DESIGN & ACCESS STATEMENT

HILLTOP FARM
EASTFIELD LANE, THURGOLAND

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7.0 Summary

1.0 Introduction

Chris Carr Associates have been instructed by Mr & Mrs R Warttig to submit a Full Planning Application for the demolition of redundant agricultural buildings at Hilltop Farm, Eastfield Lane, Thurgoland and the redevelopment of the site for residential purposes.

2.0 Site Assessment

2.1 Location

Hilltop Farm is located immediately adjoining the Northern side of Eastfield Lane, and between Eastfield House and a group of houses and cottages, referred to as Hilltop Cottages. The farm is 1.5km from Thurgoland and 5km from the centre of Barnsley.

Site location plans are attached at **Appendix 1**.

2.2 Background

The site, which is the subject of the Planning Application, was previously a part of a larger agricultural holding which included extensive ranges of farm buildings to the North and South of Eastfield Lane. The premises were developed over a number of years by the present owner's father, and throughout the nineteen eighties and nineties operated as a substantial and regionally important poultry enterprise.

Developed from original general purpose farm buildings, the site became the hub of that poultry enterprise and grew to include feed storage, general purpose, office accommodation and, most importantly, slaughter, dressing, packing and distribution facilities for the business.

Both turkeys and chickens were produced elsewhere on the farm and transported to the site for slaughter, preparation and sales. The central buildings grew to an industrial scale to accommodate the expanding business and almost the whole site area is now covered by a single structure.

Unfortunately, following the death of the applicant's father, and due to changes in the industry, the business ceased to operate in 2003 and has remained largely redundant since. The farming operation, centred around Hilltop Farm, has now become fragmented and the ownership of the core buildings has passed to Mr & Mrs Ronald

Warttig. The site is isolated from surrounding agricultural land and located between existing houses and cottages on the Northern side of Eastfield Lane.

The existing buildings are a mix of timber, concrete and steel framed structures with walls of blockwork and roofs clad with asbestos cement sheeting and metal cladding. Internally, the building has been sub-divided to create space for bulk grain and feed storage with a number of large silos, delivery and collection areas, slaughter house, preparation and dressing rooms, cold rooms, storage areas, offices and plant rooms, compressors and other redundant agricultural equipment.

This is a substantial range of buildings designed for a specific purpose and clearly now redundant to modern-day agricultural use. The owners have investigated the potential for conversion of the existing buildings to a modern slaughter house, meat packing and processing plant but, following professional advice, have concluded that the substantial costs involved in achieving acceptable modern-day environmental standards render the buildings totally redundant and that it would be necessary to redevelop the site completely for this purpose.

The type of existing accommodation, size of spaces involved and finishes mean that the buildings are of an industrial character and could not easily be put to any other local agricultural use. The site is badly located for business use, being served by a narrow country lane and it is unlikely that the Planning Authority would support any future intensification which required access by heavy commercial vehicles. All existing buildings are to be demolished. See demolition plan at **Appendix 2.**

2.3 Photographic Survey

A photographic survey is attached at **Appendix 3**. This illustrates the existing buildings, both internal and external views, and a key plan confirms the directions from which the photographs were taken.

2.4 Measured Survey

A detailed topographical survey of the site has been undertaken and copies of that survey are attached with the Planning Application.

2.5 Phase 2 Site Investigation

The site has been used for intensive agricultural purposes and, in particular, as a slaughter house, dressing and packing centre for a major poultry business. Eastwood &

Partners were instructed by Chris Carr Associates on behalf of the applicant to carry out a desk top study and site investigation. The investigation included six trial pits and four open hole boreholes.

The report finds that the site is likely to feature made ground over much of its area, above clay and sands overlying Silkstone rock of the middle coal measures. It is advised that no special precautions will be necessary to protect against shallow coal mine workings and that no Radon protection will be required. Foundations should be normal strip footings taken through made ground and founded into the underlying dense sand.

A contamination survey found slightly elevated levels in parts of the site and the report recommends capping the garden areas with a 600mm layer of clean capping material including at least 150mm of topsoil.

A copy of the Phase 2 site investigation report is attached with the Application.

2.6 Structural Survey

As it is not intended to retain any of the existing buildings, or utilise any part of them for future use, no structural survey of those buildings was prepared. It should be noted, however, that the existing building is constructed to the boundary on the North East side with Eastfield House and that demolition will need to be carefully undertaken to avoid any unnecessary damage to adjoining property. It is likely that boundary walls along the North East boundary will need to be reconstructed following demolition.

2.7 Bat and Owl Survey

A bat and owl survey has been undertaken by Derek A Whitcher Ltd, wildlife consultants.

No bat roosts were found in any of the buildings on the site. Feeding activity was identified within the buildings and this was confirmed to be from bats roosting in Eastfield Hall, the adjoining property. There is therefore no requirement for a Natural England European Species Licence in connection with the proposed development of the Hilltop Farm site.

A copy of the bat survey is attached at **Appendix 4**.

2.8 Arboricultural Survey

There are few existing trees of importance on the site. Those that remain are in close proximity to the existing buildings and have been damaged in the past. Due to the proximity of existing buildings and overhead power lines, it is advised that they should be removed. A single tree adjoining the entrance is to be retained. The location of existing trees is marked on the site layout plan.

Trees within the adjoining property on the East boundary of the site are in close proximity to the existing buildings. Following demolition and site clearance, these trees should be the subject of a detailed inspection, and overhanging branches likely to cause damage in the future should be removed. New build construction should be moved away from the boundary to provide space for the construction of foundations. If possible, the new access road should pass beneath the trees.

2.9 Drainage and Flood Risk

A drainage statement and flood risk assessment has been prepared by Stevenson Associates. The report describes the existing drainage facilities on site. Foul water is drained to septic tanks and surface water to soakaways and unadopted surface water drains. The report advises that separate foul and surface water drainage systems should be used throughout, that all foul water should be drained to a new Biodisk self-contained treatment plant and that surface water should be taken to the existing surface water drain but with special consideration.

A copy of the drainage statement and flood risk assessment is attached at **Appendix 5**.

3.0 Planning Policy

The site is within the Green Belt. National and Local Green Belt Planning Policy clearly states that development within the Green Belt is inappropriate other than in exceptional circumstances. Existing agricultural, commercial and business uses have a right to maintain and improve their facilities but any substantial redevelopment and/or extension of those facilities would require Planning Permission and such Permission would only be granted on the grounds that it did not adversely affect the openness and/or character of the Green Belt.

Residential uses within the Green Belt are strictly controlled and would not normally be allowed other than in exceptional circumstances and normally only for the purposes of providing accommodation for a person employed full time in either agriculture or forestry. Conversion of existing redundant buildings for residential purposes is allowed but only in

those cases where the existing buildings are judged to be of architectural interest and/or importance, structurally sound and capable of conversion to residential use without major alteration and/or extension. The buildings at Hilltop Farm do not fall within this category and are clearly unsuitable for conversion.

For any proposal to demolish the existing buildings and redevelop the site with residential development to be judged acceptable, it would have to be felt that the proposal was of an exceptional nature which justified a departure from normal policy. We believe that this can be shown to be the case.

4.0 Involvement

As a part of the initial feasibility study, a meeting was arranged with Mr Merryweather, the Local Planning Officer, to visit the site, inspect the existing buildings and discuss future options. A site visit was arranged for Wednesday 20 June 2007 when it was agreed that the site had little or no potential for future agricultural or business use, it was probably not suitable for leisure or tourist uses and that residential use would normally be precluded as a result of Planning Policy.

The architects explained to the Planning Officer that the existing buildings were redundant, that they constituted an intrusion into the Green Belt and open countryside and that they currently detracted from the openness and character of the Green Belt. It was suggested that their demolition and replacement with a small residential development of purpose-designed houses and cottages, arranged in the style of a group of traditional agricultural buildings would be an enhancement of the Green Belt and that, in these circumstances, it would represent a special case that the Planning Authority should feel able to support. The Planning Officer agreed with that view and indicated his support, in principle, subject to full assessment of a Detailed Planning Application.

5.0 Evaluation

The existing "industrial" premises are located immediately adjoining a number of houses and cottages. The site detracts from the residential amenity and privacy of those properties, dominates the immediate locality and is clearly out of keeping with the surrounding Green Belt and open countryside to the South West of Barnsley. Demolition of the existing building, clearance of the site, removal of fill materials and redevelopment with a small number of purpose-designed houses and cottages will result in a material benefit to the Green Belt and it will enhance both the privacy and amenity of existing residential property.

6.0 The Proposals

6.1 Description

It is proposed to construct 6 No new dwellings within the site. A mix of houses and cottages providing three/five bedroomed accommodation are arranged in a traditional courtyard layout with access taken from an inner private roadway leading to a central parking court.

The new buildings follow the natural fall of the land which slopes 3m in a North Westerly direction from Eastfield Lane to the rear boundary. The scheme includes a mix of one and two storey linked buildings, typical of the surrounding rural area.

6.2 Use

It is proposed that following the demolition of more modern portal framed agricultural buildings, all agricultural use of the site will cease. Future use will be private residential in keeping with adjoining properties at Eastfield House and Hilltop Cottages.

6.3 Access

Existing vehicular access to the site is via principal access doors to the farm buildings from a private lay-by adjoining Eastfield Lane, and via an access track which passes to the rear of the site and services existing houses and cottages and farm buildings beyond.

All future vehicular access is to be via a new private roadway constructed from Eastfield Lane to the centre of the site, connecting to a parking courtyard with garaging and parking spaces adjoining individual dwellings. The access roadway is to be enclosed by traditional dry stone boundary walls and surfaced with tarmacadam. Parking spaces will be delineated by the use of artificial stone block paving.

Access to the central courtyard space has been designed to accommodate emergency vehicles and refuse collection.

The rear access track is not required to service the development and lies outside the site's boundaries. The reconstruction of dry stone boundary walls adjoining the track will help delineate its alignment and reinstate the rural character of the area. 2 No additional parking spaces have been provided for Hilltop Cottages.

The existing rights of way over the access track are to be retained for the purposes of servicing the proposed Biodisk foul sewage treatment plant.

Level access is shown to all new dwellings where possible. Due to the steeply sloping site, level access cannot be provided to all dwellings, and in the case of dwellings Nos 2 and 6, short flights of access steps will be constructed to ambulant disabled standards.

6.4 Layout and Scale

The residential development has been designed to reflect a traditional courtyard of stone barns. This building form is common to the area, where a courtyard of stone buildings is constructed in close proximity to the principal farmhouse, providing sheltered accommodation for stock and produce. The development at Hilltop Farm repeats this configuration, retaining the inner courtyard space for common access, parking and circulation, and allowing the outer elevations to be "roof dominated". All new houses have been designed to traditional proportions, having an overall span of between 6m/7m, a wide frontage, low eaves and 40° roof pitch.

The new buildings will be substantially lower and less obtrusive than those which currently exist on site and will have a beneficial impact upon the surrounding Green Belt.

6.5 Appearance and Materials

The detailed design proposals seek to reflect traditional houses, cottages and agricultural buildings within the surrounding area. Roofs will be clad in artificial stone slates and external walls constructed in natural stone. The scheme has been designed to be "agricultural" in character with painted door and window frames set within a minimum 75mm recess to surrounding stonework and with black finished aluminium rainwater goods. Stone boundary walls are to be constructed in dry stone with random stone on edge copings. Pathways and terraces surrounding the dwellings are to be surfaced with good quality artificial stone flags, setts and gravel.

6.6 Landscaping

Landscaping to the site frontage, and internally within the central courtyard, is to include dense shrub planting to enhance enclosure and privacy. Private gardens to all properties will be turfed and a number of heavy standard trees are proposed at critical positions throughout the scheme.

7.0 Summary

The proposed redevelopment of Hilltop Farm will allow for the removal of modern, unsightly agricultural buildings on a prominent site within the Green Belt to the South West of Barnsley. Redevelopment of the site for residential purposes will remove heavy agricultural and commercial vehicles from narrow, rural roads and will enhance the privacy and amenity of adjoining dwellings.

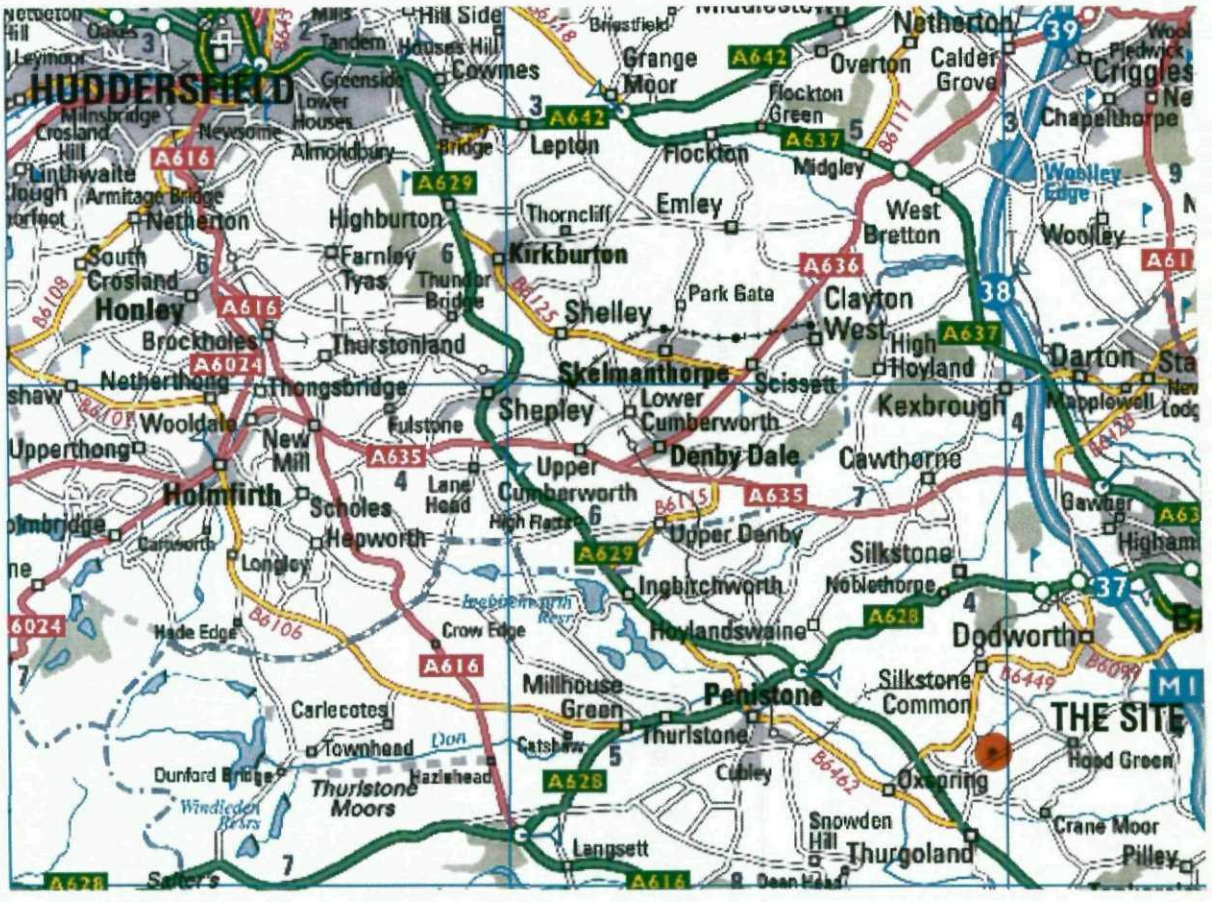
The proposals allow for the construction of six new dwellings, providing a mix of three/five bedroomed properties, built in natural stone and to a layout, scale and appearance in keeping with the site's rural location and Green Belt surroundings. The removal of unsightly agricultural/industrial buildings and their replacement with dwellings will make a positive contribution to the openness and character of the Green Belt.

Signed.....

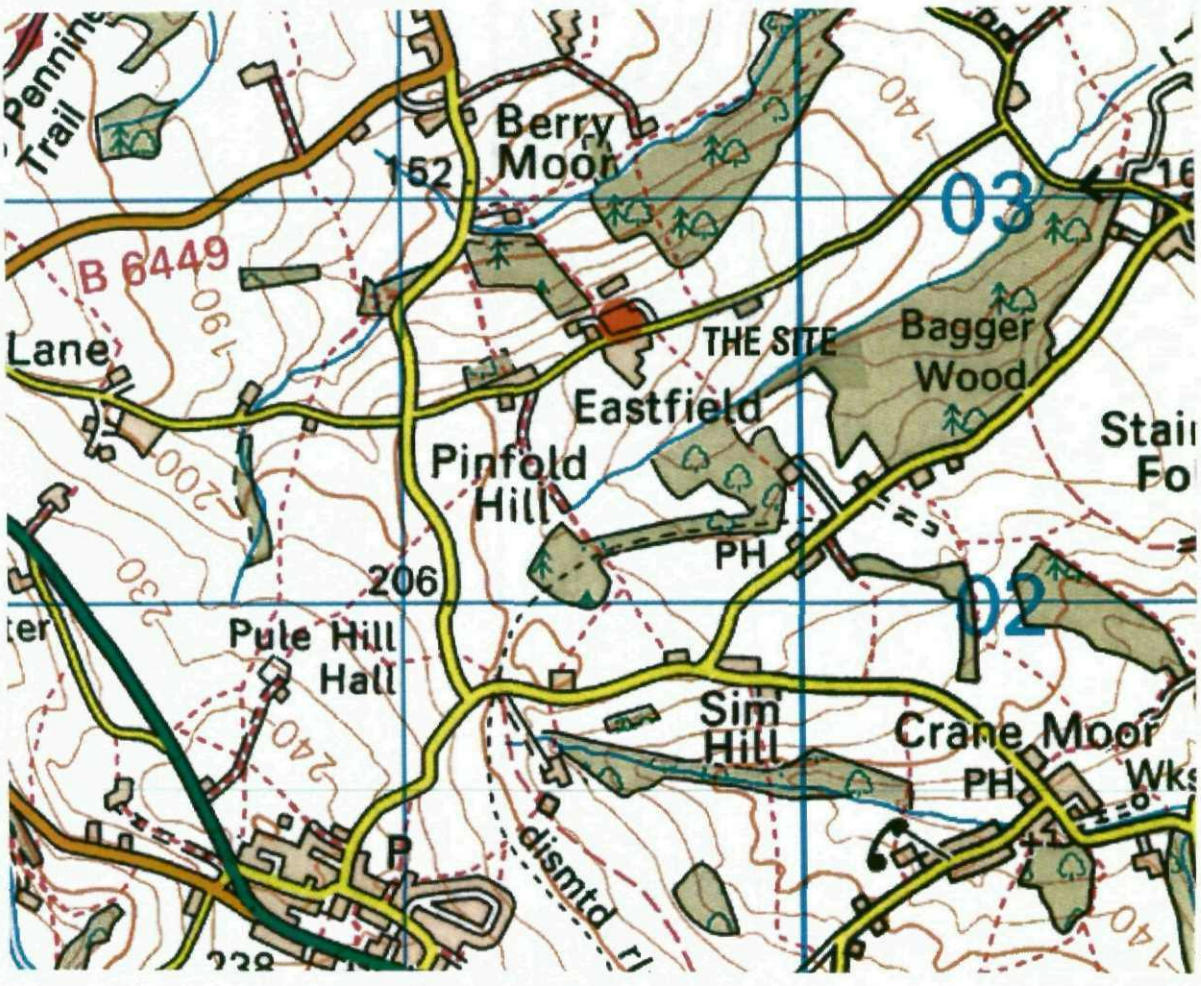
FOR CHRIS CARR ASSOCIATES

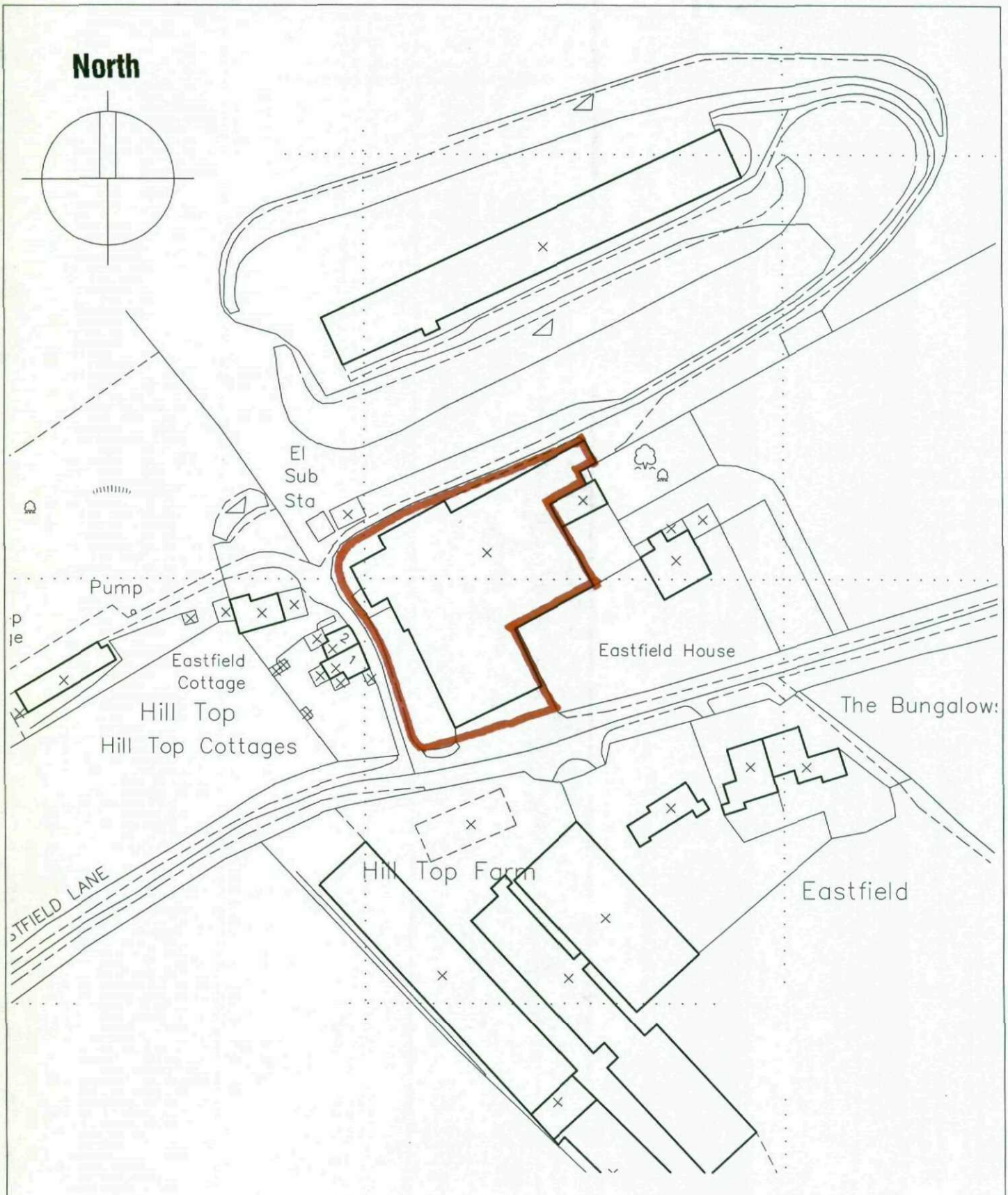
APPENDIX 1

SITE LOCATION PLANS



SITE LOCATION PLAN





HILLTOP FARM, EASTFIELD LANE, THURGOLAND, SHEFFIELD S35 7AY

LOCATION PLAN

Scale 1:1250

Date Nov 07

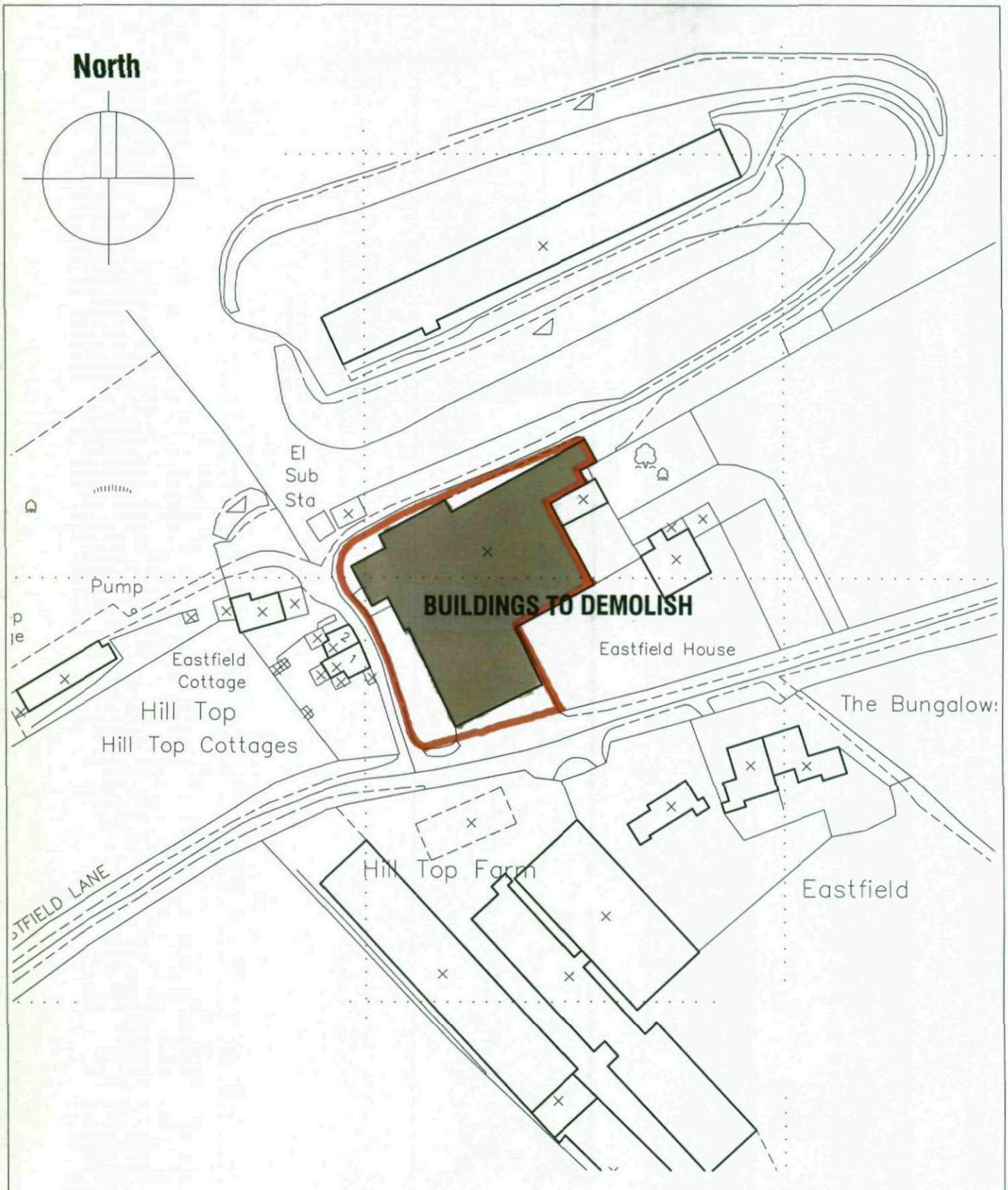
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APPENDIX 2

DEMOLITION PLAN



HILLTOP FARM, EASTFIELD LANE, THURGOLAND, SHEFFIELD S35 7AY

DEMOLITION PLAN

Scale 1:1250

Date Nov 07

Ref 22.14

Drwg No OS3

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APPENDIX 3

PHOTOGRAPHIC SURVEY



1. The existing building from Eastfield Lane



2. The existing building and side access from Eastfield Lane



3. The rear of the existing building as seen from the private access roadway (West elevation)



4. The main entrance from Eastfield Lane



5. Rear elevation of existing building (North)



6. Existing rear entrance at North East corner



7. "Lay-by" adjoining Eastfield Lane with Eastfield House in the background



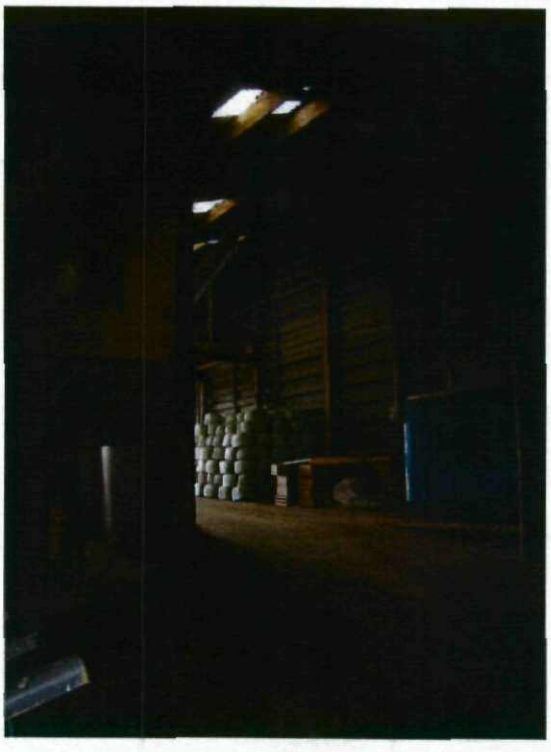
8. The existing access from Eastfield Lane



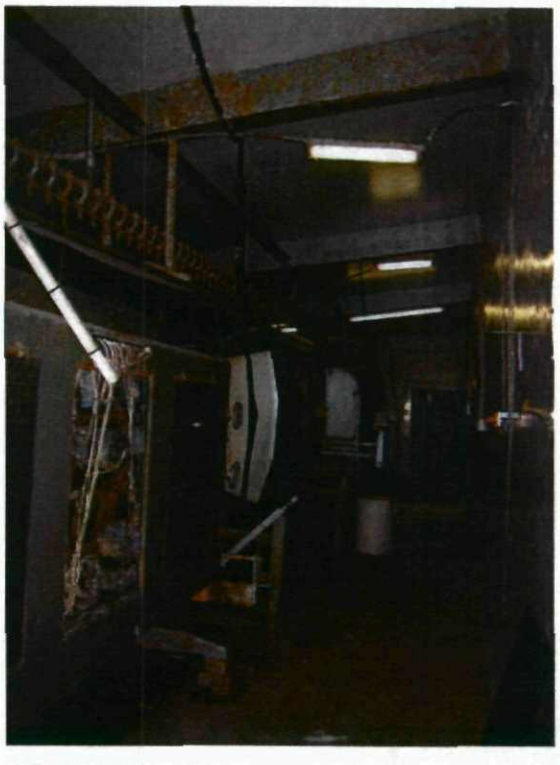
9. Interior view



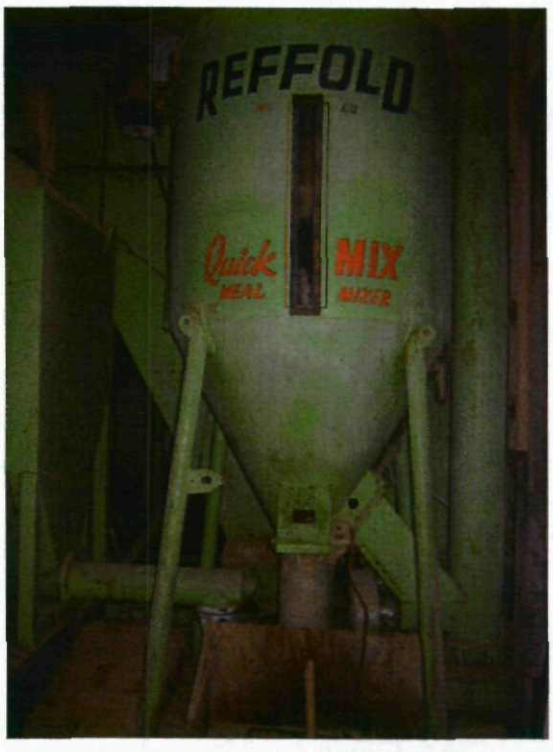
10. Interior view



11. Interior view



12. Interior view



13 & 14. Existing mill mix equipment and controls



APPENDIX 4

BAT AND BARN OWL REPORT

Derek A Whitcher Ltd.
Wildlife Consultants.

HILL TOP FARM, THURGOLAND.

BAT SURVEY.

Ref No:- **070749.**

Date: **7th August 2007.**

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1. INTRODUCTION.

1.1. Hill Top Farm buildings have in the past been used for the production and processing of turkeys but the buildings are no longer used for that purpose. A planning application is to be submitted for a change of use and a bat survey is required in support of that application.

1.2. Derek A Whitcher Ltd was therefore commissioned to carry out a bat survey. The survey was carried out on 27th July 2007. This report outlines the findings of that survey and makes appropriate recommendations.

1.3. Appendix I of this report provides back ground information with respect to bats and the legal protection afforded to them.

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2. SURVEY METHODOLOGY.

The structure was checked for potential bat roosting sites looking for the following signs:-

* Holes, cracks or crevices.
* Bat droppings.
* Prey remains.

This was followed by a dusk emergence survey using a Batbox Duet detector.

****

3. SURVEY RESULTS.

3.1. Site Description.

3.1.1. The site is entirely occupied by a large complex of buildings that were all used for the production and processing of turkeys.

3.1.2. The buildings are constructed from synthetic stone or concrete blocks with a steel frame and corrugated sheet walls and roof above although there are brick and rendered extensions to the rear.



3.1.3. Internally, one large section of the building is occupied by feed storage silos. This area is open to the roof and is very dusty and dirty.

3.1.4. The remainder is occupied by refrigerated areas where the turkeys were processed before sale. These are equipped with cooling plants and are generally lined and insulated within the main structure of the building.

3.2. Day Light Survey Results.

3.2.1. A thorough search of the inside and the outside of the buildings identified few bat roosting opportunities. The buildings are generally single skinned and very dusty and dirty with no opportunity for the bats to seek shelter. No bat droppings or field signs were identified anywhere.

3.2.2. A dead elm tree trunk was identified at the western end of the buildings, between the access track to the rear of the site and the end of the buildings. A number of holes, cracks and crevices were identified in the dead trunk but no field signs to suggest occupation by either bats or birds.

3.3. Dusk Emergence Survey Results.

3.3.1. A dusk emergence survey was carried out by one surveyor equipped with a Batbox Duet detector. The surveyor had free access to the inside and outside of the buildings except at the eastern end where there was no access to Eastfield Hall and its garden.

3.3.2. The evening was clear and fine although there was a stiff breeze blowing. The temperature at 10-00pm was 16°C

3.3.3. A high level of pipistrelle activity was identified on the site with the first appearing at 21.14 and continuous activity thereafter.

3.3.4. The bat activity was concentrated around the eastern end of the site and particularly over the garden of Eastfield Hall where there was continuous pipistrelle feeding activity throughout the survey.

3.3.5. From 21.16 onwards pipistrelle bats were seen and recorded entering the Hill Top Farm buildings with up to four bats at a time flying around the buildings and feeding.

3.3.6. No bat activity was seen or recorded at the western or the northern ends of the site until after 21-40 and this appeared to be a pipistrelle dispersing from the site to feed further away from the site.

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4. EVALUATION OF FINDINGS.

4.1. The time that the first bat was seen suggests that there is a roost very close to the site. This is confirmed by the level of pipistrelle activity seen and recorded throughout the survey.

4.2. The main area of feeding activity was over the garden of Eastfield Hall, next door to the site.

4.3. The high level of feeding activity inside the farm buildings was only to be expected as there was no breeze inside the buildings but there were numerous insects. Bats were seen flying into the building to feed, were recorded within the building and then the echolocation calls reduced or ceased when bats were seen to fly out. This suggests they were flying in to the buildings to feed.

4.4. No bat roosts were found in any of the buildings on the site.

4.5. A further dusk emergence survey was carried out in the grounds of Eastfield Hall, next door to the survey site on 6th August 2007. Six pipistrelle bats were seen to emerge from a roost within the hall confirming the presence of a male summer roost and explaining the pipistrelle activity during the first survey.

****

5. RECOMMENDATIONS.

5.1. No bat field signs were identified and no bat roosts were found within any of the Hill Top Farm buildings. Feeding activity was identified within the buildings and the bats feeding in the buildings were roosting in Eastfield Hall, next door to the site. There is therefore no requirement for a natural England European Species Licence in connection with the proposed development of the Hill Top Farm site.

5.2. Care should be taken when demolishing the existing buildings on the site and in the unlikely event that a bat is found, the bat should be protected from harm and work should cease in that area until further advice has been sought from a licensed bat worker.

5.3. Whilst there is no legal obligation to provide bat roosting opportunities within the new buildings on the site, it is recommended that pipistrelle roost opportunities be provided, either in the form of bat bricks or narrow slots 50mm long and 15mm wide in the back of soffit boards.

****

Derek A Whitcher.
07.08.2007

Appendix I. BAT INFORMATION.

It is necessary to understand a little about bats, their basic nature, ecology and legal protection in order to evaluate the findings of this report.

Over 15 species of bat have been recorded in Britain. These fall into two families, the horseshoe bats and the 'ordinary bats'. They are extremely difficult to identify in the hand and even more so in flight.

All appear to be diminishing in numbers, probably due to shortage of food, caused by pesticides, as insects are their sole diet, and habitat change.

As their diet consists solely of insects, bats hibernate during the winter when their food source is at its most scarce. They will spend the winter in hollow trees, caves, mines and the roofs of buildings.

Certain species, particularly the pipistrelle (the commonest and most widespread British bat) can quickly adapt to man made structures and will readily use these to roost and to rear their young.

Bats are protected under the Wildlife and Countryside Act 1981, The Habitats Regulations 1994 and the Countryside & Rights of Way Act 2000.

It is an offence to intentionally or recklessly kill, injure or capture or disturb bats or to damage, destroy or obstruct access to any place used by bats for shelter or protection.

A breeding or resting site of any bat is known as a bat roost. A bat roost is therefore any structure a bat uses for shelter or protection. Because bats tend to use the same roosts each year, legal opinion is that the roost site is protected whether or not the bats are present at that time.

Bat roosts can be identified by looking for:-

- Suitable holes, cracks and crevices.
- Bat droppings.
- Prey remains.
- By carrying out night observations using a bat detector.

Where development proposals are likely to affect a bat roost site, a licence is required from Natural England.

The person applying for that licence has to be suitably qualified and experienced in bat matters. That person is then responsible for ensuring that the measures contained in the licence are carried out.

APPENDIX 5

DRAINAGE AND FLOOD RISK ASSESSMENT

STEVENSON ASSOCIATES

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PROPOSED DEVELOPMENT at HILL TOP FARM, EASTFIELD LANE THURGOLAND, SHEFFIELD S35 7AY

Drainage Statement / Flood Risk Assessment

INTRODUCTION

It is proposed to redevelop property at Hill Top Farm on Eastfield Lane on the outskirts of Thurgoland. The site is currently occupied by a building previously used for food processing - mainly poultry.

It is proposed to demolish the existing building and construct in its place a small residential development consisting of six to eight new dwellings with gardens around a central courtyard.

This report considers the implications of the proposed changes with regard to drainage and offers a solution to mitigate any effects of the proposals. The report also assesses whether the site will be affected by flooding or cause others to flood.

EXISTING TOPOGRAPHY

The site is irregular in shape with a frontage along Eastfield Lane of around 35 metres and a width across the rear of around 65 metres. It measures approximately 58 metres from front to back producing an area of around 2,670 square metres. The site is almost entirely covered by one building (or a series of existing buildings extended and joined to create one). This building has a roof area of approximately 2,040 square meters.

The site is on the north side of Eastfield Lane and falls from front to back with a difference in level of around four metres. There are farm buildings opposite the site and there is a large house to the east (Eastfield House) and farm cottages to the west. To the rear of the site is a large farm-related building (battery) which is served by a drive to the side and rear of the proposed development site. The battery is at a much lower level than the proposed development site (10 metres or more) and between the two sites there is a steep embankment.

[See Appendix A for site location plan]

EXISTING DRAINAGE

There are no public sewers in the area. Predominantly foul water is drained to septic tanks and surface water to soakaways or (unadopted) surface water drains.

The existing site has separate foul and surface water drainage systems.

Foul water from toilets, sinks and cleaning/wash-down areas drains to a septic tank located in the embankment at the rear of the site. Separate septic tanks serving Eastfield House and Hill Top Cottages are also located in the same embankment close-by.

Surface water from the roof of the existing building and open yard to the front of the building drains to a manhole by the side of the drive at the rear of the property. From here it drains north to Hollin Dike via, at first, a 300mm-diameter drain. The drain collects additional flows from the premises at the rear and is believed to pass beneath the large battery farm building. [Pipe sizes or gradients downstream have not been checked.]

[See Appendix B for Existing Drainage Details]
[See Appendix C for Site Survey]

PROPOSED DRAINAGE

Separate foul and surface water drainage systems will be used throughout.

All foul water will drain to a new bio-disc self-contained treatment plant.

It is proposed to utilise the existing surface water drain for the new development – but with special consideration:

Calculations show that, with a roof area of 2,040 square meters, surface water flows from the existing building would be in the order of 35 litres per second during a 'normal' 1 in 1-year storm. The pipe from site down the embankment should have a capacity in excess of 350 litres per second. However, the yard at the lower level is much flatter and bearing in mind that the drain passes beneath the farm building at the rear, the surface water drain will be laid at a much flatter gradient. Assuming that it is laid to a recognised minimum gradient of 1 in 300, the drain would have a capacity of around 65 litres per second.

This initial section of the off-site drain has been checked for overloading during a 1 in 100-year storm. Flows from site would increase to around 55 litres per second and would still be accommodated within the pipes without surcharge.

As additional areas are drained to the sewer the size of it should be increased. As the entire length has not been verified and areas draining to the sewer have not been confirmed, it is therefore prudent to accept only that which is known: a 300mm diameter drain laid flat across neighbour's property and that it drains beneath a building.

For that reason, flows from the proposed development will be controlled, using a Hydro-brake flow control, to that level expected regularly from the existing building: 35 litres per second during a 1 in 1-year storm.

Subject to final design, it is assumed at this time that the proposed development will be split 50:50 - drained roof and yard areas / garden and landscaped areas.

Fifty percent of the site is around 0.133 hectares and using a 239mm MD5 Hydro-brake flow-control to reduce flows, calculations indicate that 7.3 cubic metres of storage would need to be provided to prevent flooding during a 1 in 100-year storm. The critical storm would be that of 15 minutes during the winter months, where rain would be falling at a rate of 93mm/hr.

However, in line with recommendations in PPG25 / PPS25 and Environment Agency guidelines a further allowance for the unknowns of global warming needs to be made.

For this storm period being considered, a 1 in 200-year storm produces rainfall at a rate of 108mm/hr – some 16% greater and calculations for this storm produce a storage requirement of 8.4 cubic metres when flows from site are restricted to a maximum of 35 litres per second.

[See Appendix D for Drainage Calculations]

FURTHER CONSIDERATIONS

The Environment Agency's Indicative Floodplain Map shows that the site is not within a floodplain and local enquiries verify that there have been no incidents of flooding on this site.

No other design considerations were considered necessary in this regard.

[See Appendix E for the Environment Agency's Flood Zone Map]

SUMMARY AND EFFECTS OF PROPOSALS

It is proposed to redevelop property at Hill Top Farm by demolishing the existing building and construct in its place a small residential development.

It is proposed to maintain the status quo with a like-for-like proposal with improvements.

The existing foul water drainage system will be improved by way of changing from a septic tank to a modern Bio-disc self contained treatment plant.

Surface water draining from the site will be controlled using a Hydro-brake flow-control. Currently rainwater from an area larger in size that that proposed drains through pipes across neighbouring land. Although calculations indicate the initial pipe-work is suitably sized, it is likely that the drain was not designed for storms of the severity now being considered and therefore particular concern is shown for that part of the system which then passes beneath the neighbour's building.

Flows will be reduced to those of a moderate storm (1 in 1-year) and balanced on site for a 1 in 100-year storm plus a further allowance for the unknowns of climate change.

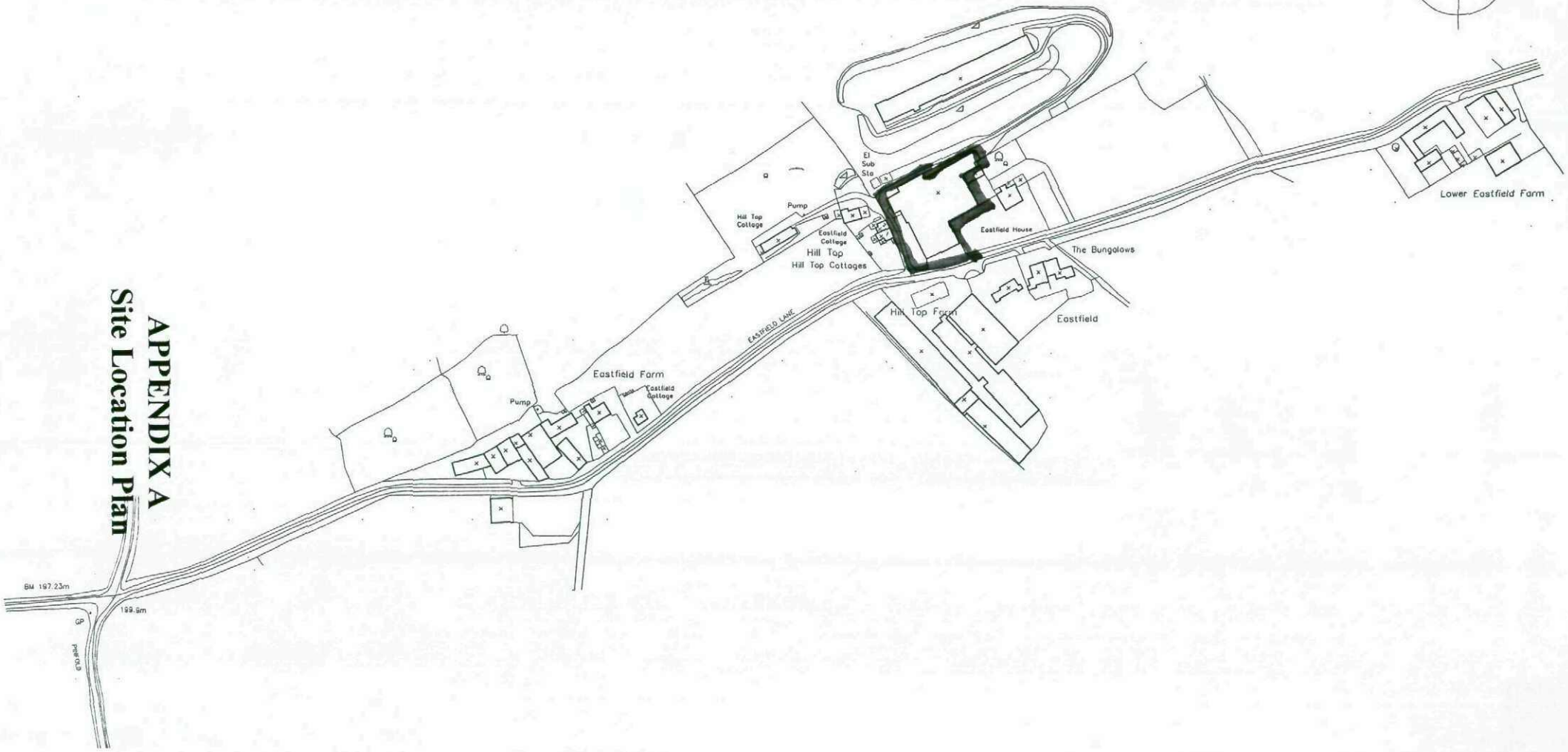
The site is not within a floodplain and it is believed that this and surrounding sites do not flood.

If these measures are taken, the proposals should not affect the current status quo; the site will be adequately protected from flooding and the development will not cause other areas to flood.



Michael Stevenson
25th September 2007

North



APPENDIX A

Site Location Plan

HILLTOP FARM, EASTFIELD LANE,
THURGOLAND, SHEFFIELD
S35 7AY

LOCATION PLAN

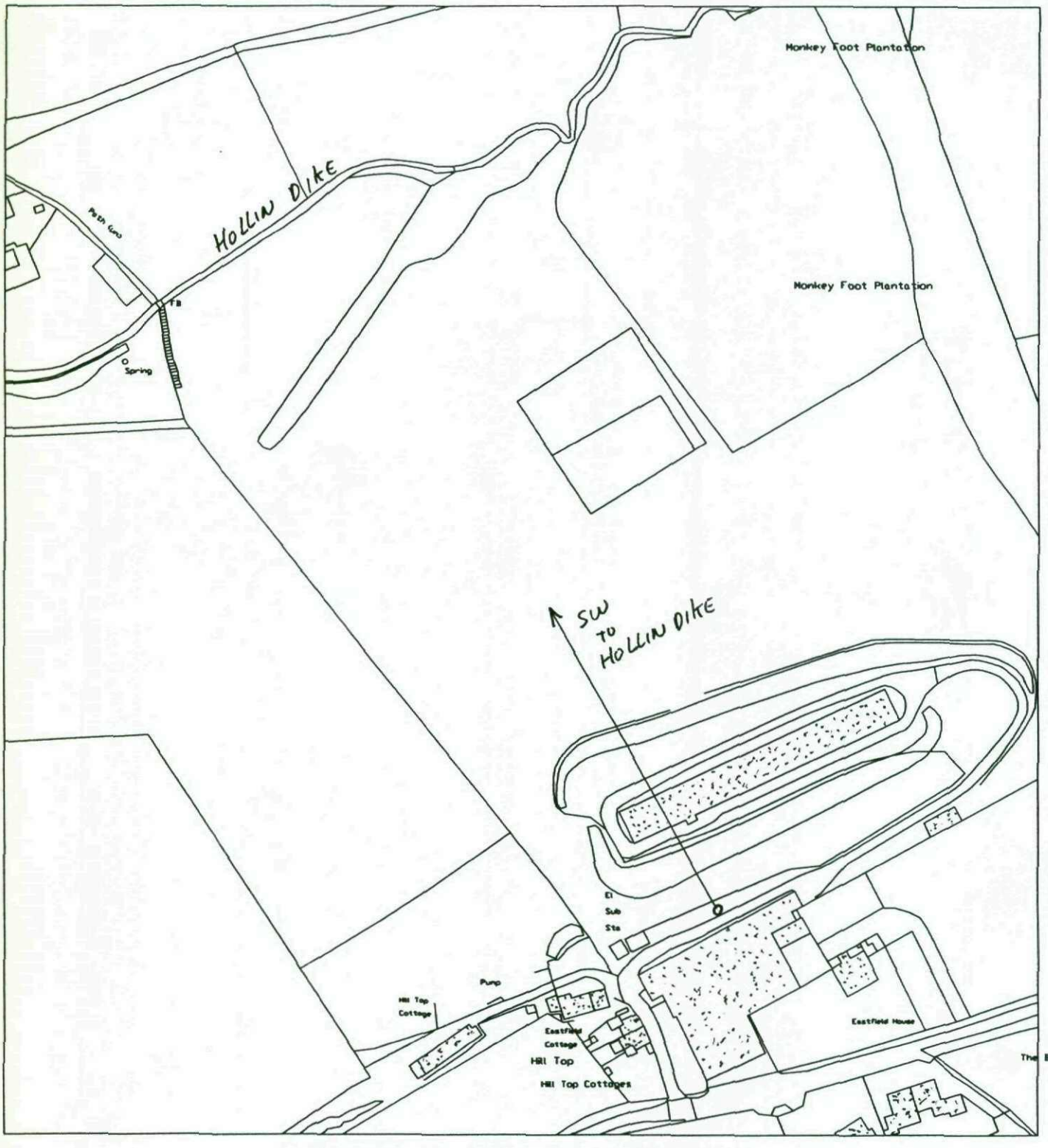
Scale 1:2500

Date May 07

Ref 22.14

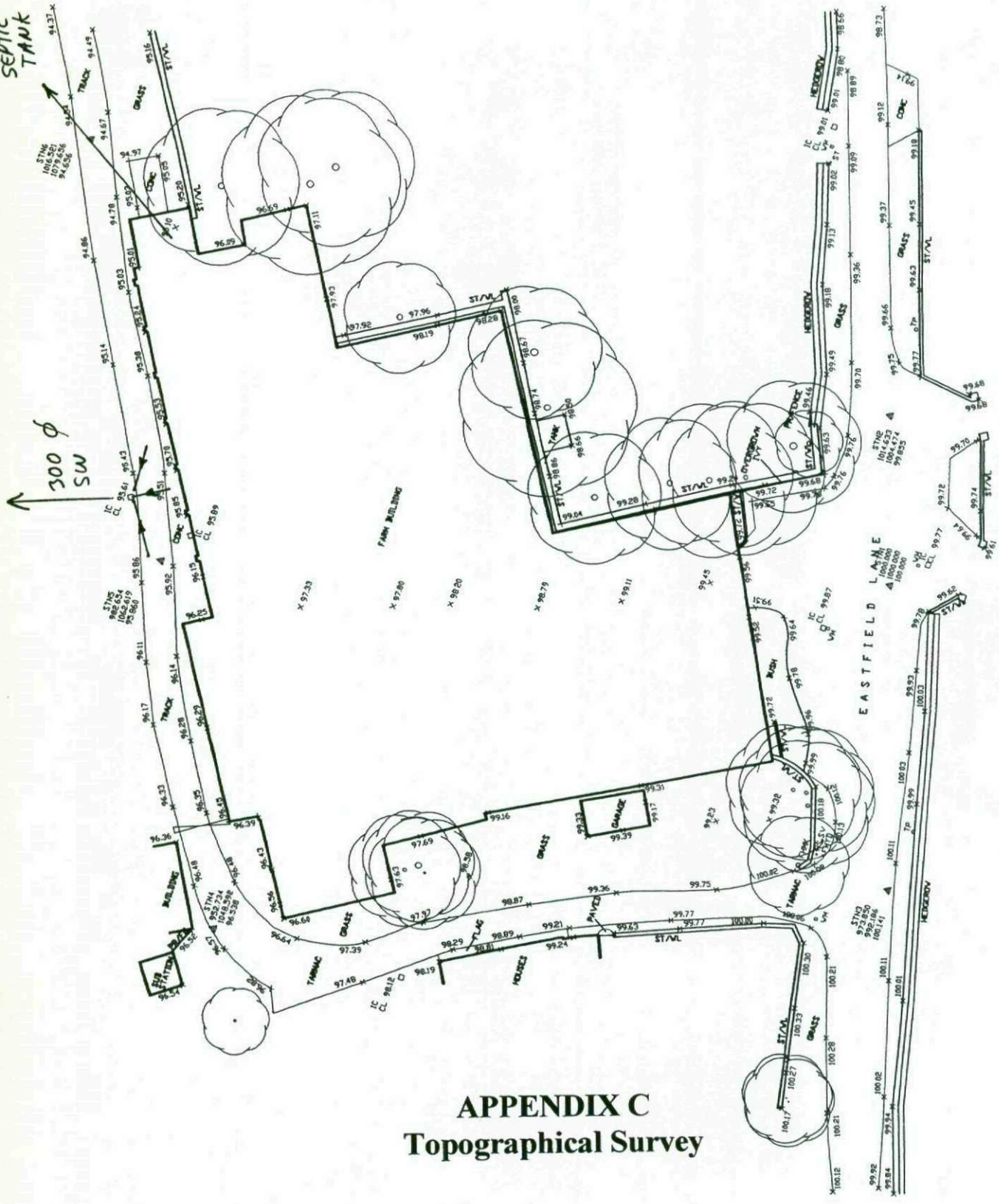
Drwg No OS1

Chris Carr Associates
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APPENDIX B
Existing Drainage Details (off-site)



APPENDIX C
Topographical Survey

Stevenson Associates	
PO Box 58	Hill Top Farm
Monk Fryston	Thurgoland Barnsley
Leeds LS25 5WZ	EXISTING FLOWS
Date September 2007	Designed By Owner
File	Checked By
Micro Drainage	System1 W.10.4

STORM SEWER DESIGN by the Modified Rational Method

Global Variables

Pipe Size File c:¥WinDes¥STANDARD.PIP Manhole Size File c:¥WinDes¥STANDARD.MHS

Location - England & Wales

Return Period (years)	1	Depth from Soffit to G.L. (m)	1.200
M5-60 (mm)	19.000	Min Vel. (m/s - Auto Design Only)	1.00
Ratio R	0.400	Min Slope (1:X - Optimisation)	500
Maximum Rainfall (mm/hr)	100	Minimum Outfall Invert (m)	0.000
Foul Sewage (l/s/ha)	0.00	Ground Level at Outfall (m)	0.000
O'flow Setting (*Foul only)	0	Outfall Manhole Name	
Volumetric Runoff Coeff.	0.75	Outfall Manhole Dia/Length (mm)	0
Infiltration %	0	Outfall Manhole Width (mm)	0
Minimum Backdrop Height (m)	0.200		

Designed with Level Soffits

Network Design Table

PN	Length (m)	Fall (m)	Slope (1:X)	Area (ha)	T.E. (mins)	DWF (l/s)	k (mm)	HYD SECT	DIA (mm)
1.000	10.00	1.000	10.0	0.204	3.00	0.0	0.600	o	300
1.001	10.00	0.035	285.7	0.000	0.00	0.0	0.600	o	300

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	E.Area (ha)	E.DWF (l/s)	Foul (l/s)	Infil. (l/s)	Vel (m/s)	CAP (l/s)	Flow (l/s)
1.000	63.2	3.0	95.610	0.204	0	0	0	5.00	353	35
1.001	61.9	3.2	94.610	0.204	0	0	0	0.93	65	35

APPENDIX D1

Drainage Calculations – (Existing Property)

Time Area Diagram

Time From (mins)	Time To (mins)	Area (ha)
0	4	0.204

Total Area Contributing (ha) = 0.204

Total Pipe Volume (m^3) = 1.414

(c) 1982-2006 Micro Drainage

STORM SEWER DESIGN by the Modified Rational Method

OVERLOADED SYSTEM OPTION 1

Note: Pipe diameters have been increased where necessary and overloaded pipe lines are marked with a '*'.

Global Variables

Pipe Size File c:¥WinDes¥STANDARD.PIP Manhole Size File c:¥WinDes¥STANDARD.MHS

Location - England & Wales

Return Period (years)	100	Depth from Soffit to G.L. (m)	1.200
M5-60 (mm)	19.000	Min Vel. (m/s - Auto Design Only)	1.00
Ratio R	0.400	Min Slope (1:X - Optimisation)	500
Maximum Rainfall (mm/hr)	100	Minimum Outfall Invert (m)	0.000
Foul Sewage (l/s/ha)	0.00	Ground Level at Outfall (m)	0.000
0' flow Setting (*Foul only)	0	Outfall Manhole Name	
Volumetric Runoff Coeff.	0.75	Outfall Manhole Dia/Length (mm)	0
Infiltration %	0	Outfall Manhole Width (mm)	0
Minimum Backdrop Height (m)	0.200		

Designed with Level Soffits

Network Design Table

PN	Length (m)	Fall (m)	Slope (1:X)	Area (ha)	T.E. (mins)	DWF (l/s)	k (mm)	HYD SECT	DIA (mm)
1.000	10.00	1.000	10.0	0.204	3.00	0.0	0.600	o	300
1.001	10.00	0.035	285.7	0.000	0.00	0.0	0.600	o	300

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	E.Area (ha)	E.DWF (l/s)	Foul (l/s)	Infil. (l/s)	Vel (m/s)	CAP (l/s)	Flow (l/s)
1.000	100.0	3.0	95.610	0.204	0	0	0	5.00	353	55
1.001	100.0	3.2	94.610	0.204	0	0	0	0.93	65	55

(c) 1982-2006 Micro Drainage

Summary of Results for 100 year Return Period

Storm Duration (mins)	Maximum Control (l/s)	Maximum Outflow (l/s)	Maximum Water Level (m OD)	Maximum Depth (m)	Maximum Volume (m^3)	Status
15 Summer	30.8	30.8	10.3123	0.3122	6.3	O K
30 Summer	30.9	30.9	10.3148	0.3147	6.3	O K
60 Summer	27.4	27.4	10.2678	0.2677	4.9	O K
120 Summer	21.3	21.3	10.2008	0.2007	3.0	O K
180 Summer	16.8	16.8	10.1653	0.1652	2.1	O K
240 Summer	14.0	14.0	10.1428	0.1428	1.6	O K
360 Summer	10.5	10.5	10.1153	0.1153	1.0	O K
480 Summer	8.5	8.5	10.0988	0.0988	0.7	O K
600 Summer	7.2	7.2	10.0843	0.0843	0.5	O K
15 Winter	32.2	32.2	10.3473	0.3472	7.3	O K
30 Winter	31.4	31.4	10.3258	0.3257	6.7	O K
60 Winter	25.7	25.7	10.2488	0.2487	4.3	O K
120 Winter	17.5	17.5	10.1708	0.1707	2.2	O K
180 Winter	13.2	13.2	10.1368	0.1368	1.4	O K
240 Winter	10.6	10.6	10.1163	0.1163	1.0	O K
360 Winter	7.8	7.8	10.0908	0.0908	0.6	O K
480 Winter	6.2	6.2	10.0728	0.0728	0.4	O K
600 Winter	5.2	5.2	10.0608	0.0608	0.2	O K

Storm Duration (mins)	Rain (mm/hr)	Time-Peak (mins)
15 Summer	93.28	15
30 Summer	61.30	22
60 Summer	38.41	38
120 Summer	23.28	66
180 Summer	17.15	96
240 Summer	13.73	126
360 Summer	9.97	186
480 Summer	7.95	246
600 Summer	6.66	306
15 Winter	93.28	15
30 Winter	61.30	22
60 Winter	38.41	38
120 Winter	23.28	66
180 Winter	17.15	96
240 Winter	13.73	126
360 Winter	9.97	186
480 Winter	7.95	246
600 Winter	6.66	308

APPENDIX D2

Drainage Calculations – (Proposed Storage)

(c) 1982-2006 Micro Drainage

Rainfall Details

Region	ENG+WAL	Cv (Summer)	0.750	Summer Storms	Yes
Return Period (years)	100	Cv (Winter)	0.840	Winter Storms	Yes
M5-60 (mm)	19.000	Shortest Storm (mins)	15		
Ratio-R	0.400	Longest Storm (mins)	600		

Time / Area Diagram

Total Area (ha) = 0.133

Time (mins) from:	to:	Area (ha)	Time (mins) from:	to:	Area (ha)
0	4	0.070	4	8	0.063

(c) 1982-2006 Micro Drainage

Circular Pipe Details

Diameter (m) 0.600 Length (m) 50.000 Cover Level (m) 12.000
Slope (1:x) 500.0 Invert Level (m) 10.000

Hydro-Brake Outflow Control

Design Head (m) 0.600 Hydro-Brake Type MD5 Invert Level (m) 10.000
Design Flow (l/s) 35.0 Diameter (mm) 239

Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)
0.10	8.6	0.60	34.9	1.60	43.7	2.60	55.5	5.00	77.0	7.50	94.3
0.20	21.2	0.80	34.8	1.80	46.3	3.00	59.7	5.50	80.8	8.00	97.4
0.30	30.4	1.00	36.2	2.00	48.7	3.50	64.4	6.00	84.4	8.50	100.4
0.40	34.1	1.20	38.5	2.20	51.1	4.00	68.9	6.50	87.8	9.00	103.3
0.50	35.1	1.40	41.1	2.40	53.4	4.50	73.1	7.00	91.1	9.50	106.2

(c) 1982-2006 Micro Drainage

Stevenson Associates	
PO Box 58	Hill Top
Monk Fryston	Thurgoland
Leeds LS25 5WZ	200 YEAR
Date September 2007	Designed By Owner
File THURGOLAND.SRC	Checked By
Micro Drainage	Storage Design W.10.4

Summary of Results for 200 year Return Period

Storm Duration (mins)	Maximum Control (l/s)	Maximum Outflow (l/s)	Maximum Water Level (m OD)	Maximum Depth (m)	Maximum Volume (m^3)	Status
15 Summer	34.7	34.7	10.4558	0.4557	6.9	O K
30 Summer	34.8	34.8	10.4613	0.4612	7.0	O K
60 Summer	32.4	32.4	10.3528	0.3527	5.0	O K
120 Summer	25.2	25.2	10.2438	0.2437	3.0	O K
180 Summer	20.1	20.1	10.1913	0.1912	2.0	O K
240 Summer	16.5	16.5	10.1628	0.1627	1.6	O K
360 Summer	12.3	12.3	10.1298	0.1298	1.1	O K
480 Summer	9.9	9.9	10.1108	0.1108	0.8	O K
600 Summer	8.3	8.3	10.0973	0.0973	0.6	O K
15 Winter	35.1	35.1	10.5513	0.5512	8.4	O K
30 Winter	35.0	35.0	10.4873	0.4872	7.4	O K
60 Winter	30.7	30.7	10.3088	0.3087	4.2	O K
120 Winter	20.7	20.7	10.1963	0.1962	2.1	O K
180 Winter	15.5	15.5	10.1548	0.1547	1.4	O K
240 Winter	12.5	12.5	10.1308	0.1308	1.1	O K
360 Winter	9.1	9.1	10.1043	0.1043	0.7	O K
480 Winter	7.2	7.2	10.0843	0.0843	0.5	O K
600 Winter	6.1	6.1	10.0708	0.0708	0.3	O K

Storm Duration (mins)	Rain (mm/hr)	Time-Peak (mins)
15 Summer	108.27	15
30 Summer	71.52	22
60 Summer	44.95	36
120 Summer	27.26	66
180 Summer	20.06	96
240 Summer	16.03	126
360 Summer	11.59	186
480 Summer	9.22	246
600 Summer	7.72	306
15 Winter	108.27	15
30 Winter	71.52	23
60 Winter	44.95	36
120 Winter	27.26	66
180 Winter	20.06	96
240 Winter	16.03	126
360 Winter	11.59	184
480 Winter	9.22	244
600 Winter	7.72	306

(c) 1982-2006 Micro Drainage





APPENDIX E

Environment Agency's 'Indicative Flood Zone Map'