



**A Case for the Countryside**

**Cross Curricular**

**A Hole lot of Fuss - Draft Mineral Planning Application from Tarmac**



DRAFT

MINERAL PLANNING APPLICATION

EASTROP FARM,

HIGHWORTH

FROM TARMAC QUARRY PRODUCTS LTD.

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## 1.0 INTRODUCTION

This Planning Application is submitted by Tarmac Quarry Products Limited and requests permission to extract sand and gravel from 50 hectares of land known as Eastrop Farm, Highworth. The Application includes proposals to provide a Processing Plant and associated facilities on a 2 hectare site in the north eastern corner of the Application site. It is further proposed to construct a new access on to the public highway the B4000 (Shrivenham Road). The Application details the methods and programme of extraction and incorporates proposals to progressively restore the land to agriculture.

The full Application site extends to 50 hectares which includes the operational areas together with areas for screening and other features retained for environmental purposes.

### 1.1 Applicant Company

Tarmac Quarry Products have an interest in the land indicated as Extraction Site on the attached Location Plan (see Map 2 in the Student Maps and Aerial Photography document). Tarmac Quarry Products Limited is part of Tarmac Heavy Building Materials (UK) Limited which in turn is a subsidiary of Tarmac PLC, the largest building materials and construction group in the UK. It is widely recognised as one of the leading companies in the extraction, processing and supply of aggregates and asphalt within the UK to meet the demand of the building and construction industry.

The existence of sand and gravel at Eastrop Farm is well documented and gave rise to the land immediately to the north of the B4000 being identified in the Wiltshire Minerals Local Plan as a preferred area. In 1997 an extensive geological survey was carried out to determine the full extent of the commercially viable sand and gravel within the Eastrop Farm deposit. Following discussions with the Mineral Planning Department of Wiltshire County Council it was decided that the development proposed in this Application would form a self contained phase of mineral extraction.

The development proposed in the Application provides in the order of 2.6m tonnes of saleable sand and gravel which it is considered will be extracted over a period of 10 years. The location of the plant site has been chosen as being in the least environmentally sensitive area available.

## 1.2 Procedures

During preparation of this Planning Application, the following statutory authorities were consulted:

- a) Wiltshire County Council - various Departments viz: Mineral Planning, Highways, Landscape and Archaeology.
- b) Thamesdown Borough Council - Environmental Health Officer.
- c) DEFRA regarding land quality and restoration.
- d) Environment Agency concerning water supply to service the processing plant.
- e) English Nature and Wiltshire Wildlife Trust - concerning the ecological status of the site.

In addition the Application area has been evaluated by various consultants who have reported back on the following aspects:

1. Geology and geotechnics.
2. Landscape impact, screening and restoration
3. Archaeology.
4. Noise.
5. Ecology.
6. Market analysis.

Consultants prepared various reports which are appended to this statement and summarised in Section 4 below.

## 2.0 THE APPLICATION SITE

The Application site is located immediately to the south east of town and to the north of the B4000. This is shown on the Location Plan (see Map 1 in the Student Maps and Aerial Photography document - Position of Eastrop Farm). This shows the site's position in relation to Highworth town and other local centres of population and the road network. The proposed land uses within the site are shown on Map 3 in the Student Maps and Aerial Photography document which outlines the zoning of operational areas, plant area and screen bank areas. The whole of the mineral extraction area is part of a larger farming unit and the Application area incorporates a complex of farm buildings in the centre of the site, see Map 2 in the Student Maps and Aerial Photography document. The subject land currently has 24 hectares which is continuously put to winter wheat, 14 hectares to winter barley and 12 hectares to set-aside. The farm is worked by the owners and is not subject to any agricultural tenancy agreements.

There are no listed buildings within the extraction area. The farm building complex is all of modern construction.

## 3.0 PLANNING POLICIES AND STATUTORY DESIGNATIONS

County Planning policies are framed to direct development and safeguard environmental standards. Of these a number are pertinent to mineral development at the Eastrop Farm site.

The Company's proposals have been designed to comply with the principles identified in such policies, including numerous mitigating measures to overcome any identified environmental effects.

Examination of the currently available published data suggests that the Application site does not fall within any statutorily designated areas as listed below:

1. National Nature Reserves.
2. Sites of Special Scientific Interest.
3. National Parks.
4. Areas of Outstanding Natural Beauty.
5. Regional Country Parks.
6. National Forest Parks.
7. Local Nature Reserves.

Nor is it affected by any of the following:

1. Tree preservation orders.
2. Water protection zones.
3. Nitrate Sensitive Areas.
4. Conservation areas.
5. Scheduled Ancient Monuments.
6. Areas of Archaeological importance.

However, the site falls within the Special Landscape Area allocated within the Thamesdown Local Plan which does not preclude development per se. Development harmful to the beauty of the landscape of such areas will only be permitted if (1) there is a proven need for the mineral which cannot be practically met from any more environmentally acceptable location, and (2) the proposals minimise the landscape impact of the development. The principle of development within the special landscape area should therefore not be compromised by the company's proposals.

#### 4.0 SITE EVALUATION AND DEVELOPMENT DESIGN

A detailed evaluation has been made of the Application site in order to assess the best means of developing the mineral resource in an environmentally acceptable manner. The previous sections have identified the statutory authorities who have been consulted and the specialist reports which were commissioned during the design of the development proposals.

The reports were not prepared in isolation but in consideration of other aspects. For example, the *plant design and layout* was designed after consultation with landscape and acoustic specialists; the *phasing* was designed in recognition of an ongoing agricultural production and the *limit of extraction* has been constrained by geological, archaeological landscape and acoustic restrictions.

The reports are appended to this written statement and their broad conclusions and recommendations are summarised below. Anticipated environmental effects and proposed mitigation measures are also discussed.

#### 4.1 Geology and Geotechnics Statement

The report concludes that within the Application there is a substantial recoverable mineral reserve in the order of 2.6m tonnes of saleable sand and gravel. The geological survey and laboratory analysis of the recovered minerals are provided in tabular format in the Appendix 2. The deposit is overlain by soils and overburdens ranging between 1 and 2 metres in thickness and underlain by fine grained clay sand.

This will need putting in the correct location. The economic mineral is the sand and gravel horizon that lies below the Highworth limestone and above a bed of clayey sand. The clay in turn rests upon Oxford clay.

Boreholed investigations show that the economic deposit lies above the water table and therefore the intended depth of excavation. The operation will be a 'dry working' and there should be no possibility of affecting any deep ground water abstraction.

Although there is movement of water within the gravels and local streams and drains, excavating the site will have no detrimental effect on stream flow. Water for the washing process will be obtained from a deep borehole.

Within the limit of proposed extraction a reserve of 2.88m tonnes is predicted which after 10% processing losses will produce 2.6m tonnes of saleable sand and gravel.

## 4.2 Landscape Appraisal (Appendix 3)

This report describes the Application area and provides a detailed description of the landscape. It considers the visual impact of the proposed development when viewed from a number of vantage points. It provides recommendations for the initial and progressive screening of the site and landscape features which should be retained and incorporated in the restoration design and addresses the suitability of the plant site in terms of natural screening. The visual impact of the development can be minimised by:

- a) provision of effective screening features, and
- b) restoration of the site in such a way as to reflect local topographic, vegetative and land use characteristics.

The Report identifies potential effects and proposed mitigating measures.

## 4.3 Ecological Appraisals (Appendix 4)

A wildlife assessment of the proposed site was undertaken and concludes that the site is of low wildlife value. Loss of the arable fields and less intensively farmed margins could be reduced on a short timescale and by progressive restoration.

A farm building environment holds a typical range of common weeds and around the perimeter of the farmyard there are common trees and bushes. Swallows probably nest in some of the outbuildings but there is no indication that any uncommon species are present within the built up area.

There are no uncommon species found in any of the perimeter hedgerows. However, in the north east corner of the site there is a copse which is registered as an Ancient Woodland. This contains a number of mature species within which a badger sett was found.

In accordance with consultations with English Nature, a badger survey was commissioned and it was concluded that badgers are present close to the site and forage within it. A license for activity in the vicinity of an active badger sett is not required as no activities are likely to take place within a 30 metre radius of the sett and there is sufficient foraging ground being retained from the woodland northwards.

The ecological appraisal considers both the application area and its immediate surroundings. It describes the ecological habitats identified, e.g. arable, woodland and farm buildings and comments on their value within the broader area. The site is of limited ecological value. It has no statutory or non-statutory designations such as SSSI or wildlife heritage site but does contain a single non-statutory designation for the immediately adjacent Highmoor Copse of ancient woodland. However, there is no citation for the ancient woodland and it is proposed that the Company should undertake a national vegetation classification survey of the land.

## 4.4 Agricultural Land Classification and Soil Handling Recommendations (Appendix 5)

This report provides an analysis of soil sampling in accordance with the Department for Environment, Food and Rural Affairs (DEFRA) Land Classification of England and Wales. It concludes that over 65% of the extraction area comprises best and most versatile quality land, that is land that falls within Grades 2 and 3a. The remainder of the site falls within the slightly lower quality of Grade 3b (see Map 9 in the Student Maps and Aerial Photography document).

It makes recommendations for the methods of soil handling and identifies essential criteria which must be achieved in the restored soil profile.

#### 4.5 The Environmental Noise Assessment (Appendix 6)

This report analyses the noise impact that the proposed development will have on the surrounding area. In particular consideration is given to noise effects on the nearby residential properties. It recommends protection measures which have been prepared in consultation with the landscape and engineering consultants.

Design criteria are defined to meet current and anticipated legislated limits for noise in relation to domestic properties. In all cases the consultants calculations show that acceptable levels should not be exceeded as a result of the Company's development proposals.

The acoustic design recommendation, which include earth bunds and acoustic screening, have been adopted and incorporated into the proposed scheme. The location of such features are shown on Map 3 in the Student Maps and Aerial Photography document.

#### 4.6 Analysis of Supply and Demand Forecasts (Appendix 7)

Aggregates supply and demand in Wiltshire and the adjacent counties is detailed in this report, it identifies the historical end use for sand and gravel in the vicinity, of which 63% goes to the production of ready mixed concrete. The majority of the area supplied would fall within a 15 mile radius of the proposed site and the main market areas which will be served by the development will dictate that the delivery vehicles will exit northwards out of the site on the B4000 to the mini roundabout on the perimeter of Highworth and take the A361 either north or southwards, which has previously been allocated as a primary aggregate route in the Wiltshire Minerals Local Plan.

#### 4.7 Archaeology (Appendix 8)

The County Archaeological Department have been informed of the proposed development and their guidance was requested regarding procedures for the basis of pre-development valuation.

They have advised that an archaeological evaluation will be required.

The County Archaeologist supplied an archaeological brief outlining the areas in which an archaeological evaluation programme should concentrate (Appendix 8 - use with Map 10 in the Student Maps and Aerial Photograph document). The

applicant Company has commissioned Wessex Archaeology to undertake an archaeological evaluation - project design.

## 5.0 OPERATIONAL PROGRESSION

### 5.1 Site Development (use Map 3 in the Student Maps and Aerial Photograph document)

The site will be developed by building an access off the Shrivenham Road to the plant site situated in the eastern corner of the site at approximately 97m AOD. A conveyor will transport mineral from the extraction phase to the plant site. An initial cut will be made down the centre of the site in a southeast/northwest direction. This will allow access to all working phases and keep the conveyor at a low level. The conveyor will then retreat as the works progress.

A freshwater lagoon will be constructed near the plant to supply clean water. This will be fed by water circulated back from the silt lagoons which will be located with worked out phases. The silts will be used to provide restoration materials for landform creation. Soils will be stripped from all areas to be developed or excavated and top soil removed from subsoil bund areas. Across the site an average of 0.31m of top soil and 0.7m of subsoil will be removed and stored or used directly for restoration. (See sections 1 and 3 of the Student Information Sheet.)

### 5.2 Agricultural Restoration

A total of 1.2 cubic metres of soil will be put back on all areas to be restored to agriculture ensuring that good agricultural land quality will be retained. Apart from the excavation all areas will be returned to their original levels. The excavated area will be filled with limestone overburden, silts and soils replaced on top to achieve the levels shown on the restoration plan.

At the end of excavation all plant and buildings and access roads would be dismantled and the site restored to the approved plan. The site would then be subject to a 5 year aftercare period, during which time the management of the restored land would be subject to the approval of the Mineral Planning Authority.

These proposals include the planting of some 5Ha of the site (in the region of 22,000 trees) and an additional 31km of hedgerows. It is considered that the proposed field pattern is more in keeping with the land immediately to the north of the sites and its special landscape area status (see Map 8 in the Student Maps and Aerial Photograph document).

The water area has been created to provide a natural location for the water to drain and collect. this collection point will also add to the ecological diversity of the site.

## 6.0 CONCLUSIONS

It is therefore considered that the proposed Eastrop Farm development satisfies the requirements of the Wiltshire Minerals Local Plan.

This is demonstrated by the conclusion provided in the various consultants' reports that the site could be operated with limited ecological, highways and visual impact.

To summarise, the benefits of the development are as follows:

1. The provision of 2.6 million tonnes of sand and gravel into the Wiltshire Landbank.
2. The reduction of long haul importation of materials into the County, reducing dramatically the environmental impact on County roads.
3. The creation of 10 permanent jobs and a number of ancillary jobs, likely to be in the region of 30.
4. Additional expenditure into the local economy in the region of £1.5 million via rates, wages and quarry plant maintenance costs.
5. The site will provide an improved, more diverse landscape with more appropriate field patterns, befitting the Special Landscape status of the area.
6. Provision of additional woodland adjacent to Highmoor Copse, further strengthening the long term status of the woodland.
7. Potential for community involvement in the planting of the 22,000 additional trees, possible community woodland.
8. Added ecological value with a proposed water area and 3 km of additional hedgerows.

## APPENDIX 1 - Environmental Policy Statement - Quarry Products



This statement is the first phase of the Company's environmental Management System. The remaining phases cover site appraisal, site monitoring, site audit and reporting.

Tarmac Quarry Products is committed to carrying out its operations in accordance with optimum environmental standards which go beyond the minimum legal requirements of any legislation, statutory regulations or authorisations.

In order to achieve these aims the company will:

Ensure, where practical, that up-to-date technology will be used in all aspects of its operations.

Ensure compliance with all statutory requirements, permissions and authorisations.

Ensure that all sites and their immediate environment will be subject to a regular cleaning and maintenance regime.

Encourage constructive liaison and discussion with local residents, appropriate authorities and other bodies.

Ensure regular maintenance of fixed and mobile plant, including road vehicles and encourage similar standards for other site users.

Direct transport drivers to exhibit particular care to minimise noise during unsocial hours; to be aware of their responsibilities regarding load security; to be considerate drivers and to comply with any designated routing requirements.

Ensure that, where practical, energy-efficient techniques are utilised throughout the company's activities.

Ensure that the environmental policy is monitored for its effectiveness and revised and updated whenever circumstances require.

Ensure efficient use of raw materials incorporating appropriate opportunities for waste minimisation and to re-use and recycle.

Report key environmental impacts of operations, the improvements delivered and targets for the future.

A handwritten signature in black ink, appearing to read "G W Bolsover". The signature is written in a cursive style with a horizontal line underneath.

G W Bolsover  
Chief Operations Officer

## APPENDIX 2

### EASTROP FARM GEOLOGICAL STATEMENT

#### GENERAL GEOLOGY

The following geological succession exists in the Highworth area (use with Map 4 in the Student Maps and Aerial Photograph document ):

<b>U P P E R  J U R A S S I C</b>	<b>OXFORDIAN</b>	<b>CORALLIAN</b>	<b>CORAL RAG HIGHWORTH GRIT HIGHWORTH LIMESTONE SAND AND GRAVEL CLAYEY SAND</b>
	<b>CALLOVIAN</b>	<b>OXFORD CLAY FORMATION</b>	

Detailed exploration in the form of 27 boreholes has been carried out across the site using an HE90 drill rig employing an 8" intermittent flight augering technique. This exploration has proven the broad geological succession above although not all layers are present elsewhere.

#### DETAILED GEOLOGY

The economic mineral is the sand and gravel horizon that lies below the Highworth Limestone and above a bed of clay sand. The clay sand in turn rests upon Oxford Clay.

The sand and gravel varies from 0 to 12.0 metres in thickness and comprises brown, clean to slightly silty, fine/medium to medium grained sands with 25-30% gravel. The average gravel, sand, silt/clay split is 28%, 67% and 5%. The gravel is predominantly less than 40mm in size and is composed of quartzite.

The underlying clay sands are uneconomic because they comprise very fine grained sands with 20-30% silt and clay varying from 0 to 16.0mm in thickness. The very fine grained nature and the very high clay volume makes this material unprocessable and unsuitable for construction aggregate.

The overlying Highworth Limestone is a yellow brown, fine grained, soft and weathered fossiliferous limestone, 0 to 3.4m thick.

The quality of the economic deposit has been proven by the laboratory grading of a comprehensive number of borehole samples. The analyses confirm the sands would comply after processing to the relevant British Standards, for M and F grade concrete sands and for S and G grade building sands. 'M and F grades' relate to the coarseness of the concrete sand product, i.e. Medium grained and Fine grained. 'S and G grades' are terms for products that are generally much finer grained than concrete sand products and are suitable for, e.g. mortar materials.

The gravel would be selectively graded within the processing plant to produce 40mm, 20mm and 10mm single size aggregates. A proportion would also be crushed to introduce a coarse element to the concrete sands.

#### Reserves

The borehole investigation work has proven recoverable mineral reserves within the proposed extraction area equating to approximately 2.6 million saleable tonnes of sand and gravel. At anticipated sales levels of 260,000 tonnes per annum, the total reserves of the existing site and extension area would last for 10 years.

## APPENDIX 3

### REPORT FROM LANDSCAPE ARCHITECT

- 1.0 The site and proposed development
- 1.1 Location (use Map 1 in Student Maps and Aerial Photograph document)
  - 1.1.1 The site is located approximately 4 km north-east of Swindon and immediately to the south-east of Highworth. the approximate centre of the site has a grid reference of SU209916
- 1.2 Description (use with Maps 2, 5 and 7)
  - 1.2.1 The site is broadly rectangular, 50 hectares of generally north-east facing land. It is situated at the eastern end on the north side of a long, narrow ridge of locally high land, which stretches from west-south-west to east-north-east through central Oxfordshire and Buckinghamshire. The ridge divides the Vale of White Horse to the south from Upper Thames Valley to the north.
  - 1.2.2 The site is approximately 800m long in a north-west/south-east direction and 600m wide south-west/north-east. Its highest elevation is the western corner 124m AOD and its lowest near the eastern corner 97m AOD.
  - 1.2.3 At the centre of the site is a group of farm buildings known as The Buildings. A track runs through this group north-east to south-west dividing the site into two. To the west of the track the topography is generally flat at about 120-122m AOD falling away to the east to a height of 111m AOD approximately.
  - 1.2.4 To the east of the track there is a marked valley formation falling from 120m AOD in the west to 97m AOD in the east. At the northern site boundary of the valley there is a spring but within the site the valley is dry.
  - 1.2.5 The south-west boundary of the site is formed by the Shrivenham Road, the B4000. there is no hedge-line or trees along this boundary and only a shallow ditch along the western part. At the western corner the boundary is well vegetated with a dense hedge, trees and shrubs associated with a children's nursery.
  - 1.2.6 The north-east boundary is connected by three small plantations which appear to be part of the landscaping of Eastrop Grange. Part of the boundary is hedged, part is open.
  - 1.2.7 The north-eastern boundary is open, across agricultural land as far as the track. From there to Highmoor Copse at the western corner it has a hedge and again bounds agricultural land. Highmoor Copse abuts the site for approximately 150m at the eastern corner.
  - 1.2.8 The south-eastern boundary is mainly against agricultural land with a well maintained hedge but the southern corner abuts a residential property with quite dense planting against the site boundary.
  - 1.2.9 The only non-agricultural vegetation occurring within the site is located around The Buildings. This consists of overgrown hedgerows.
  - 1.2.10 There is no surface drainage on the site although a short length of dry ditch is located along the Shrivenham Road.
  - 1.2.11 One public footpath crosses the site from the western corner, north of the nursery and runs south-eastwards to the Shrivenham Road opposite Wragg Cottage at the southern corner of the site.

## 2.0 THE PROPOSED DEVELOPMENT

### 2.1 General Description (use with Maps 3 and 8 in Student Maps and Aerial Photograph document)

- 2.1.1 It is proposed to build an access road from the Shrivenham Road to the plant site which is located in the eastern corner of the site. A cut will be made down the centre of the site in a south-east/north-west direction along which a conveyor will be laid to transport material from the working area to the processing plant.
- 2.1.2 The plant site will consist of a 'surge pile' which will feed the main crushing, scrubbing and washing plant. A screening plant will then separate the sand and gravel into stock piles which will then be stored in purpose built bays by mobile plant. At the plant area there will also be a weighbridge and office, associated works facilities and car parking areas. A fresh water lagoon will be located near the plant site to feed the washing plant. This will be fed from the silt ponds which will be located within the workings.
- 2.1.3 All top and subsoils will be stripped from the areas to be developed or excavated and stored in bunds around or within the site. Subsoil storage bund areas will be stripped of topsoil before bund construction. Topsoil and subsoil will be kept in separate storage bunds.
- 2.1.4 Overlying limestones will be bulldozed to one side and behind the workings to provide fill for restoration. The mineral will be obtained by dozing it into a hopper to feed the conveyor.
- 2.1.5 Soils from phases 1 - 3 will be put into storage and create the screening bunds. From phase 4 onwards, however, soils stripped from individual phases will be used to restore some of the previously worked areas, thus achieving progressive restoration through the site.
- 2.1.6 Final restoration is proposed to agriculture with a small water feature, two main woodland blocks and associated hedgerows. The general topography will be a three-sided wide basin falling to an open fourth side where an outfall near Highmoor Copse will provide a drainage outlet.
- 2.1.7 A large block of tree planting on the eastern boundary will extend Highmoor Copse and hedgerow planting will define field boundaries.

## 3.0 THE SITE AND LANDSCAPE

### 3.1 Topography (use with Map 1 in Student Maps and Aerial Photograph document)

- 3.1.1 The site is located at the western end of a long, narrow ridge which stretches from south-west to north-east from Wiltshire through central Oxfordshire and into Buckinghamshire. This is the Midvale Ridge separating the Vale of White Horse to the south from the Upper Thames Valley to the north.
- 3.1.2 The ridge becomes very dissected at its western end with isolated hills. Highworth rises to a height of 133m AOD. To the north-east of the site the ridge becomes more pronounced at Farrington.
- 3.1.3 To the north of the site the Upper Thames Valley is relatively flat and low-lying compared to the Midvale Ridge, as is the Vale of White Horse to the south.

### 3.2 Geology (use with Maps 4 and 5 in Student Maps and Aerial Photograph document)

- 3.2.1 The higher ground forming the broken ridge around the site is composed of Corallian limestone and sandstones which have been heavily eroded during the last ice age. The high land stands out above the surrounding clay vales which are underlain by Oxford clay.

- 3.2.2 The permeability of the Corallian limestone and sandstones results in a spring line and flushes along the boundary with the Oxford clay.

### 3.3 Land Use

- 3.3.1 The dominant land use in the area is agriculture. The ridge line tends to have largely arable farming with a spread of small woodlands, whilst the lower lying valleys are more sparsely treed with a mixture of arable and pasture land. Some agricultural areas are now used for recreation. Immediately to the south of the site is a golf course.

### 3.4 Woodlands (use with Map 7 in Student Maps and Aerial Photograph document)

- 3.4.1 Adjacent to the eastern corner of the site is Highmoor Copse which is a semi-ancient woodland. There are smaller parkland copses to the west of the site associated with Eastrop Grange. Further from the site, woodland is dispersed and scattered and mainly located on steeper ground and/or near springs and watercourses.

- 3.5 Settlements (use with 1:50,000 OS Map Landranger 174)
- 3.5.1 The main town in the area is Swindon which is approximately 5km to the south-west of the site. Highworth is immediately to the west but separated from the built-up area by the grounds of Eastrop Grange and the playing fields of a local school. Shrivenham is 4.5km to the south-east.
- 3.5.2 The smaller villages of Sevenhampton to the south, Coleshill to the north-east and Honnington to the north-west are 1km, 3km and 3km distant respectively. To the north the nearest village is Upper Inglesham some 4.5km away.
- 3.5.3 There are also isolated dwellings and farmsteads in the area which reflect its agriculture nature.
- 3.6 Communications and Transport (use with Maps 1 and 2 in Student Maps and Aerial Photograph document and 1:50,000 Landranger 174)
- 3.6.1 Roads
- 3.6.1.2 The B4019 runs west to east from Broad Blunsdon through Highworth to Coleshill, whilst the B4000 starts in Highworth and runs south-east to Shrivenham. The B4000 abuts the site as it leaves Highworth. To the south-east of the site the B4508 joins the B4000 and runs eastwards to Watchfield.
- 3.6.1.3 Apart from the developed areas of Highworth, there are only a few minor roads near the site, the most prominent being to the south-east of the site. This runs in approximately a south-west to north-east direction from the A361 to the B4019 via Sevenhampton, crossing the B4000 at Friars Hill.
- 3.6.2 Public Rights of Way
- 3.6.2.1 The ordnance survey map shows a network of footpaths and bridleways around the site. These are mainly concentrated south and west of Highworth with only a few to the north and east. Only one crosses the southern edge of the proposed site.
- 3.7 Landscape Character
- 3.7.1 The Midvale Ridge has an agricultural landscape with small woodlands. Settlements are dense but spread around with isolated farmsteads in between. It has open visual characteristics, the elevated position of the ridge giving long, broad panoramic views and open skies.

## 4.0 VISUAL APPRAISAL

### 4.1 Methodology

- 4.1.1 The field study was carried out on several days with weather conditions varying from poor to good visibility. All views of the site identified from within the study area were noted. The Sightline Locations are shown on Maps 2 and 5 in Student Maps and Aerial Photograph document. Sightline Sections are shown on Map 6.
- 4.1.2 Views have been categorised according to their source (e.g. roads, footpaths, residential dwellings, etc.). The distance between the viewpoint and the site boundary was measured. In those cases where the viewpoint is from a defined length of road or footpath, both maximum and minimum distances were recorded.
- 4.1.3 Each viewpoint was assessed for the degree of sensitivity of the magnitude of the receptor (viewer) and the magnitude of the development proposals.
- 4.1.4 The definitions of sensitivity are set out below:

#### High sensitivity

Receptors in residential properties and well used public open spaces or areas of high aesthetic landscape value with close views of the site.

#### Medium sensitivity

Receptors with views of part of the site or where intervening vegetation or observing structures or physical features intervene and/or distance mitigates influence.

#### Low sensitivity

Receptors with limited or acute angle views of part of the site and/or where the effects of distance and/or screening effects of landscape features reduce the influence to a minimum.

#### High magnitude

Is where there are a large number of receptors affected and/or a major change or visually prominent, discordant landscape element in view. *Medium* and *low magnitude* are reduced

versions of these.

- 4.1.5 By combining the effects of sensitivity and magnitude, the degree of impact may be obtained as follows:

SENSITIVITY	MAGNITUDE		
	HIGH	MEDIUM	LOW
HIGH	Significant	Significant	Moderate
MEDIUM	Significant	Moderate	Slight
LOW	Moderate	Slight	Slight

- 4.2 General Observations (use with Maps 2 and 6 in Student Maps and Aerial Photograph document)
- 4.2.1 The site is located on the north side of Midvale Ridge. Views from the south are therefore restricted to those adjacent to the site and the higher ground of Reddown Hill (to the south west) and some close properties.
- 4.2.2 The minor ridge to the east screens views from properties in this direction but provides an elevated position for views from the minor road which runs along its crest.
- 4.2.3 Views from Highworth and nearby properties will all be at an acute angle and broken by intervening vegetation. The plant site floor area is not visible as it is located in the lowest part of the site.
- 4.2.4 The visual character of the landscape means that the site is more open to views from the north. However, within a 3km radius of the site there are only a few properties and one road, the B4019 to Coleshill, which also has views at a distance of 3km.
- 4.3 Visual elements of the development (see Maps 3 and 6 in Student Maps and Aerial Photograph document )
- 4.3.1 The proposal includes erecting processing plant in the small valley west of Highmoor Copse with an access road running from Shrivenham Road. Extraction will take place to the west of the plant and access road by making a cut into the site and working from west to east on alternate sides of the cut. Excavated material will be transported by conveyor to the processing plant.
- 4.3.2 It is proposed to return all soils on site and to re-use them in the restoration of the site. The main sources of potential visual intrusion in the proposed development are:
- a) processing plant and ancillary work;
  - b) exposed extraction faces;
  - c) soil stripping and restoration operations;
  - d) silt ponds.

Secondary sources of potential visual intrusion are:

- a) conveyor lines;
  - b) screen boundary;
  - c) increased vehicular movements on site.
- 4.4 Mitigating Measures
- 4.4.1 The development proposals contain the following measures to ensure that visual disturbance is kept to a minimum:
- a) Screen bunding to reduce views into the site.
  - b) Soil storage and re-use to ensure there is no depletion of the soil's quantity or quality for successful restoration.
  - c) A phased working and restoration programme to minimise exposed faces and working machinery.
  - d) The location of processing plant in the optimum position for screening.
  - e) Restoration of agriculture with tree and hedge planting to integrate the site back into the landscape.

- 4.5 Visual Analysis
- 4.5.1 The visual appraisal (see Map 6 in Student Maps and Aerial Photograph document) shows that the site is well located in the landscape to restrict views of the site. Apart from views from the north, views of the site are restricted to those fairly close to its boundaries. The views from the closest viewpoints to the south will be restricted to the screen bunds themselves and the access onto the Shrivenham Road. More distant views from the north are improved by distance, phasing and location of the processing plant.
- 4.6 The Visual Impact
- 4.6.1 Of possible view points none are classed as having significant impact, six were classed as moderate and the rest as slight. The public footpath which crosses the site is being diverted so no assessment can be made of the visual impact until the new route is determined.
- 4.6.2 The impact of the plant site and silt pond is greatly restricted by their location in the valley at the east of the site and the phased working and restoration programme limits the impact of the extraction process.
- 4.6.3 The main impacts are caused by the screenbunds, which reduce the view of the extraction process.
- 5.0 THE LANDSCAPE IMPACT
- 5.1 The character of the area is predominantly rural, with agricultural use predominant and scattered woodland. The phased working and restoration programmes ensure that there is the minimum of landscape discarded at any one time.
- 5.2 The final restoration proposals restoring agricultural use at a lower level with a small water feature in the west. Steeper slopes on the south-west and north-west boundaries are similar to those found on the isolated hills at the western end of the Midvale Ridge. Drainage will be maintained by the land generally falling to the eastern corner where the spring emerges near Highmoor Copse.
- 5.3 The proposed field patterns and hedgerows reflect those to the north and the new hedge-line along the Shrivenham Road will create a strong skyline feature which will replace 'The Buildings'.
- 5.4 Trees planted in the eastern corner will extend Highmoor Copse and create a strong landscape feature.
- 6.0 CONCLUSIONS
- 6.1 The local landscape quality will not be significantly reduced by the development proposals either during the site operations or after completion of the final restoration scheme. One element in the landscape, The Buildings, will be lost but it is possible that these would deteriorate beyond repair or be replaced by more modern structures. Additional landscape features, hedgerows and woodlands are proposed to enhance the quality.
- 6.2 The very nature of mineral workings means that some change is inevitable and that there will be environmental impacts. Within these proposals, however, both landscape and visual impacts have been kept to acceptable levels and therefore these impacts should not prevent the development progressing.

## APPENDIX 4

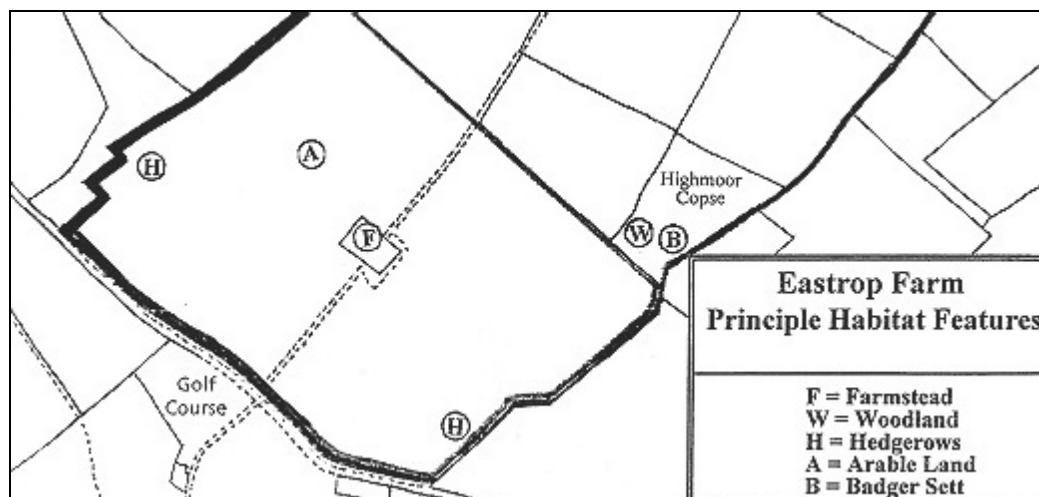
### WILDLIFE ASSESSMENT OF EASTROP FARM, HIGHWORTH, WILTSHIRE

#### Summary

1. The site was surveyed in June 1996 and relevant organisations were approached for data on the site and adjacent areas of known wildlife importance.
2. The whole of the site is occupied by arable farming techniques and has very low wildlife value. Field boundaries are also of very low to low wildlife value, being made up of predominantly hawthorn hedgerows with no uncommon species. The farm building complex also retains a number of common and widespread species of plants and animals. The loss of these habitats will not prove to be significant. Any impact could be reduced in a short timescale by new habitat creation.
3. In addition there is a copse which is registered as an ancient woodland site. This contains a number of mature species within which a badger sett was also found. The proposed operations would not affect the copse and its badger population as there is considerable foraging ground to the west, east and north of the copse.

#### Method

4. The site was surveyed on 7th and 11th June 1996 and the vegetation structure and composition recorded and used as a basis for predicting the use of the site by format. The presence of birds and other and other animals was noted.
5. The Wiltshire County Council and the County Wildlife Trust were approached for past records from the site. Information on the current status of bird species was obtained from the county bird recorder.



6. This report uses the English names, plants given in the new flora of the British Isles.

#### Results

7. The site is show on the plan above and the habitat features are also given.

### Farmstead Environment

8. There are several dwellings within an extensive range of farm buildings, storing equipment and fertiliser. This area holds a typical range of common weeds including white dead nettle, common poppy, hedgemustard, broad-leaved dock, common chickweed, common nettles and cleavers. A dry drain apparently containing yard washings held a celery leaved buttercup. At the edge of the farmyard there are elder and hawthorn bushes.
9. Swallows probably nest in some out buildings and some common song birds may breed in the hawthorn and alder. There appears to be no uncommon species.

### Fields

10. All fields are in cultivation and arable production. This area is of very limited ecological value.
11. Field boundaries carry the main element of wildlife interest where a range of common song birds may breed but success is low except in the densely structured hedges where the risks of predation by corvids (crow family) and rats are reduced. The hedges are mainly made up of blackthorn, hawthorn and some field maple.

### Woodlands

12. Immediately adjacent to the site is the previously mentioned Highmoor Copse which is registered as an Ancient Woodland site. This contains a number of mature species namely beech, oak and ash. This also contains the area within which the badger sett was found.



### Badgers

13. The badgers are present, close to the site and forage within it. Under the protection of the Badgers Act 1992 it is an offence to disturb a badger where it is occupying a sett. A licence may be sought from English Nature for activity which might disturb badgers. For most normal activities associated with gravel extraction, activity outside a 30m radius from the sett will probably not require a licence. However, English Nature suggests that it is desirable to assess the effect of any loss of foraging habitat, as in some instances this may lead to desertion of a sett and disruption of the badgers' social group.

## Impact and mitigation

14. The site on the whole is of low wildlife value. Loss of the arable land will affect a very limited number of common and widespread species of plants and animals.
15. No hedgerows are intended to be removed and the hedgerow system will be vastly improved by replanting during the restoration. The ancient woodland will not be affected by the proposed operations as there is no proposal for de-watering. In accordance with consultations with English Nature, a badgers' survey has been commissioned and it was concluded that badgers are present close to the site and forage within it. However, a licence is not required for the activity in the vicinity of the badgers' sett as it is considered that no activity is likely to take place within a 30m radius of the sett and there is sufficient foraging ground being retained from the woodland northwards.

It is recommended that the company undertake a national vegetation classification survey in order to provide county archivists with relevant information to provide a citation for Highmoor Copse.

## APPENDIX 5

### AGRICULTURAL LAND QUALITY

#### 1. SITE AND CLIMATIC CHARACTERISTICS

##### 1.1 General features and land form (use Section 2 of the Student Information Sheet - Agricultural Land Classification)

The area of land surveyed is about 50Ha in extent of which around 49Ha is agricultural land and the remainder is farmstead. The agricultural land is maintained in arable production with a variety of cereal crops being grown in rotation.

There are two principle land types based upon relative elevation. Most of the high ground lies between the farmstead 'The Buildings' and the western boundary and the intermediate ground runs from the farmstead to the northeast towards the Highmoor Copse.

The land surface is undulating.

##### 1.2 Soil parent materials and natural drainage

The most extensive soil parent material is greyish to white, very calcareous, silty alluvium. This overlays the coral rag subsoil and overburden. These parent materials are generally permeable and natural drainage is mainly by relatively rapid percolation to the ground water table. The latter fluctuates seasonally, being lower in the summer months and rising markedly in the winter. The water table is 18m AOD some twenty metres below the surface.

##### 1.3 Climatic factors

The climatic factors affecting land quality have been predicted from the Met Office's data and are set out below:

Average annual fall (AAR) 704mm  
Accumulated Temperature Above 0 degree C (ATO) 1457 DEG  
Field capacity days (FCD) 154 days  
Average moisture deficit (Winter Wheat) 109mm  
Average moisture deficit (Potatoes) 102mm

The combination of AAR and ATO is not limiting below Grade 1 quality. However, the moderate crop adjusted moisture deficit suggests that drought may affect the crops grown in the shallow stony soil.

#### 2. LAND QUALITY AND MAIN SOIL CHARACTERISTICS

##### 2.1 Survey methods

The main survey was carried out in March 1997 and the soil profile descriptions were assessed against the Department for Environment, Food and Rural Affairs (DEFRA) Agricultural Land Classification criteria ( see Section 2 of the Student Information Sheet ).

A large number of soil profiles were examined, on a regular network throughout the site. Soil pits were also dug at selected locations to investigate the subsoil and other smaller pits to examine and describe soil characteristics in more detail.

## 2.2 Agricultural land classification (ALC)

Soil, site and climatic factors were evaluated with reference to maps 1998 revised ALC criteria. The main limitation of the ground was 'droughtiness' from the level of the ground above the natural water table. This is due to inadequate water capacity from relatively thin and/or stony soil over gravel. This limits some of the higher land in the north to subgrade 3b. The top soil stoniness also adds to the limitation of the land to the east of the agricultural access track. Just over 65% of the extraction area comprises the best and most versatile quality land that is some 34.25 Ha of land falling within grades 2 and 3a of the DEFRA land classification. The remainder of the site is 17.75 Ha which is grade 3b (see Map 9 in Student Maps and Aerial Photograph document).

## 3. SOIL HANDLING

Providing soil is not handled during rainfall or in conditions of standing water, severe soil damage should not occur. This is due to its stony nature, natural topography and position above the water table. Where it is necessary to store soil it should be lightly compacted to deter the importation of rainfall and encourage run-off. Soil stores will need to be shaped, grass seeded and maintained free of weeds and should not be used as a traffic route.

Where possible soil should be stripped and directly placed for restoration without a period of intermediate storage, this will limit the handling damage to the soil and the handling cost. When soil is being transported the whole route should be on the mineral surface and not on subsoil or topsoil.

Soil used for restoration should be in an uncompacted condition, it will naturally settle subsequently during the aftercare period.

## APPENDIX 6

### ENVIRONMENTAL NOISE ASSESSMENT

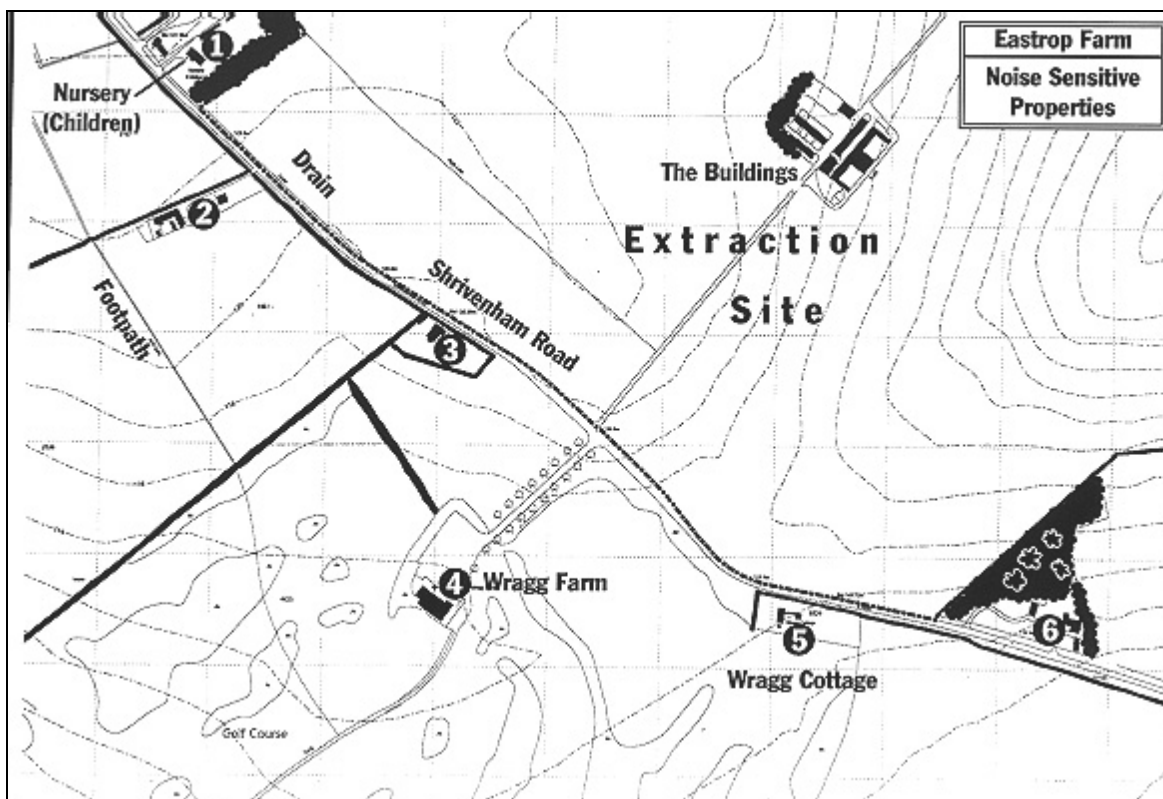
#### 1. INTRODUCTION

This report describes the baseline noise level survey which was carried out on 5th and 6th December 1996 at selected residential properties considered to be the most likely to be affected by noise emanating from the application site.

#### 2. METHOD

##### 2.1 Measurement Locations

Noise measurements were made at specific properties.



##### 2.2 Measurements

The noise measurements were made using a precise grade sound level meter fitted with a module so that values across the sound range were obtained over periods of fifteen minutes. The meter was placed on a tripod in an open position at each measurement location so that it was unaffected by the presence of buildings, walls or other surfaces which could cause reflections of sound. It was also fitted with a windshield. This was done so that comparisons could be made with the levels recommended in the Minerals Planning Guidance 'The Control of Noise at Surface Mineral Workings'.

##### 2.3 Weather conditions

The weather was very stable on both dates with virtually no wind on the first day and a very light wind from the north on the second day. There was no rain and the roads were dry. It was generally sunny with a temperature of 6 - 8°C.

### 3. RESULTS

Road traffics has a considerable effect on properties close to the road leading into Highworth from the south (B4000). Properties further from the road include Wragg Farm numbered No. 4.

#### 3.1 Measured Noise Levels

The results are given in Table 1

Date	Hour commencing	Location	L <sub>n</sub> dB						Traffic Flow per hour	Comments and Audible Noise Sources
			L <sub>1</sub>	L <sub>10</sub>	L <sub>50</sub>	L <sub>90</sub>	L <sub>eq</sub>	L <sub>eq</sub> - L <sub>90</sub>		
5 Dec	11.00	1 & 2	59	49	45	43	47	4		Light Aircraft, Milk tanker pump
5 Dec	12.00	4	53	47	41	38	43	5		High jet aircraft, Cows
5 Dec	12.00	3	77	72	57	47	70	23		High volume of traffic
5 Dec	13.00	5	58	53	42	35	50	15		High jet aircraft
5 Dec	14.00	1 & 2	55	50	43	39	46	7		Light aircraft, Tanker lorry left farm
5 Dec	14.00	3	78	72	57	45	66	21	444	
5 Dec	15.00	4	57	52	47	44	49	5		Light aircraft, Farm machine (pump), Traffic on road
6 Dec	13.00	6	53	47	43	40	45	5		Light aircraft
6 Dec	14.00	4	64	52	46	43	52	9		Distant traffic, Farm machinery (pump)
6 Dec	-	-	-	-	-	-	-	-	540	Traffic flow on road to Greenham Common
6 Dec	14.00	3	79	72	60	50	68	18		
6 Dec	15.00	1 & 2	56	50	44	37	46	9		

Where:

L<sub>1</sub> = dB level exceeded for 1% of the time (noisiest)

L<sub>10</sub> = dB level exceeded for 10% of the time (noisiest)

L<sub>90</sub> = dB level exceeded for 90% of the time (noisiest) = background noise level

L<sub>eq</sub> = equivalent background noise level over 12 hour period (working day)

L<sub>eq</sub> - L<sub>90</sub> = additional noise level as a result of mineral extraction

### 4. CONCLUSIONS

The average L<sub>90</sub> background noise level in the case of residential properties close to the main road south of Highworth is approximately 47 decibel (dB). For the properties remote from this road the corresponding value is 40dB.

The existing average ambient LAEQ noise levels for properties close to and remote from the main road are 68dB and 47dB respectively which indicates the effect of traffic noise, particularly in the former case. It is considered that target property No 3 is the only property likely to be affected by site noise and therefore an additional 100 metre standoff is proposed and should be incorporated within the phasing design. If this is incorporated then the noise levels produced from the proposed development would be acceptable and no reasonable noise complaints could be made.

## APPENDIX 7

### ANALYSIS OF SUPPLY AND DEMAND

#### Eastrop Farm Market Appraisal

A high percentage of material traditionally enters ready mixed concrete production and the housing and commercial markets. A high proportion of concrete sales (63%) will in turn enter the housing and commercial sectors emphasising the importance of the performance of these markets.

Potential Market Area (use with OS Map 1:50,000 Landranger 174 and an atlas)

A sand and gravel unit located at Eastrop Farm would realistically serve the districts of Thamesdown, Kennet, North Wiltshire, Cotswold and Vale of White Horse, all of which fall, at least in part, within 15 miles of the proposed site.

Significant conurbations within the area include Swindon, Watchfield, Highworth, Cricklade, Wootton Bassett, Wroughton and Calne. Given the continuation of government policy to concentrate future construction activity in existing built up regions, it is likely that the future development potential of these conurbations will affect the demand for sand and gravel.

#### Housing Market

Wiltshire has traditionally been, in terms of housing sites, the most vibrant county in the South West region and the latest housing construction figures indicate that the much publicised improvement in housing is evident in the county. The volume of housing contracts awarded is showing a degree of stability indicating that the recent improvements are sustainable rather than short term seasonal gains.

On a district level, Thamesdown - the location of Swindon - is the dominant recipient of new housing sites and has performed strongly, even during the slump of 1995. Local Structure Plans provide for a further 10,000 housing sites within Swindon up to 2001, a level which would seem achievable given current construction levels and a population expected to grow by 12% up to this date.

#### Industrial and Commercial Development

The location of Eastrop Farm in close geographical proximity to the M4 gives it the advantage of being positioned in an area that is fast becoming a commercial and industrial centre of regional significance. The opening of the Second Severn Crossing will lead to a regional reorientation which will create 'a wealth generating corridor including the Swindon area'. An increasing take-up rate of industrial property is likely in the medium term to enhance levels of construction activity.

Given future development patterns the Thamesdown district will undoubtedly be the dominant market for sand and gravel, taking an estimated 60% of produced material. An estimated 20% could potentially enter the North Wiltshire and Vale of White Horse markets. The remaining tonnage is likely to be distributed south of the M4 to the conurbations of Lyneham, Calne and Wootton Bassett.

## APPENDIX 8 - ARCHAEOLOGY



*Libraries, Museums & Archives  
Bythesea Road  
TROWBRIDGE  
Wiltshire BA14 8BS*

### *Archaeological Brief*

*Field Evaluation* Mineral application site

*Site:* Eastrop Farm, Highworth  
*Area:*  
*Land Use:* Agricultural - mainly arable  
*Geology/Topography* Oxford clay, limestone. Land slopes down from south-west to north-east.

### *Archeological Background:*

Medieval village earthworks survive in northern part of site.

2 cropmark enclosures recorded in middle of site.

Large number of finds of prehistoric, Romano-British, Saxon and medieval late from surrounding area.

### *Evaluation Methodology:*

This evaluation is to be a multi-stage.

- Stage 1 - A detailed desk-top study of the application area and the area up to 1km around this, is to be carried out.
- Stage 2 - Areas under arable cultivation are to be subject to fieldwalking. Areas under pasture to be subject to 1m<sup>2</sup> hand-dug test-pitting at 25m gridded intervals.
- Stage 3 - Geophysical survey to be used in areas of high potential.
- Stage 4 - The whole site to be sampled by machine trenching. A 2% ample of the site to be examined by randomly placed trenches. Additionally items of interest identified in earlier stages of work to be targeted for machine trenches.

\* Please note - No archaeological fieldwork to be carried out within the Scheduled Ancient Monument (AM 904) without the written consent of the County Archaeology Service and English Heritage.

All test-pits and trenches should be excavated by a machine using a toothless grading bucket and under constant supervision of a qualified archaeologist. The test-pits and trenches should be excavated to the top of the natural or to the top of archaeological deposits, whichever is encountered first. Wherever archaeological deposits are encountered the trenches should be cleared by hand and the deposits planned and recorded to an acceptable standard (see 'Standards for Archaeological Assessment and Field Evaluation in Wiltshire', Archaeology Service, Wiltshire County Council 1995, copies available on request via email: [archaeology@wiltshire.gov.uk](mailto:archaeology@wiltshire.gov.uk)). Excavation of archaeological

deposits should be limited to resolving questions relating to their date, nature, extent and condition. If burials are encountered during the fieldwork, these should not be excavated and recording limited to obvious detail such as position of the grave cut, alignment, burial position and stratigraphic relationships.

*Monitoring:* The County Archaeological Service should be given a minimum of 1 working week's notice of commencement of work. The County Archaeologist or his assistant should be allowed access to the site at any time during the archaeological works, even if prior notice has not been given.

*Reporting:* A full written report on the evaluation should be prepared, at least two copies of which should be sent to the County Archaeological Service. As this report is to form part of a planning application, it is in the developer's interest to ensure this report is prepared to an adequate standard (see 'Standards for Archaeological Assessment and Field Evaluation in Wiltshire', Archaeology Service, Wiltshire County Council 1995 - request via email: [archaeology@wiltshire.gov.uk](mailto:archaeology@wiltshire.gov.uk)) in order that a judgement of the archaeological value of the site can be made as quickly as possible.

*Deposition of Archive:* An agreement with the relevant museum to accept any artefacts/archive from the site should be finalised before commencement of the fieldwork.