

From: Laura Gibbons
Sent: 22 July 2019 12:21
To: kazys [REDACTED]

Subject: RE: Mistletoe Farm, Horsemere Green Lane. CM/13/19/RES; Revised Drainage Proposals

Kazys,

Thank you for sending over the revised plan. I believe there is some conflict between what you are proposing and the tree protection plan (attached).

The permeable paving for plot 2 looks like it could only be located in the T furthest round on the road rather than at the junction of roads 1 and 2. The swale also appears to be within a no dig area.

Thanks,

Laura Gibbons, MEng, GMICE
Engineer (Drainage & Coastal)

Laura Gibbons | Engineer (Drainage & Coastal), Engineering Services, Arun District Council | Location: First Floor, Arun Civic Centre, Maltravers Road, Littlehampton, BN17 5LF
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From: kazys [REDACTED]
Sent: 17 July 2019 09:54
To: Laura Gibbons <Laura.Gibbons@arun.gov.uk>
[REDACTED]

Subject: Mistletoe Farm, Horsemere Green Lane. CM/13/19/RES; Revised Drainage Proposals

Laura

Following on from your e-mail and our subsequent discussion I have re-assessed the drainage for the Mistletoe Farm site and hopefully my latest proposals will meet with your approval.

In brief I have provided permeable surfacing at the junction of Roads 1 & 2 and in the parking area of plot 1. These have been linked with a piped system and I've managed to incorporate a ditch/swale in the network. Final gravity discharge into the adjacent watercourse will be restricted to 2.0 lits/sec but in practise I anticipate it will be at a rate lower than this. The final design and modelling will be dependant on undertaking infiltration testing in the winter and if you require we can undertake groundwater monitoring through the winter period for the shallow soakaways.

Obviously the fall back position, should it be necessary, would be a pumped attenuation system details of which have been previously submitted to you.

I trust this new proposal will enable any drainage objections you have for the proposed scheme to be removed and you can advise your planning colleague accordingly.

I'll give you call later to discuss these proposals.

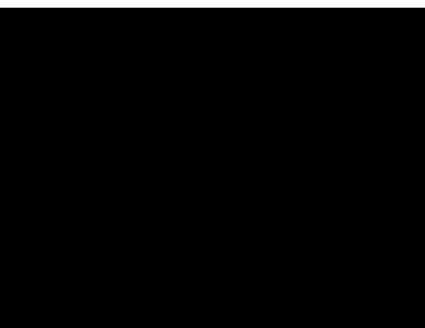
Many thanks for your cooperation and input on this scheme.

Regards

Kazys

Kazys Narbutas

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From: Laura Gibbons <Laura.Gibbons@arun.gov.uk>

Sent: 16 July 2019 14:32

To: kazys [REDACTED]
[REDACTED]

Subject: RE: Mistletoe Farm, Horsemere Green Lane. CM/13/19/RES

Hi Kazys,

Thanks for sending over the infiltration results and your proposals for mistletoe farm.

I have looked at the details and believe a gravity fall can be achieved and the need for pumping removed. I appreciate that there are numerous trees on site constraining design.

Please consider using permeable paving in the two areas that you can (proposed access road T and parking area for plot 1) with these areas providing storage. Pipework connections will of course be required, but we are hopeful that this may shallow the drainage solution and remove the pump requirement.

If you can label up the drawings with pipe diameters and falls that would be useful.

Kind Regards,

Laura Gibbons, MEng, GMICE
Engineer (Drainage & Coastal)

[Laura Gibbons](#) | Engineer (Drainage & Coastal), Engineering Services, [Arun District Council](#) | Location: First Floor, Arun Civic Centre, Maltravers Road, Littlehampton, BN17 5LF

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From: kazys [REDACTED]

Sent: 15 July 2019 18:10

To: Laura Gibbons <Laura.Gibbons@arun.gov.uk>
[REDACTED]

Subject: Mistletoe Farm, Horsemere Green Lane. CM/13/19/RES

Laura

I appreciate we spoke about the Scyld site previously and your e-mail below makes comments on the previously submitted proposals but we have a more urgent requirement for the adjacent Mistletoe Farm site.

This is an adjacent site for two units that has been submitted for the approval of reserved matters.

I have attached the results of the site investigation which was undertaken to see if the use of infiltration methods could be employed. As you will see, and bearing in mind they were undertaken in July, I do not believe we can design a surface water drainage scheme utilising these results.

Bearing in mind the length of the site and the topography I cannot provide an attenuation scheme that can discharge into the adjacent culverted watercourse by gravity.

So my proposal is to provide an attenuation scheme for the roofs and driveways that will require a small pumped facility as outlined on the attached drawing. I have had to utilise a discharge rate of 2.0lits/sec,

This I believe is the lowest practical rate that can be achieved. Attached are a set of MicroDrainage calculations together with a plan of the impermeable areas draining to the attenuation system. Regarding the access road serving the site I am proposing that the existing track is surfaced with unbound gravel.

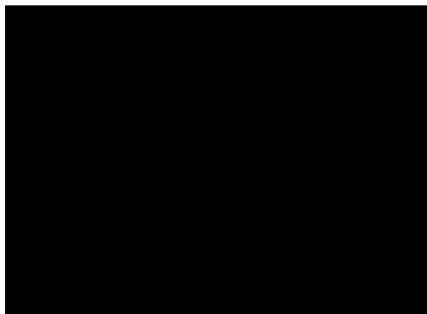
I will call you tomorrow to discuss.

Regards

Kazys

Kazys Narbutas

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From: Laura Gibbons <Laura.Gibbons@arun.gov.uk>
Sent: 05 July 2019 15:20
To: kazys [REDACTED]
Subject: FW: Scyld, Horsemere Green Lane. CM/21/19/PL

Kazys,

Just to confirm our conversation: please can you work up an attenuation scheme to demonstrate that if infiltration does not work that there is a way to drain the site with the layout that is proposed. If the strategy can be updated to state this attenuation scheme has been provided to demonstrate that drainage for a worst case scenario is feasible but that infiltration will be utilised where possible that will hopefully remove my objection. If there is any way to avoid a pumping solution this would be desirable, potential options to consider; swales, oversized pipes, conveyance through permeable paving etc. I also don't know how deep the watercourse is at this location, I know it is at quite a significant depth approx. 250m further downstream.

I will be interested to know what infiltration rates are found when testing is completed.

An extract from our mapping is attached.

Have a good weekend.

Kind Regards,

Laura Gibbons, MEng, GMICE
Engineer (Drainage & Coastal)

Laura Gibbons | Engineer (Drainage & Coastal), Engineering Services, Arun District Council | Location: First Floor, Arun Civic Centre, Maltravers Road, Littlehampton, BN17 5LF

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From: Anita Gardner

Sent: 27 June 2019 14:40

To: Laura Gibbons <Laura.Gibbons@arun.gov.uk>

Subject: FW: Scyld, Horsemere Green Lane. CM/21/19/PL

Hi Laura,

Can I have your comments on the attached additional drainage information please?

Thanks

Anita

Anita Gardner | Principal Planner, Directorate of Place, Arun District Council | Location: First Floor, Arun Civic Centre, Maltravers Road, Littlehampton, BN17 5LF

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From: Natalie McKellar [REDACTED]

Sent: 27 June 2019 11:58

To: Anita Gardner <Anita.Gardner@arun.gov.uk>

Cc: Kerry Simmons [REDACTED]

Subject: Scyld, Horsemere Green Lane. CM/21/19/PL

Dear Anita,

Further to your email dated 12th June I attach the information requested regarding a scheme for surface water drainage. The ecological survey is now being finalised and will be with you shortly.

Should you require anything further please contact me.

Kind regards,

Natalie

Natalie McKellar
[REDACTED]



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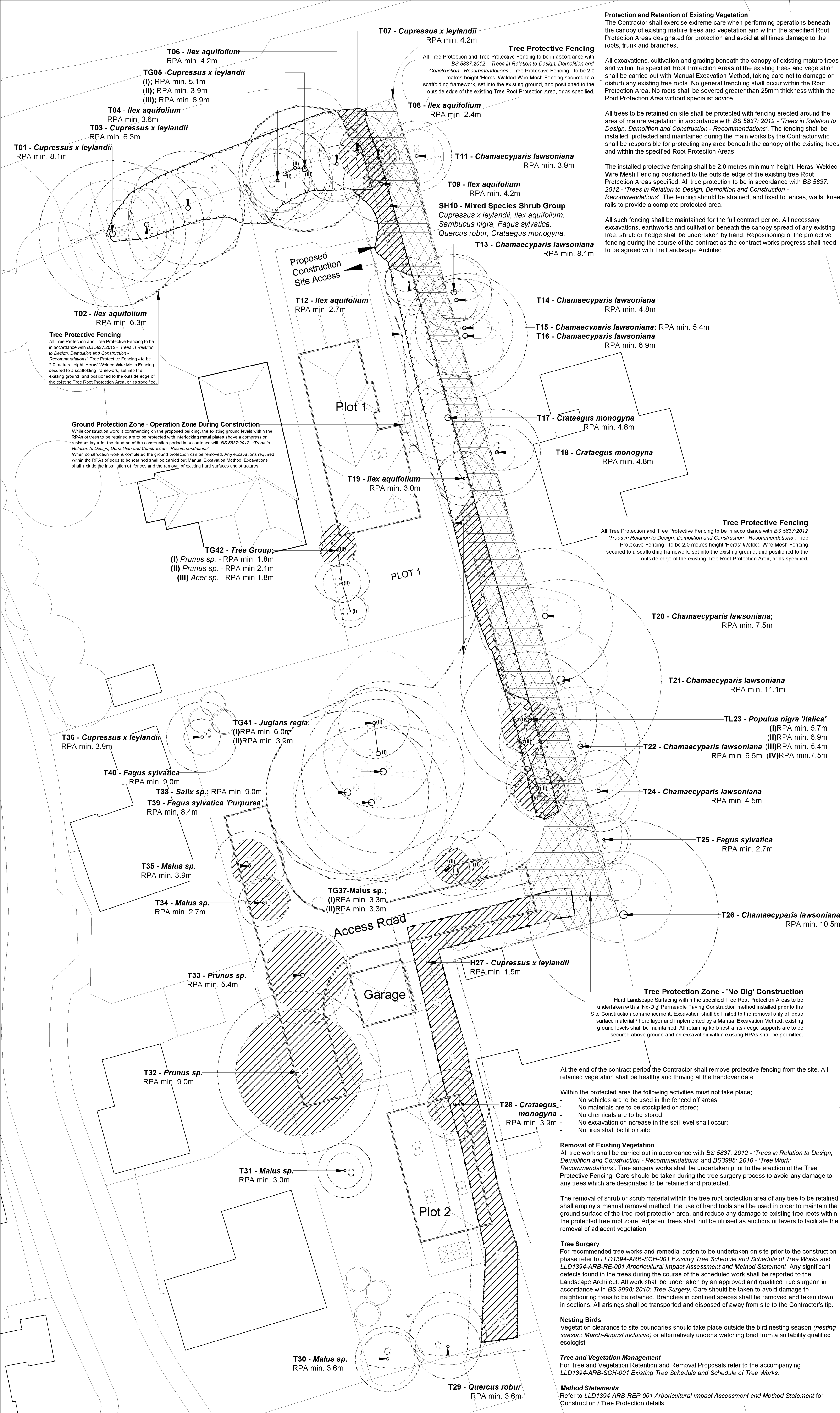
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Protection and Retention of Existing Vegetation
The Contractor shall exercise extreme care when performing operations beneath the canopy of existing mature trees and vegetation and within the specified Root Protection Areas designated for protection and avoid at all times damage to the roots, trunk and branches.

All excavations, cultivation and grading beneath the canopy of existing mature trees and within the specified Root Protection Areas of the existing trees and vegetation shall be carried out with Manual Excavation Method, taking care not to damage or disturb any existing tree roots. No general trenching shall occur within the Root Protection Area. No roots shall be severed greater than 25mm thickness within the Root Protection Area without specialist advice.

All trees to be retained on site shall be protected with fencing erected around the area of mature vegetation in accordance with BS 5837: 2012 - 'Trees in Relation to Design, Demolition and Construction - Recommendations'. The fencing shall be installed, protected and maintained during the main works by the Contractor who shall be responsible for protecting any area beneath the canopy of the existing trees and within the specified Root Protection Areas.

The installed protective fencing shall be 2.0 metres minimum height 'Heras' Welded Wire Mesh Fencing positioned to the outside edge of the existing tree Root Protection Areas specified. All tree protection to be in accordance with BS 5837: 2012 - 'Trees in Relation to Design, Demolition and Construction - Recommendations'. The fencing should be strained, and fixed to fences, walls, knee rails to provide a complete protected area.

All such fencing shall be maintained for the full contract period. All necessary excavations, earthworks and cultivation beneath the canopy spread of any existing tree, shrub or hedge shall be undertaken by hand. Repositioning of the protective fencing during the course of the contract as the contract works progress shall need to be agreed with the Landscape Architect.

Legend

Proposed Buildings/ Access Road

Tree/ Shrub Group/ Hedge Identification Label

Tree Root Protection Areas
Tree Root Protection Areas calculated and specified in accordance with BS 5837:2012 - 'Trees in Relation to Design, Demolition and Construction - Recommendations'.

Category A Trees
Trees of High Quality and Value.

Category B Trees
Trees of Moderate Quality and Value.

Category C Trees
Trees of Low Quality and Value.

Category U Trees;
Trees Unviable for Retention.

Tree to be Removed

Hedge to be Removed

Shrub to be Removed

Tree Protective Fencing
All Tree Protection and Tree Protective Fencing to be in accordance with BS 5837:2012 - 'Trees in Relation to Design, Demolition and Construction - Recommendations'. Tree Protective Fencing - to be 2.0 metres height 'Heras' Welded Wire Mesh Fencing secured to a scaffolding framework, set into the existing ground, and positioned to the outside edge of the existing Tree Root Protection Area, or as specified.

Ground Protection Zone - Operation Zone
While construction work is commencing on the proposed buildings, the existing ground levels within the RPAs of trees to be retained are to be protected with interlocking metal plates above a compression resistant layer or with the existing hard standing surfaces for the duration of the construction period in accordance with BS 5837:2012 - 'Trees in Relation to Design, Demolition and Construction - Recommendations'. When construction work is completed the ground protection can be removed. Any excavations required within the RPAs of trees to be retained shall be carried out Manual Excavation Method. Excavations shall include the installation of fences and the removal of or existing hard surfaces and structures.

Tree Protection Zone - 'No Dig'
Construction
Hard Landscape Surfacing within the specified Tree Root Protection Areas to be undertaken with a 'No-Dig' Permeable Paving Construction method installed prior to the Site Construction commencement. Excavation shall be limited to the removal only of loose surface material / herb layer and implemented by a Manual Excavation Method; existing ground levels shall be maintained. The construction area within the existing tree Root Protection Area (RPA) is to be overlain with a Cellweb TRP system, or equal and approved, including: TreeTex membrane and min. 150mm of Cellweb TRP Cellular Confinement System filled with open graded aggregate such as MOT Type 3. All retaining kerb restraints / edge supports are to be secured above ground and no excavation within existing RPAs shall be permitted. The permeable construction shall allow for moisture infiltration gaseous diffusion to occur and shall prevent localised compaction of the existing soil structure in accordance with BS 5837:2012 - 'Trees in Relation to Design, Demolition and Construction - Recommendations'.

- Notes:**
- Drawing to be viewed in colour
(Refer to LLD1578-ARB-DWG-001 - Tree Constraints Plan and LLD1578-ARB-SCH-001 - Existing Tree Schedule)
 - Details of tree retention and protection measures
(Refer to LLD1578-ARB-REP-001 - Arboricultural Impact Assessment - Method Statement)

PLANNING ISSUE

Rev	Description	Date	Initials
01	Planning Issue	20.12.18	JH

Landscape Design and Ecology

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T. 01903 216033 E. lizardlandscape@btconnect.com W. lizardlandscapeology.com

Project Title and Location

Mistletoe Farm, Climping

Client

Domusea Developments

Drawing Title

Tree Retention & Protection Plan

Scale

1:200@A1

Drawn

JH

Date

20.12.2018

Drawing No

LLD1394-ARB-DWG-002

Revision

01

CAD Filename

LLD1394

Tree Retention and Protection Plan
Mistletoe Farm, Horsemere Green Lane, Climping, West Sussex