

**Royalle Estates/Britch
Associates**

**Arboricultural Survey:
Proposed development at
Manor Inn, Grimethorpe.**

Ref: 1694/DR.07

August 2007

1.0 INTRODUCTION

- 1.01** A. C. S. Consulting is instructed by Britch & Associates, Manchester on behalf of Royale Estates to advise on trees and the implications of development at Manor Inn, Brierley Road, Grimethorpe, Barnsley.
- 1.02** The report is undertaken by Mr Ian Murat, Director, A.C.S. Consulting, Manchester. I have been involved in Arboriculture for fifteen years, with project experience throughout Great Britain, Europe and the Middle East. I hold a Master of Science Degree in Applied Environmental Investigation and RFS Certificate in Arboriculture. I am a Registered Consultant of the Arboricultural Association, a Law Society 'Checked' Expert Witness and a Registered Expert Witness. My duties involve all aspects of Arboricultural Consulting including written and oral evidence for DETR planning enquiries, civil and criminal actions, development appraisals, hazard evaluations and the like. I am a Fellow of the Arboricultural Association and a Professional Member of the ISA.
- 1.03** The assessment I have undertaken identifies trees and discusses their suitability to be retained on the site.

The survey identifies:

- Trees that are undesirable to be retained because of structural or other defects.
- Trees that can be retained with an acceptable level of risk and the measures that are required to ensure their long-term retention.
- Trees removed to accommodate the development

1.0 INTRODUCTION (Continued)

1.04 I visited the site during August 2007 and completed a survey of the trees recording; *species type, age, height, crown spread, diameter-at-breast-height, and condition.*

1.05 My report contains information regarding the trees and the protection requirements of those trees considered desirable or highly desirable to be retained.

1.06 All the trees have been summarised in the tables in Appendix 1 and are to be read in conjunction with the Arboricultural Plan 1694_01.

Appendix 1

1.07 Contains tree tables and key.

Appendix 2

1.08 Contains details of tree protection.

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2.0 BACKGROUND

The Site

- 2.01** The application site is located in the village of Grimethorpe, Barnsley. The site is a brownfield site that housed the Manor Inn. This has been demolished. The site is located in a largely residential area of the village approximately 1 kilometre north of the village centre.

Statutory Protection/Planning Policies

- 2.02** The application is subject to the Planning Policies of Barnsley Metropolitan Borough Council's Unitary Development Plan:

Woodland Hedgerows & Trees

Policy GS22

THE COUNCIL WILL SEEK THE RETENTION AND MANAGEMENT OF EXISTING HEDGEROWS, WOODLANDS AND TREES BOTH INDIVIDUALLY AND IN GROUPS.(sic)

The development is also subject to the Council's Supplementary Planning Guidance Trees and Hedgerows which has additional plan policies.

3.0 TREE SURVEY

3.01 I have identified 3 trees as individuals or in groups where appropriate. The group classification is intended to identify trees that form cohesive arboricultural features either aerodynamically, visually or culturally. A Constraints Plan (1694_01) has been produced.

3.02 I have surveyed the trees for *species type, age, height, crown spread, diameter-at-breast-height, condition*, and their suitability for retention.

Each tree has been assessed using BS 5837:2005 (a copy can be found in Appendix 1).

3.03 The trees have been summarised in Appendix 1. An indication has been given as to *their desirability to be retained*. The trees comprise two mature sycamores located on the northern boundary on a slightly raised area and a linear group of mature cherry along the western boundary. The sycamores are retainable. The trees exhibit good foliage density and vigour and they appear to have a reasonable life expectancy. The trees have suffered from poor past pruning practice which is easily rectified. Their height and the lack of other trees of similar stature in the locality give the trees added prominence. The cherries are mediocre short lived trees as a linear group located along the western boundary. The trees are overgrown with elder and rose. There is also a privet hedge that travels behind the trees. Overall the trees are mediocre specimens and their retention is not considered desirable. Their removal is easily mitigated by new planting.

4.0 DEVELOPMENT IMPLICATIONS

- 4.01** The application site is located at the north end of Grimethorpe on the site of a former public house. An Arboricultural Plan (1694_01) has been produced.

Development Implications

- 4.02** The Constraints Plan identifies tree condition and the corresponding Root Protection Area (RPA) for those trees that are considered highly desirable or desirable to be retained at the site. The proposals are to retain the sycamores (1938 and 1939). Car parking has been located in this area. Through the use of a “no-dig” system, similar to that advocated in BS 5837:2005, the car park will be installed. It will be necessary to calculate the soil CBR to determine the overall depth of the structure. There are no other constraints on development from the retention of the trees. Being located to the north, issues of shade and dominance are not applicable.

Planning Policies

- 4.03** Barnsley Metropolitan Borough Council has one specific policy and a number of secondary policies contained within the SPG. The development accords with these policies.

Tree Protection

- 4.04** A draft specification of protection has been prepared for comment. Following that, a method statement should be prepared by the demolition contractor and agreed with the Arboricultural Consultant and the Arboricultural Officer prior to commencement at the site. A full scheme of protective fencing, its location, and type should be agreed with the Arboricultural Consultant. Definitive plans are to be produced by the Arboricultural Consultant showing the location of the haul routes, storage facilities, compounds and the like prior to commencement on site.

5.0 CONCLUSIONS

Summary

- 5.01** The site is located at the northern end of the village of Grimethorpe. The site is a former public house that has been demolished. The site has two mature individual trees as well as a linear group. The proposals are to construct apartments with areas of car parking and pathways.

Conclusions

- 5.02** An examination of the relationship between the structure and the retained tree concludes that it is satisfactory both in terms of primary development pressure through construction and secondary development pressures through the use of the building. The proposals will result in the loss of the linear group (1940). The loss of these trees has no significant detrimental effect on the tree amenity of the site. The trees are poor short lived trees. The two mature sycamores will be retained. Car parking is proposed beneath the canopies. This will be installed as a "no-dig" structure as advised in BS 5837:2005. A method statement is appended.
- 5.03** Appropriately worded planning conditions should specify the requirement for detailed method statements associated with the following issues: demolition, earth works, fencing, site storage/compounds/site cabins, tree works, monitoring and reporting.


August 2007

Appendix 1

CONTENTS

Key

BS5837: 2005

Tree Tables

KEY

S/D	Stem Diameter (millimetres)
C S	Crown Spread Radius at Cardinal Points (metres)
C C	Height of Crown Clearance (metres)
Age	Y - Young Out planted tree that has yet to establish SM – Semi-mature, established tree up to 1/3 of total life expired EM – Early Mature, between 1/3 and 2/3 of life expired M – Mature, between 2/3 and normal age expected, still capable of growth FM – Fully Mature, expected age, growth only slowly occurring OM – Over Mature, tree beginning to decline and break up due to age, S – Senescent, tree in advanced stage of decline/canopy break up due to age.
Comments	Includes: Physiological Condition Structural Condition Preliminary Management Recommendations (as per BS 5837:2005)
E R C	Estimated Remaining Contribution (years)
Cat	Category Grading (A, B or C) (as per BS 5837:2005)

Table 1 – Cascade chart for tree quality assessment

TREES FOR REMOVAL				
Category and definition	Criteria			Identification on Plan
Category R Those in such a condition that any existing value would be lost within 10 years and which should, in the current context, be removed for reasons of sound arboricultural management.	- Trees that have a serious, irremediable, structural defect, such that <i>their</i> early loss is expected due to collapse, including those that will become unviable after removal of other R category trees (i.e. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning). - Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline. - Trees infected with pathogens of significance to the health and/or safety of other trees nearby (e.g. Dutch elm disease), or very low quality trees suppressing adjacent trees of better quality. NOTE: Habitat reinstatement may be appropriate (e.g. R category tree used as a bat roost: installation of a bat box in nearby tree).			DARK RED
TREES TO BE CONSIDERED FOR RETENTION				
Category and definition	Criteria – Subcategories			Identification on Plan
	1 Mainly arboricultural values	2 Mainly landscape values	3 Mainly cultural values, including conservation.	
Category A Those of high quality and value: in such a condition as to be able to make a substantial contribution (a minimum of 40 years is suggested)	Trees that are particularly good examples of their species, especially if rare or unusual, or essential components of groups, or of formal or semi-formal arboricultural features (e.g. the dormant and/or principal trees within an avenue)	Trees, groups or woodlands that provide a definite screening or softening effect to the locality in relation to views into or out of the site, or those of particular visual importance (e.g. avenues or other arboricultural features assessed as groups)	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)	LIGHT GREEN
Category B Those of moderate quality and value: those in such a condition as to make a significant contribution (a minimum of 20 years is suggested)	Trees that might be included in the high category, but are downgraded because of impaired condition (e.g. presence of remedial defects including unsympathetic past management and minor storm damage)	Trees present in numbers, usually as groups or woodlands, such that they form distinct landscape features, thereby attracting a higher collective rating than they might as individuals but which are not, individually, essential components of formal or semi-formal arboricultural features (e.g. trees of moderate quality within an avenue that includes better, A category specimens), or trees situated mainly internally to the site, therefore individually having little visual impact on the wider locality	Trees with clearly identifiable conservation or other cultural benefits	MID BLUE
Category C Those of low quality and value: currently in adequate condition to remain until new planting could be established (a minimum of 10 years is suggested), or young trees with a stem diameter of below 150 mm	Trees not qualifying in higher categories	Trees present in groups or woodlands, but without this conferring on them significantly greater landscape value, and/or trees offering low or only temporary screening benefit	Trees with very limited conservation or other cultural benefits	GREY
	NOTE: whilst C category trees will usually not be retained where they would impose a significant constraint on development, young trees with a stem diameter of less than 150 mm should be considered for relocation.			

No.	Species	Height (m)	S/D (mm)	Crown Spread (m)				Height of CC (m)	Maturity	Comments	ERC (years)	Cat
				N	E	S	W					
1938	Sycamore	15	650	6	6	6	6	6	M	Twin stemmed tree at 6m, good foliage density and vigour located on a slight raised area, reasonably prominent in landscape, retain.	20	C1/2
1939	Sycamore	15	900 (x10)	4	4	5	5	3	M	Single stemmed tree on raised area, poor past pruning truncated branch to north, good foliage density and vigour, retain.	20	C1/2
1940	Group	7	<400		5			2	M	Linear group of cherry with elder, privet, rosa, mediocre trees possible construction damage from adjacent site, reasonable foliage density and vigour, short lived, loss to development.	10	C1/2

Appendix 2

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Constriction Specification

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Specification for Demolition, Site Clearing & Construction. Manor Inn	Issue: 1
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Main Activity/Area of Work

The works will be within the site boundaries.

Drawing/Specification References

1694_01

Barriers/Fences/Warning Signs

A.C.S. Consulting has marked the limits of all tree protection zones on **Plan No.1694_01**. The following fencing is to be erected after the tree works have been completed and before any top soil stripping/demolition/hard surface removal: Heras fencing supported by a braced metal frame. The fence panels shall butt together and be fixed by two clamps. Each panel will be supported by a 45° section of scaffold tube from the top of the fence panel. The base will be fixed to two sections of 1000 mm long scaffold tube driven at least 500 mm into the ground.

Site Office/Storage Compound

The site office and storage compound shall not be located within the protection zones detailed on the Plans. The plan specifies and area where storage may take place.

The following work must be accomplished before any demolition or site-clearing activity occurs within 10 metres of trees. A flow chart at page 6 details the sequence of events.

1.1) The principal contractor is required to liaise with A.C.S. Consulting (the Arboricultural Consultant) throughout the project which include additional site visits. The critical operations requiring liaison are as follows:

- Tree Works
- Erection of fencing
- Removal of hard surfaces
- Installation of car park

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- 1.2) The demolition/site clearance contractor is required to submit details, prior to beginning work, of all procedures, access and haul routes, storage and tree protection measures in the form of a Method Statement to the Engineer/ACS, with time for the Engineer/ACS to review and consider before the work starts on site.

Tree Felling

- 2) Trees 1940.
- 3) Roots are to be ground out. Any brush clearing required within a tree protection zone shall be accomplished with hand-operated equipment.

Tree Pruning

- 4) 1938, 1939.

Tree Work General

- 5) All felled brush and trees shall be removed from the tree protection zone either by hand or with equipment sitting outside the tree protection zone. Extraction shall occur by lifting the material out or by 'skidding' it across the ground.
- 6) Any damage to trees due to demolition activities shall be reported to A.C.S. Consulting **within one hour** so that remedial action can be taken. The principal contractor shall also notify the Engineer of any damage to the trees.
- 7) Spoil from trenches, basements or other excavations shall not be place within the tree protection zone. Details of site storage of demolition and building materials are to be agreed with the A.C.S. Consulting.

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Construction

The following work must be accomplished before any construction activity occurs within 10 metres of trees.

- 1) The construction contractor is required to liase with A.C.S. Consulting throughout the project, as necessary.
- 2) The fences that have been erected to protect the trees are to be preserved. Fences are to remain until all site work has been completed. Fences may not be relocated or removed without consent from A.C.S.
- 3) Construction vehicles and storage areas must remain outside fenced areas at all times.
- 4) No materials, equipment, spoil, or wash out water may be deposited, stored or parked within the tree protection zone.
- 5) Tree contractors and not construction personnel must perform additional tree pruning required for clearance during construction.
- 6) If injury should occur to any tree during construction the Consultant should evaluate it as soon as possible.

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Foundations.

- 7) The stumps of the trees will have been ground out. The trench for the foundations are to excavated using a super-sonic soil pick. Roots <25 millimetres Ø are to be severed with sharp saw, roots > 25 millimetres Ø are to be retained and reported for evaluation. The trench is to be lined with heavy gauge plastic to reduce concrete poisoning of the soil. Concrete is to be poured by hand into the trench. Consultant may monitor the work that is expected to encounter tree roots.

Hard Surfaces

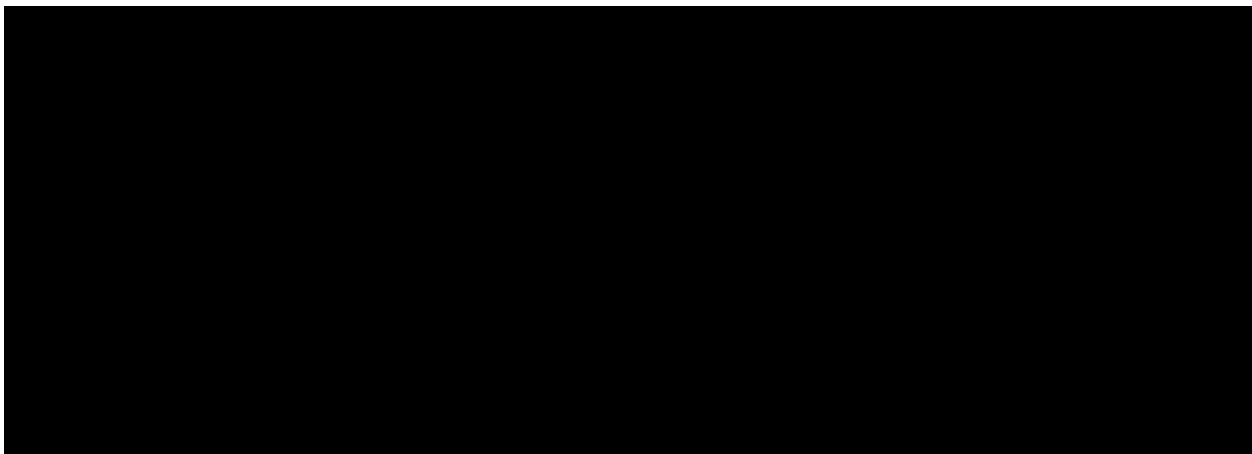
- 8) Sufficient hard surface will be removed to allow the development to take place. That located within the Tree Protection Zone, marked out by A.C.S. Consulting, shall be retained until all development work is finished and landscaping is required. The removal of the hard surface within the tree protection zone shall use the smallest equipment possible and operate from outside the tree protection zone. Hard surfaces shall be removed by using a Super Sonic Soil Pick and by hand working, loading the rubble into buckets of excavators. Exposed roots are to be covered in moist Hessian sacking until they can be covered in high quality top soil. This shall be the final operation on site.

Temporary Working Surfaces

- 8) The ground is to be covered in a suitable geo-textile as described in BS 5837:2005. The voids are to be filled with sharp sand or washed road stone to allow access. The soil CBR is to be calculated so that the correct depth of structure can be built to ensure continuing protection of tree roots.

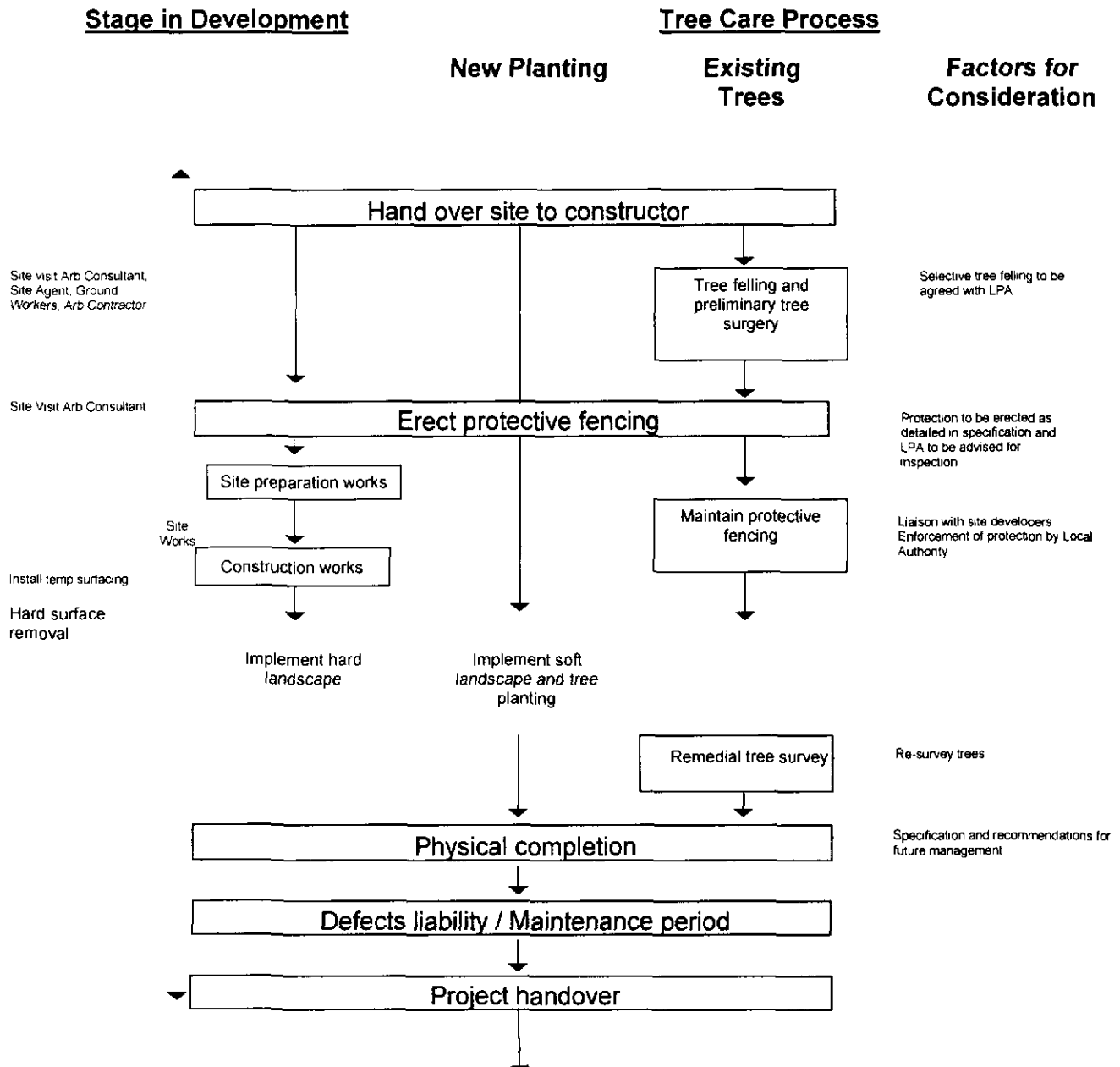
 ACS consulting architectural solutions	DRAFT		No: 1694/SPEC
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- 9) All services shall be installed in accordance with NJUG 10.
- 10) Exposed roots shall be covered in Hessian sacking and kept moist throughout the construction operations until they can be covered in high-grade topsoil.
- 11) Any roots damaged during grading or construction shall be exposed to sound tissue and cut cleanly with a saw. Spoil from trenches, basements or other excavations shall not be placed within the tree protection zone. Details of site storage of demolition and building materials are to be agreed with the Engineer.
- 12) The Contractor shall report to A.C.S. that the works have been completed satisfactory. A.C.S. will be given the opportunity to inspect the works.



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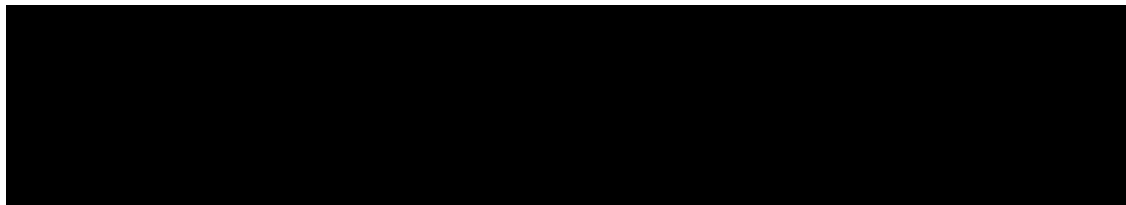
Protection of Trees on Development Sites



Schedule of Tree Works 1694/TW

Manor Inn, Grimethorpe

Tree No	Identity	Particular Schedule of Works Required	
1638	Sycamore	3.7 3.10	Crown clean Crown lift to give 5.5 metres clear branch height, removing minor lateral branches over development.
1639	Sycamore	3.7 3.10	Crown clean Crown lift to give 5.5 metres clear branch height, removing minor lateral branches over development.
1640	Group	3.19 3.20.2.1	Fell, Grind stump out to 300 mm below ground level



METHOD STATEMENT – NO DIG Car park

- 1) The contractor is required to meet with the A.C.S. Consulting at the site prior to beginning work to review all procedures, access and haul routes, storage and tree protection measures. Tree contractors and not construction personnel must perform additional tree pruning required for clearance during construction
- 2) The sketch appended to this spec should be referred to. The product manufacturer Geosynthetics has a product helpline – 01455 617139

Sub-grade Preparation

- 3) Major protrusions: Rocks, stumps to be removed under supervision. Major hollows: All significant hollows are to be filled with SHARP sand to give a level surface. All other vegetation shall be retained. Cellweb shall be laid directly on the site. The Cellweb shall be fixed by means of long steel pins at 1 – 1.5 metre centres. Grade of geogrid is subject to final design.

Placing Geogrid

- 4) The geogrid may be placed on the sub-grade to the road centre line or transversely. Timber boards shall be placed along the sides of the area, overlapping the geogrid. The boards shall be fixed in place with timber pegs.

Sub-base

- 5) A WASHED, graded aggregate is considered a suitable sub-base. Type 1 or Type 2 is recommended as described in Clauses 803 and 804 in the DoT Specification for Highway Works.

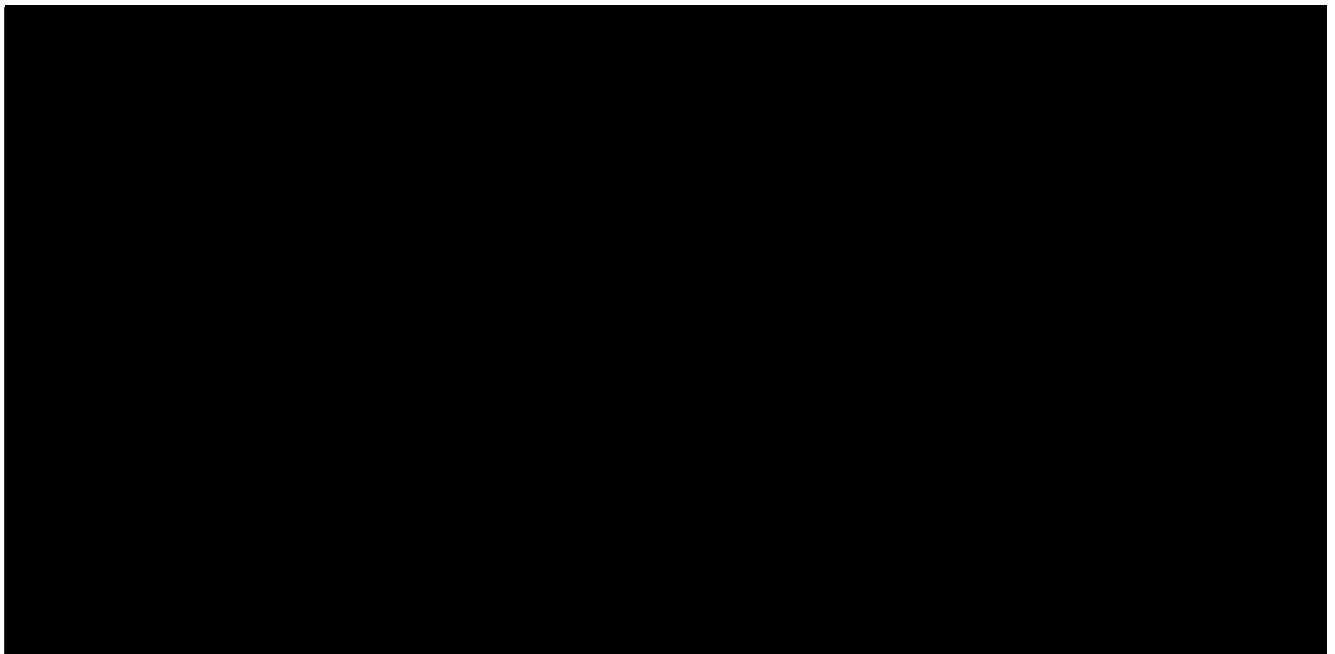
A.C.S. Consulting

Placing Sub-base

- 6) Lorry loads of the sub-base material shall be tipped into stockpiles adjacent to the Tree Protection Area and *NOT* directly onto the Cellweb. The sub-base shall be spread by suitable mechanical plant with due regard for the tree canopies. The sub-base shall be spread in such a manner that the material cascades onto the geogrids. The material will be spread in such a fashion that the material advances across the grids rather than along. The material shall be spread in layers of 100 mm thickness to the required depth.

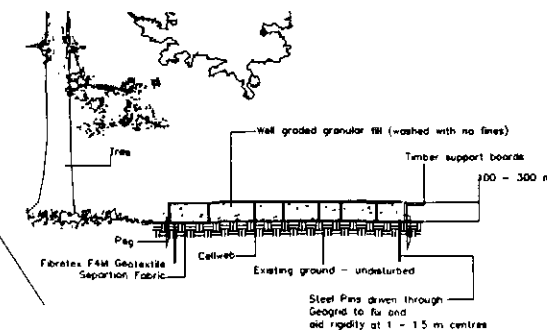
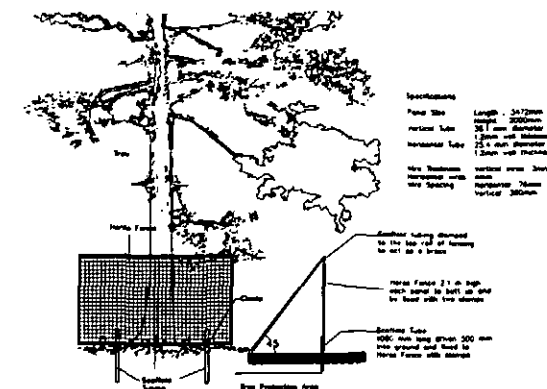
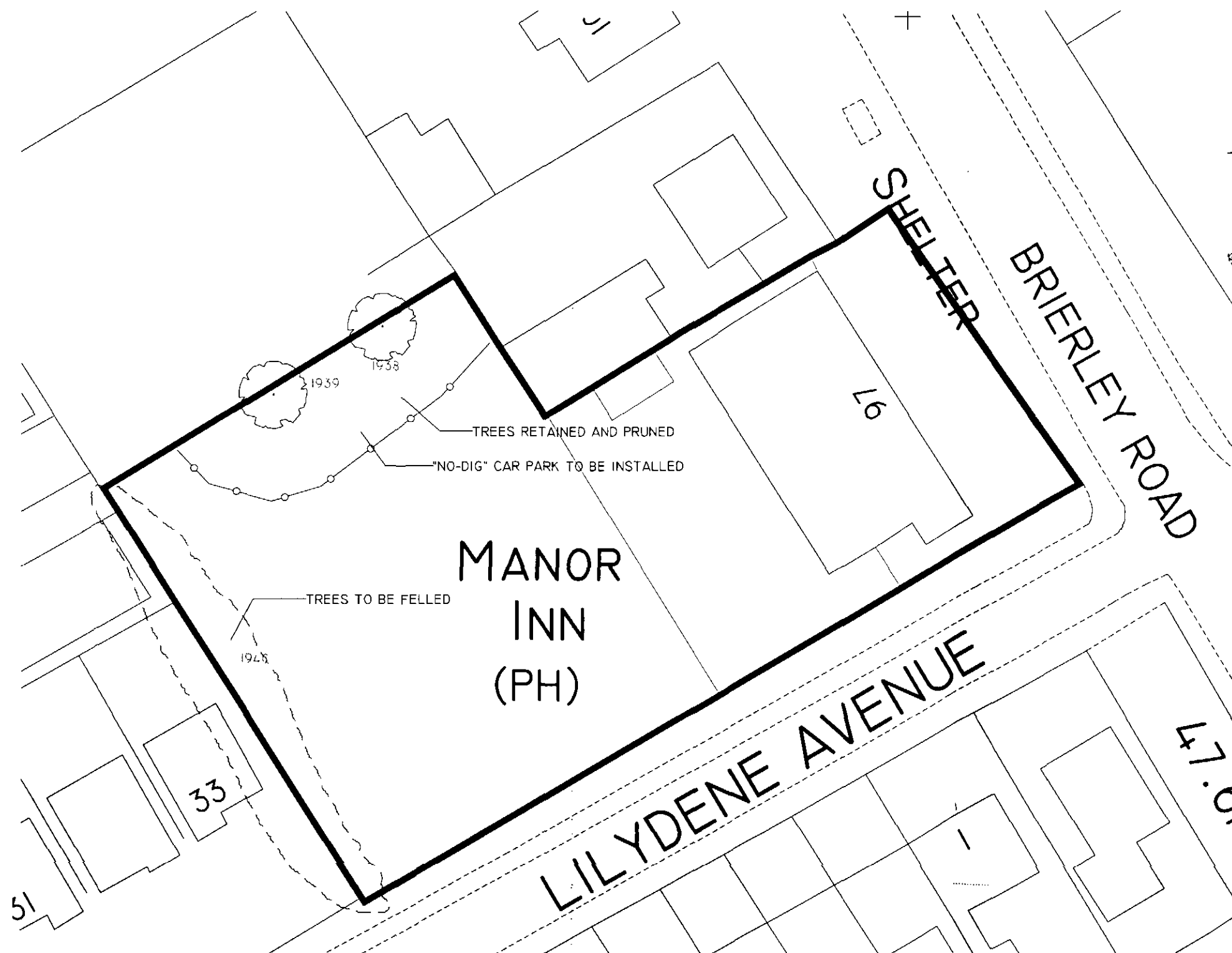
Compaction

- 7) No compaction of the unbound sub-base is to take place.
- 8) The final layer shall be placed over the stone. This may consist of dry laid block sets or tarmac. At all times the operation will be conducted from the roadside.
- 9) Any damage to trees due to construction activities shall be reported to A.C.S Consulting **within one hour** so that remedial action can be taken.
- 10) Construction vehicles and storage areas must remain **outside** the Tree Protection Area at all times.
- 11) No materials, equipment, spoil or washout water may be deposited, stored or parked within the Tree Protection Area.






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Tree Retention

Number	Category
1000	Highly Desirable
1000	Desirable
1000	Optional
1000	Fell/Loss to condition

Root Protection Zone (RPZ)



Tree Protection

Refer to Construction and Demolition Specification.



Existing trees which are to be retained (refer to Arboricultural Report for details)



Existing trees which are to be removed (refer to Arboricultural Report for details)

DO NOT SCALE

NO	REVISIONS	DATE	BY	CHKD

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MAIL@ACSCONSULTING.CO.UK	

CLIENT	ROYALLE ESTATES
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LOCATION	MANOR INN, GRIMETHORPE
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DRAWING TITLE	ARBORICULTURAL PLAN
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SCALE	1:200	DATE	AUG 2007	REV	
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