BRITISH STANDARD 5837 TREE SURVEYS ARBORICULTURAL IMPLICATION STUDIES TPO/PLANNIG ADVICE/ PROJECT MANAGEMENT
TREE INVENTORIES AND RISK ASSESSMENTS WOODLAND MANAGEMENT PLANS TREE PLANTING SCHEMES TPO RE-SURVEY




ARBORICULTURAL IMPLICATIONS ASSESSMENT

PROPOSED DEVELOPMENT

AT

HILLSIDE
MOOR LANE
WISWELL

Author: C. Salisbury
Date: 26 June 2023
Ref: TRE/HML/Rev C

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1.0 Introduction

1.1 Mulberry Tree Management were instructed by Mr T Smith, to carry out an arboricultural survey of trees at their site in Moor Lane, Wiswell.

1.2 This report details the arboricultural implications of developing the site, including:

- a survey of the trees on and near the development which may impact the proposal from ground level, noting their location, species and all relevant parameters, i.e. stem diameter, height, crown spread, condition etc;
- providing advice on the removal, retention and management of trees;
- assessment of the potential effects of the proposal on retained trees and vice versa;
- assessment of the requirement for tree protection for the duration of the works;
- mitigation for any loss;
- preparation of a tree schedule;
- and report on the above matters.

1.3 The survey was carried out on 25 March 2022 by means of inspection from ground level by an experienced and qualified arboriculturalist. The inspection can be restricted in cases where trees were Ivy clad or surrounded by vegetation.

1.4 Under *BS5837: 2012 Trees in Relation to Construction - Recommendations*, the assessment of trees is made objectively. The tree categorisation method identifies the quality and value of the existing tree stock, allowing informed decisions to be made concerning development design layout.

1.5 The following documents have been made available by the client:

- Drawing- Topo.dwg
- Drawing- 23-06-26_22007_Hillside, Wiswell_Site Plan.dwg

1.6 The supplied drawing included some tree positions plotted. Any dimensions regarding tree positions and protective fencing must be checked on site.

1.7 Weather conditions during the survey were dry and still.

1.8 The survey was carried out noting the conditions of the trees at the time of inspection. As trees are part of the natural environment, conditions can naturally change; therefore the contents of this report are valid for one year only. After this period, re-inspection may be necessary.

2.0 Survey Methodology

2.1 The trees were surveyed (prefixed T, or G for group) and recorded in the tree schedule in appendix one. Where groups are recorded, average height and diameter at breast height (DBH) of the trees in the group are reported. Where access to the base of any trees was limited, stem size was estimated.

2.2 All the trees were assessed using: a grading A to C (retention) and U (removal); condition and age class as defined in appendix two.

2.3 Where appropriate, canopy spread for each tree was recorded at four cardinal points in order to reproduce an accurate representation of the crown shape of the tree on the tree plan in appendix three.

2.4 The survey included all trees within the proposal area and trees near to the proposal.

2.5 Sight lines were difficult to establish during the survey due to the dense vegetation hence trees were grouped appropriately.

3.0 Development Proposals

3.1 Due to the proposed development and its associated infrastructure there are a number of locations where the proposals are in close proximity to the trees surveyed. The Site Layout Plan within appendix three identifies the trees in relation to the proposed development.

3.2 In order to fully assess the impact of the proposals an Impact Table has been created detailing each tree, which shows the proximity of the associated works to the tree.

3.3 This can then be assessed in accordance with BS 5837:2012 to determine whether the development will have a detrimental impact on the health of each tree. Once this has been determined remedial measures can be detailed to reduce the impact the proposals will have on the treescape.

3.4 Impact Table:-

Tree No.	Root Protection Area identified in Table 2 of BS 5837:2012	Distance to Proposed Hard Standing (m)	Distance to Proposed Development (m)	Can the Tree/s be Successfully Retained
T1	65m^2	N/A	N/A	Yes
T2	Fell Due to Development			
T3	62m^2	1.50	16.10	No
T4	180m^2	12.70	38.50	Yes
T5	297m^2	8.50	28.40	Yes as outlined in section 5.0
T6	80m^2	8.50	21.50	Yes
G1	76m^2	N/A	N/A	Yes
G2	33m^2	N/A	N/A	Yes
G3	Fell Due to Development			
G4	Fell Due to Development			
G5	209m^2	3.70	37.70	Yes as outlined in section 5.0
G6	80m^2	8.70	31.60	Yes
H1	2m^2	N/A	N/A	Yes
H2	2m^2	1.40	4.50	Yes
H3	2m^2	0.80	35.10	Yes
H4	2m^2	2.60	1.70	Yes

4.0 Impact Assessment

4.1 To assess the implications of the Impact Table each tree can be categorised in the following way: -

	Trees to be retained		Trees to be removed	
	With No Impact	With detailed construction	Due to Condition	Due to Development
Tree No.	T1, T4, T5, T6, G1, G2, G5, G6, H1, H2, H3 & H4	N/A	N/A	T2, T3, G3 & G4

5.0 Mitigation Proposals

5.1 Car Parking/Driveway

5.1.1 The impact table below shows the proposed car parking having a minor encroachment into the root protection area of T5 & G5. It is felt that due to the species, condition and limited extent of encroachment the proposal will not have a detrimental impact on the safe useful life expectancy of these trees.

5.1.2 Section 7.4.2.3 of BS 5837:2012 advises that new permanent hard surfacing should not exceed 20% of any existing unsurfaced ground within the RPA. The table below details the amount of new surface proposed within the RPA of each tree.

Tree No	Total Area m2 of RPA	Total m2 of New Hard Surfacing within the RPA	Percentage of Hard Surfacing within the RPA
T5	297	3.90	1.40%
G5	209	1.90	0.90%

5.1.3 As you can see form the table the proposed hard surfacing does not exceed 20% for each of the RPA's. It is therefore felt that the proposed driveway will not have a detrimental impact upon the existing trees.

5.2 Visibility Splays & G5

5.2.1 The location of these trees falls outside the required visibility splay, however to ensure their canopies do not encroach they should be crown lifted to 3.5m over the highway.

6.0 Conclusions and Arboricultural Recommendations

6.1 The tree categorisation method identifies the quality and value of the existing tree stock but it is not meant to be interpreted rigidly and is presented in order to form a balanced judgement on tree retention and removal.

6.2 A precautionary method of working near trees is detailed in the accompanying Arboricultural Method Statement.

6.3 Following site development, regular (annual or biannual) inspections of all retained trees should be undertaken by a qualified Arboricultural Consultant.

6.4 It is considered that in following the advice in this document, any negative factors affecting trees on the site will be minimised.

Appendix One

Tree Survey Schedule

TREE SURVEY SCHEDULE

Arboricultural Data Sheet:				Date of Survey: 25/03/22					Surveyor: C. Salisbury			
Tree No.	Species	DBH (mm)	Height (m)	Age	Crown Spread (m)				Crown clearance	Condition rating	Comments and preliminary management recommendations	Estimated remaining contribution	Tree quality category rating
					N	**E**	**S**	**W**					
T1	Poplar	380	9.80	SM	3.0	3.0	3.0	3.0	4.00	B	An individual specimen situated within an adjacent property.	40 – 60	**C2**
T2	Conifer	670	11.60	M	2.5	2.5	2.5	2.5	0.00	B	An individual specimen with reasonable form.	20 – 40	**C2**
T3	Eucalyptus	370	12.20	EM	3.0	3.0	2.0	4.5	4.00	B	A poor-quality twin-stemmed specimen.	40 – 60	**C2**
T4	Maple	630 est.	16.60	M	2.0	5.0	4.0	5.0	7.00	B/C	A co-dominant specimen with poor form displaying evidence of stem decay.	60 – 80	**B2**
T5	Poplar	810 est.	17.20	M	4.5	4.5	4.5	4.5	8.00	B/C	A co-dominant specimen with poor form displaying evidence of stem decay.	20 – 40	**C2**
T6	Maple	420	9.80	EM	3.0	3.0	3.0	3.0	2.50	B/C	A poor-quality ivy-clad specimen.	40 – 60	**C2**
G1	Conifer & Rowan	410<	8.40	EM	-	-	-	-	3.00	B	An ornamental group situated within a raised bed.	20 – 40	**C2**
G2	3 x Ash & 3 x Holly	270<	9.80	SM	-	-	-	-	0.50	B/C	A poor-quality linear belt situated on the property boundary.	40 – 60	**C2**
G3	3 x Cherry & 1 x Dead Tree	750<	6.80	SM/EM	-	-	-	-	3.00	B/C	An ornamental group situated adjacent to a highway. – **Fell 1 x dead tree**	10 – 20	**C2**

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					N	**E**	**S**	**W**					
G4	Cherry	430<	7.20	EM	-	-	-	-	2.50	C	A poor-quality ivy-clad linear belt situated on the property boundary.	10 – 20	**C2**
G5	2 x Holly, 1 x Beech & 1 x Ash	680<	12.60	EM/ M	-	-	-	-	3.00	B/C	A mixed species group situated adjacent to a highway. **Fell the Ash due to Ash Dieback**	40 – 60	**B2**
G6	Willow & Holly	420<	5.80	EM/ M	-	-	-	-	0.00	B/C	A poor-quality mixed species group.	20 – 40	**C2**
H1	Holly & Elderberry	60 avg.	3.40	EM	-	-	-	-	0.00	B/C	A well-maintained boundary hedge.	20 – 40	**C2**
H2	Privet & Laurel	60 avg.	2.00	EM	-	-	-	-	0.00	B/C	A well-maintained boundary hedge.	20 – 40	**C2**
H3	Holly	60 avg.	1.60	EM	-	-	-	-	0.00	B/C	A well-maintained boundary hedge.	40 – 60	**B2**
H4	Holly	60 avg.	1.60	EM	-	-	-	-	0.00	B/C	A well-maintained boundary hedge.	40 – 60	**B2**

Appendix Two

Tree Survey Key

Trees for removal			
Category and definition	Criteria		
Category U 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 their 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 bat box in nearby tree).		
Trees to be considered for retention			
Category and definition	Criteria - Subcategories		
	1 Arboriculture values	2 Landscape values	3 Conservation values
Category A **Those of high quality and value**: in such a condition as to be able to make a substantial contribution (a minimum 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 arboriculture features (e.g. the dominant and/or principal trees within an avenue)	Trees, groups or woodlands which 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)
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 remediable 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 arboriculture features (e.g. trees of moderate quality within avenue that includes better, A category specimens), or trees situated mainly internally to the site, therefore individually having little impact on the wider locality	Trees with clearly identifiable conservation or other cultural benefits
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 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
	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		

Age Class

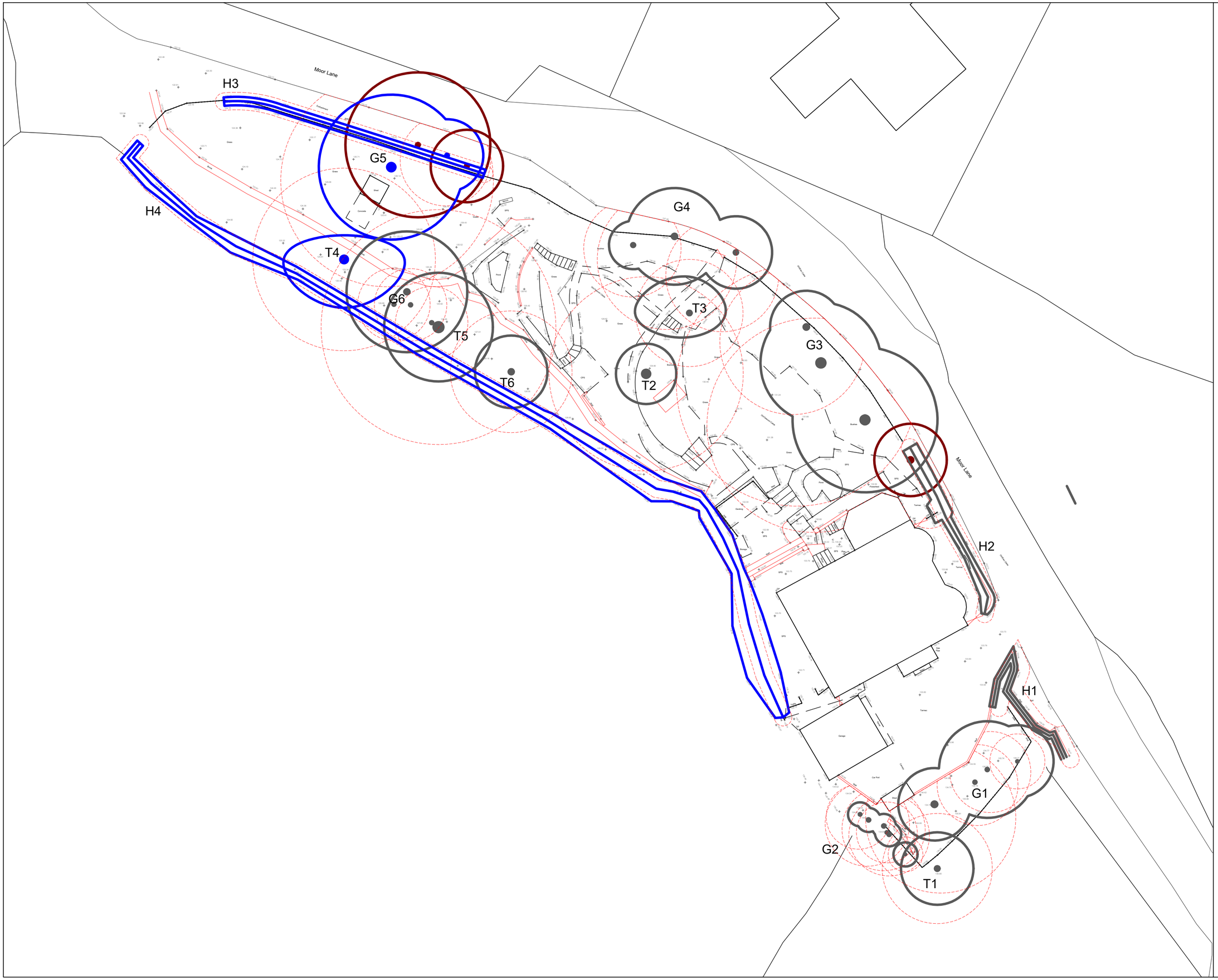
Y	Young	Trees that have not yet established
SM	Semi-Mature	Established trees up to 1/3 of expected height and crown
EM	Early mature	Between 1/3 and 2/3 expected height and crown
M	Mature	Between 2/3 and full expected height and crown
FM	Fully Mature	Full expected height and crown
OM	Over-Mature	Crown beginning to break up and decrease in size
S	Senescent	Crown in advanced stage of break-up

Condition

A	Good
B	Fair
C	Poor
D	Dead

Appendix Three

Plans



Category A Trees

Category B Trees

Category C Trees

Category U Trees

Root protection area

Mulberry TMC
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Tel: 0161 955 3628
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Site Address:
Hillside
Moor Lane
Wiswell

Drawing Title:
BS5837 Plan

Drawing No:
HMLW/BS/01

Date:	Scale:	Drawn by:
04/05/2022	1:200@A2	CS

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Drawing Title:
AIS Plan

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HMLW/AIS/01 Rev C

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26/06/2023	1:200@A2	CS