development along the A33 relief road and Commercial Road should, therefore, be visually/physically permeable to views/movement into and out of the site;
- Pedestrian movement through the site should relate to desire lines and link with routes to facilities in the surrounding area, for example to Green Park and the Reading Retail Park, the Kennet Valley recreational corridor, Manor Farm Road, Safeway and facilities in Whitley;
- Access points into the site should form appropriate gateways in order to achieve a sense of arrival whilst contributing towards the achievement of sustainable transport objectives;
- The quality of the public realm can be greatly improved by seeking to contain all parking, where possible. In particular, the use of the level changes could be used to screen parking areas; and
- The northern WHS should be enhanced and pedestrian access discouraged in order to enable wildlife and ecology to flourish. This will link well with the wildlife corridor alongside the Foudry Brook and the main body of the Kennet Meadows to the north and west.

5. land use proposals

5.1 DEVELOPMENT CONCEPT

The proposed development will enable the redevelopment of a 28 hectare (ha) brownfield site located in a prominent position along the eastern side of the A33 relief road for high quality residential use. Development will exploit the opportunity afforded by its prominent location adjacent to the A33 relief road and provide a new balanced community through provision of a range of dwelling types, sizes and tenures. Residential development will be complemented by small scale ancillary uses that add to its attractiveness and provide a public/community focus for the development.

Ensuring that the development is of a sufficient scale to provide a sense of community which could support a range of community, working and shopping facilities is an important focus. This cannot and will not be achieved, however, at the expense of integration.

Public routes will be provided to encourage movement both to, and within the site. This will contribute towards making the Kennet Valley area to the west i more accessible to residents of Whitley. It will also contribute towards ensuring that the scheme is fully integrated into the surrounding area and prevent its development as an isolated community. Provision of a high quality bus service will also discourage reliance on the private car.

An ecology area is proposed along the east of the Foudry Brook and, together with the enhancement of the Wildlife Heritage site, will encourage the ecology of the area to flourish and provide a unique resource for residents and visitors alike.

The overall impression, therefore, will be of a high quality, high density residential scheme with appropriate ancillary uses. Open spaces will be distributed throughout the scheme with public access structured to create high quality pedestrian environment which is varied, safe and interesting.

5.2 DEVELOPMENT COMPONENTS

It is proposed to develop 1000 residential dwellings, which will comprise a broad mix of units catering for a range of demands. This mix will address the twin objectives of meeting local housing

need whilst creating a balanced residential community. Table 1 identifies the likely range of unit types to be provided. This will be refined through detailed design and subject to market demand at the time of construction.

Table 2.1 - Proposed Mix of Dwelling Type

Dwelling Type	Number of Dwellings	Percentage of Dwellings (%)
1 bed flat	110	11
2 bed flat	390	39
		50
2 bed terraced	140	14
3 bed terraced	140	14
4 bed terraced	220	22
		50
Total	**1000**	

The net site area extends to approximately 21 hectares, excluding ecological areas and landscape buffer zones, giving rise to net site density of approximately 50 dwellings per hectare (DPH). The figure has been derived using calculations in accordance with PPG3 and accords with recommendations regarding appropriate densities for development.

The height of the development will generally be three storeys, reflecting the scale of the surrounding development. The development rises to four storeys along the A33 frontage in order to provide a strong urban edge. Similar heights are attained to the north east in order to provide an element of balance in relation to surrounding industrial development.

Provision will be made in the scheme for an appropriate element of affordable housing. This provision will make an important contribution to the housing need of lower income households, key workers, students and disadvantaged groups and will help to ensure that a balance community evolves over time.

5.3 ANCILLARY USES

The development will also incorporate a number of community facilities, including a flexible community space, meeting rooms and a crèche/nursery facility. These facilities will be encompassed within a single building, which will be located to the east of the site by the Manor Farm entrance. This location will maximise accessibility to both new and existing communities and will increase the integration of the site to the surrounding area.

5.4 OPEN SPACE AND PUBLIC REALM AREAS

Integration of the built form with open space will be a key factor in ensuring a quality living environment within the site. The scheme proposes to provide approximately 9 hectares of open

space of which 2.5 hectares will comprise public open space for passive and active recreation (i.e ball sports, walking, children's play areas etc) and communal open spaces associated with buildings, and 6.5 hectares for nature conservation and ecological areas set aside for habitats and wildlife to flourish. These areas will be easily accessible to all dwellings within the development.

The public realm is proposed to be attractive and appropriate to this location. Surfaces within the scheme will be predominantly hard and paved with selected areas of tree planting to highlight significant areas such as the entrance at Manor Farm Road and from the A33 relief road.

5.5 LANDSCAPE AND ECOLOGY

The enhancement of the A33 relief road boundary will ensure that this route is reinforced as the 'Gateway to Reading'. Landscape treatment will be integrated into the building massing and design in order to provide a visually exciting development. The ecology-based and linear landscape treatment along the western boundary of the site will act as a visual continuation of the Waterloo Fields open space to the north of the site.

The eastern and southern site boundaries will be enhanced with landscape treatment in order to improve the setting of the development in relation to the wider context of the site. A public Realm strategy for Manor Farm Road will be developed and will include footpath and cycle routes softened with planting to ensure safe and attractive pedestrian and cycle access to the site.

The Fobney Meadows Wildlife Heritage site to the north of the site, will be significantly enhanced through the creation of a new aquatic habitats that relate to the Kennet and Foudry Brook corridors. Public access will be discouraged in order to allow the wildlife and ecology of the area to flourish.

The Foudry Brook will be enhanced with the creation of a series of shallow berms adjacent to the existing channel along with a 15 metre wide zone to the east of the Brook to provide habitats and refuge for wildlife due to limited public access.

5.6 PEDESTRIAN AND CYCLE MOVEMENT

The development will incorporate high quality pedestrian and cycleways, which will connect the development to facilities within the surrounding area. The proposals include:

- A segregated pedestrian and cycleway route along the main access road to the site that will link into the existing cycleway along the A33 relief;

- A segregated pedestrian and cycleway route along Manor Farm Road, which will create a link to the Basingstoke Road and hence to the facilities in Whitley;
- The provision of a new footbridge over the Foudry Brook to the north west of the site enabling links to the Kennet Valley and to the town centre; and
- Toucan crossings on the Basingstoke Road immediately to the north and the south of Manor Farm Road and as part of the A33 relief road access junction to provide safe links to the surrounding area.

On-site proposals will also include the provision of home zones, comprising shared surfaces where pedestrians and cycles have priority and cars travel at very low speeds.

5.7 PUBLIC TRANSPORT

High frequency public transport services and infrastructure provision, stopping at the centre of the site and connecting with destinations including Green Park, the town centre and integrating with rail services, will be provided. A bus priority lane will be provided at both the A33 relief road and the Manor Farm Road entrances. Two high quality bus shelters are also proposed with either stop being within 400m of all properties.

5.8 VEHICULAR ACCESS AND CIRCULATION

Access into the development via Manor Farm Road will be upgraded and improved with works being carried out along its entire length, including the junction with Basingstoke Road. Two new access points will also be introduced. These will include an all moves junction from the A33 relief road enabling both public transport and vehicles access into the western part of the site and a new junction onto Commercial Road.

There will be no direct access through the site for cars. Instead, a wide 'loop' road is proposed, which will be designed to maintain vehicle speeds of 20mph or less and discourage through traffic with the use of traffic calming measures.

6. A33 frontage

The urban design proposal for the A33 relief road frontage illustrates the form that development within this important area of the site will take. It serves to demonstrate that a high quality and attractive scheme can be prepared and that the density, scale and massing of the development is appropriate for the site and responds to and utilises the site's characteristics and qualities to best advantage.

6.1 AN URBAN CONCEPT

The development of the frontage land presents the opportunity to significantly enhance the local environment within the A33 relief road corridor by improving the overall quality of the visual scene. The development will seek to maximise this opportunity by creating a built form along this frontage which is original, innovative and adaptable, incorporating landmark buildings and which forms an 'urban edge' to the gateway to the town.

The proposed frontage contains 17 blocks each of which is generally 4 storeys in height. At the northern and southern end are larger buildings, which form landmark features and define the entrance to the town. Higher buildings are also used to frame the entrance to the site itself.

6.2 QUALITY AND VITALITY

The Manor Farm frontage offers a unique opportunity to create a high quality metropolitan scale residential development on a prominent area of land. The scheme envisages a density and scale of development capable of generating urban vitality. The density of development is comparable with contemporary residential developments advocated in government policy.

6.3 VIEWS AND IMPACTS

The prominent views of the site are across to the Kennet Valley. To ensure that these views are protected and the scheme is fully integrated with the surrounding area, the development creates a visual and physically permeable frontage which allows views into and out of the site.

The prominence of the site has resulted in the need to create a visible and memorable gateway. The scheme, therefore, aims to create a rhythm along the frontage utilising both buildings and landscape. The buildings will be set back so that the development is more visually interesting..

6.4 THE FOUDRY BROOK

A 15 metre width of land adjacent to the Foudry Brook is incorporated within the scheme in order to enable wildlife to flourish within what will be an attractive and valuable wildlife corridor.

7. planning policy context

This section sets the proposal for the redevelopment of Manor Farm STW within the context of current national, regional and local planning policies for housing. It describes how the Manor Farm redevelopment proposal will comply fully with all relevant planning policies pertaining to the site and its environs.

Given that the various tiers of planning policy share many common principles of relevance to the development of sites for housing, this section takes a thematic approach to the consideration of policies. This approach has been taken to avoid the repetition of similar planning issues, which emerge under each relevant national, regional and local policy. Each theme is considered separately within the context of all relevant planning policies for housing.

The key policy documents referred to in the following text are:

- PPG1: Planning Policy Guidance Note 1, General Policy and Principles;
- PPG3: Planning Policy Guidance Note 3, Housing;
- Draft Regional Planning Guidance for the South East (RPG9): May 2000;
- Towards an Urban Renaissance, Urban Taskforce;
- The Berkshire Structure Plan – adopted November 1995;
- The Reading Local Plan – adopted October 1998;
- Revised Planning Brief for South West Reading – May 2000.

7.1 MEETING IDENTIFIED HOUSING DEMAND AND NEED

Owing to the need for the completion and commissioning of the Island Road STW to take place before the decommissioning and demolition of the Manor Farm commences, it is unlikely that housing development will commence before 2005. The site will therefore make a limited contribution towards meeting housing provision figures for the period of the existing development plan to 2006.

Provision therefore needs to be considered more generally within the context of the emerging Regional Guidance. This will guide both the quantitative and locational requirements for future housing development.

Reading's contribution to meeting regional housing needs in the period from 2006 onwards will depend in most part upon the availability of opportunities for redevelopment and hence will form a significant component in realising brownfield development objectives, which are considered below. Irrespective of the overall figure for future housing provision within Berkshire, the contribution from Reading should be maximised to further urban renaissance and regeneration objectives.

7.2 DEVELOPMENT OF PREVIOUSLY USED LAND

National planning policies place considerable emphasis on the need for the majority of housing development to take place on previously used land within urban areas. This reflects the Government's objectives to promote more sustainable patterns of development, make more efficient use of land, minimise the development of greenfield sites, and encourage urban renaissance and regeneration. Explicitly, PPG3 (Housing) states that by 2008, 60% of additional housing should be provided on previously developed land and through the redevelopment of previously used buildings. Previously developed land is otherwise known as 'brownfield' or 'recycled / re-used' land. This principle is clearly reflected in other relevant national, regional and local policy documents and statements listed above, including a clear restatement within the draft replacement of Regional Planning Guidance for South East England (RPG9).

As a brownfield site within the Reading urban area, the Manor Farm redevelopment proposal constitutes a scheme which embraces the principle of maximising the use of previously used land and hence will make a substantial contribution to meeting the Government's 60% objective within Reading Borough.

The Government also strongly advocates the adoption of a sequential approach to the identification of development sites for a range of developments. This approach was recently endorsed in PPG 3 (Housing) and requires that a systematic method be used to assess the development potential of sites in deciding which sites are most suitable for housing. Moreover, the method should be used to decide the sequence in which development should take place. PPG3 clearly states that the sequence should start with the re-use of previously developed land and buildings within urban areas.

The Reading Local Plan acknowledges that the availability of land to meet further housing growth is limited. The alternative for meeting Reading's future housing needs is the development of greenfield sites beyond its boundaries. Adoption of the sequential approach, therefore, increases the importance of fully utilising options that do become available within the urban area. In assessing planning applications for housing development, the Government requires that local authorities have regard to the sequential approach and other policies outlined in PPG3 as material considerations which may supersede the policies in their development plans.

7.3 MAKING THE BEST USE OF LAND

Current and emerging guidance (including PPG3 and draft RPG9) require that new housing development make efficient use of land. PPG 3 therefore encourages development at net densities of between 30 to 50 dwellings per hectare. In keep with this new government guidance, the average housing density on the Manor Farm site will be 47 dwellings per hectares. This approach also fully accords with the recommendations of the Urban Taskforce as set out in its report, 'Towards an Urban Renaissance', July 1999.

7.4 CREATING MIXED COMMUNITIES

Both PPG3 and draft replacement RPG9 emphasise the need for developers to provide wider housing opportunity and choice and a better mix in the size, type and location of housing than is currently available, with the aim of creating mixed and inclusive communities. The proposal for Manor Farm will assist in creating a more mixed and inclusive community in South Reading. Firstly, the development will provide for a significant proportion of 'affordable' units to meet local housing needs, including needs emanating from key workers on relatively low incomes. Secondly, a broad mix of unit types will be provided to account for projected changes in demography and lifestyle. In particular, the scheme mix reflects the growing demand and need for smaller and single person households.

7.5 SUSTAINABLE RESIDENTIAL DEVELOPMENT

In addition to the concentration of development on previously used land, making efficient use of land and creating mixed communities, current policy aims to encourage sustainable residential development by:

- linking development with sustainable forms of transport;
- promoting mixed-use;
- greening the residential environment; and
- designing for quality.

The principles listed above are embodied in the Manor Farm proposals through:

- the incorporation of measures designed to reduce the need to travel through incorporation of flexible accommodation to promote home working; provision of on-site business support facilities; provision of supermarket drop off areas and incorporation of local shops designed to meet daily requirements;
- the promotion of travel by means other than private car. Such measures will include high quality walking, cycling and public transport links, both on and off site; high quality cycle storage facilities throughout the development, promotion of opportunities for car share or local car leasing schemes;
- provision of a range of open space including recreation space, wildlife corridor, landscape enhanced areas and linear park. An important feature of the scheme includes the development of physical links with the surrounding environment and the enhancement of existing nature conservation and ecological areas;
- adoption of high quality and appropriate design principles aimed at meeting the twin objectives of making best use of previously developed land and improving the attractiveness of residential areas. Furthermore, design will be guided by the new urban design framework introduced by the draft planning brief for south west Reading;
- consideration of specific design initiatives including:
  - The promoting of recycling: through the inclusion of recycling facilities within the development and through the use of building materials from renewable sources.
  - Water conservation: by encouraging lower consumption and investigating the potential for re-circulation.
  - Promotion of energy efficiency: through the incorporation of high standards of insulation, high efficiency gas condensing boilers and good solar access. Investigation would also be made of the potential to incorporate solar heating.

7.6 PLANNING BRIEF FOR SOUTH WEST READING

The development brief for South West Reading forms non-statutory planning guidance in support of the development plan.

It emphasises the importance of the A33 relief road as a new Southern Approach into Reading, and introduces an Urban Design Framework that focuses on high standards of built design and landscape structure. In so doing, it builds on the existing policy framework set out in the relevant policy plan.

Of primary importance is the brief's proposal for the redevelopment of Manor Farm site. The brief advocates that the site is most suitable for medium to high-density residential development. It is also requires that development on the site be well linked to other areas and that that design should be original, innovative and adaptable. The principles and objectives of the brief have provided the basis upon which the proposal for Manor Farm has been designed.

7.7 POLICY CONSIDERATION

The site represents a major brownfield site within the settlement boundary of Reading and hence there exists a general presumption in favour of development.

It is allocated within the development brief for south west Reading for residential use and hence the proposals are wholly consistent with RBC's overall aspirations for the site.

The development contributes positively towards meeting sustainability objectives and to improving the environment and amenity of south west Reading and to this extent it satisfies all relevant development and environmental policies.

The development of this site also contributes significantly to the housing need within the Borough and will contribute meeting the need for affordable dwellings within the town.

8. environmental impacts

8.1 EIA PROCESS

The ES which accompanies this report considers all the direct and indirect environmental impacts and where required, proposes measures to mitigate against adverse effects. The main conclusions of the assessment are considered under four headings:

8.2 LAND AND RESOURCES

Site investigations have found the Manor Farm site to be only lightly contaminated. There will not be a need to transport large quantities of contaminated material off site for disposal. Some surplus concrete and filter material will require removal to form appropriate ground levels. The estimated quantity of 115,000 tonnes equates with a deficit identified in the southern area of the Island Road site. Once the new A33 access is constructed therefore, the material will be transported directly to the new site to assist with ground remodelling.

The development will result in higher waste volumes being created within Reading, but the opportunity exists to incorporate recycling facilities within the development and hence to contribute towards improving current recycling rates within the Borough.

8.3 WATER AND ECOLOGY

The development will have no adverse effects on the water environment. The management of surface water drainage will be integrated with ecological enhancement through the creation of new aquatic habitats in the northern area of the site, adjacent to the River Kennet.

These in turn will be linked to an enhanced ecological corridor running adjacent to the Foudry Brook, to the west of the site. Ecological and landscape objectives will be closely co-ordinated within this area to ensure that an attractive and valuable frontage to the development is created.

8.4 POLLUTION

The most important conclusion that derives from the assessment of environmental effects is the significant improvement in the odour environment that will result from the relocation of the Manor Farm STW and the redevelopment of the site for residential use. This will bring represent a major benefit to residents throughout the areas of Whitley and Church.

The new Island Road works is also unlikely to have any adverse effect upon the new residential development due to the high standard of odour control measures that it incorporates.

The A33 relief road corridor is identified as the main noise source in the area and does require the design of the development to incorporate measures specifically to address road noise and ensure that the amenity of future residents is not compromised. A range of potential suitable measures exists to achieve this, the precise combination of which will be determined at the detailed design stage. A minimum set back of 60 metres from the A33 relief road is, however, built into the scheme at this stage.

Mitigating the potential effects of traffic generated by the development relies upon the adoption of a range of measures both to reduce the need to travel and to promote travel by means other than the private car. Such measures are included as a comprehensive package within the development proposals and are outlined earlier in this statement.

8.5 HUMAN ACTIVITIES

The development will have significant beneficial effects both in terms of improvements to the visual quality of the A33 relief road corridor and the effects on land use and community facilities. In particular it will result directly in improved links being created between the residential areas of Whitley and Church and the open leisure and recreation areas of the Kennet Valley.

Existing community infrastructure within south west Reading has been shown through the assessment to be adequate to accommodate a development of this scale without detriment to current standards.

8.6 CONCLUSIONS

The development will have a very positive effect on the area, contributing towards environmental enhancement, open space provision, improved connectivity throughout the area, enhanced public transport, improvements to wildlife interests and meeting housing needs in a sustainable manner.

9. implementation

9.1 REMEDIATION

The Manor Farm site will be remediated to a standard commensurate with its proposed residential use prior to the commencement of construction. It is scheduled to commence in 2004 subject to satisfactory commissioning of the Island Road STW. The site will be ready for development in approximately 2005.

9.2 DEVELOPMENT PHASING

The site will be developed over a period of ten years. The *preliminary phasing programme* sets out five equal phases of development occurring as follows:

Phase 1

The central east- west axis through the development will be constructed. This will include:

- construction of the access on to the A33 relief road. This will reduce the impact of construction traffic on the Basingstoke Road area and enable public transport linkages through the site at an early stage of development;
- provision of the public transport link coupled with improvements to the Manor Farm entrance.
- 200 dwellings constructed along the central axis.

Phase 2

The southern section of the loop road will be completed to enable access via Commercial road and to prevent 'through' traffic between Basingstoke Road and the A33 relief road. Approximately 200 units will be built in this phase with the open space provision made in the south of the area.

Phase 3

This will involve the development of a further 200 dwellings in order to complete the construction of the southern section of the site and the provision of the community centre at the Manor Farm road entrance to the site thereby providing amenities for the residents of the scheme.

Phase 4

The northern section of the loop road will be completed to enable the construction of dwellings within the northern half of the site. Approximately 200 dwellings will be completed along the A33 relief road frontage and the north of the site.

Phase 5

The scheme will be completed with the remaining 200 dwellings and open space provision being completed.

9.3 MANAGEMENT AND MAINTENANCE

An effective mechanism will be put in place to ensure the management and maintenance of the public and common areas of the site. The mechanism could include either a residents trust, management company funded by charges made on residents and commercial operators or a commuted sum to the local authority on the basis of an agreement to adopt and maintain all common areas

10. the planning application

10.1 DESCRIPTION OF DEVELOPMENT

Outline planning permission is sought for the following:

- residential development of 1000 units;
- a community centre;
- local shopping provision;
- open space;
- children's play area;
- roads; and
- landscaping

Outline planning permission is also sought for development along the A33 frontage comprising:

- residential development of 307 units;
- roads; and
- landscaping

This application site for the latter development is wholly included within the site of the former. The rationale for the two applications is to allow greater detail to be supplied for approval in respect of the important frontage area.

10.2 RESERVED MATTERS

Details of the access onto the A33 relief road, Manor Farm Road and Commercial Road are included for approval. Siting, design, external appearance and landscaping are reserved for subsequent approval.

The application for development on the A33 relief road frontage will include details of siting and access for approval. External appearance, design and landscaping will be reserved for subsequent approval.

10.3 LEGAL AGREEMENT

The applicants will enter into a legal agreement covering appropriate issues. This will include the need to link the two outline applications described above in order to ensure that the conclusions of the assessment of environmental effects can be relied upon.

appendix 1

Drawing Name	Drawing Number
Manor Farm Redevelopment – Planning Application/Site Strategy and Zoning Plan	8485/A/100
Manor Farm Redevelopment – Outline Application Site Plan	8485/A/101
Manor Farm Redevelopment – A33 Frontage Application	8485/B/102
Manor Farm Redevelopment – A33 Frontage Application – Outline Application Site Plan	8485/B/103