



Arboricultural Impact Assessment

Marlie Holiday Park

For and behalf of

Park Holidays UK Ltd.

23.10.2017

CA15/020

Corsican Associates

Landscape Architecture and Arboriculture services.

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Table of Contents

Introduction	4
Aims and Objectives of the Report	4
Survey Methodology	4
Legal Constraints to Tree Works/ Removals.....	5
Summary of Proposed Development Impact on Vegetation.....	6
The Site and Existing Trees	7
Site Description	7
Address of site.....	7
Grid reference	7
Figure 1: site location map.....	7
Overview of Existing trees on site.....	8
Remedial Tree works	8
Impacts of The Proposed Development on Existing Trees	8
Tree Removals.....	9
Tree Surgery and Pruning	10
Tree Planting	11
Tree protection	11
Tree Protection Fencing.....	11
Ground Protection	11
Temporary Access to Construction Exclusion Zone	11
Structural Landscape Areas	11
Access to site.....	12
Site Office, Welfare Facilities and Parking	12
Spoil, Waste and Materials Handling/Storage/Mixing	12
Inert and/or Bulk Materials	12
Cement/Silos/Mixing/Wash Out Areas/Marine Aggregates	12
Chemicals/Lubricants/Fuels/Admixtures – any phytotoxic materials.....	12
Demolition	12
Structures.....	12
Hard Surfacing.....	13
Services	13
Site Preparation, Civilising and Soil Stripping	13

Construction.....	13
Structures Close to Retained Trees.....	13
Foundation design	13
Hard surfaces in Root Protection Area of trees.....	13
Services in Root Protection Area of trees.....	14
Level Changes in Root Protection Areas	14
Post Development Implications of Tree Retention and Mitigation Planting	15
Tree Planting Methodology	15
Existing Trees to new development.....	15
Conclusions	15
Recommendations	15
Arboricultural Method Statement	16
Introduction	16
Purpose	16
Methodology.....	16
Sequenced Methods of Construction and Tree Protection.....	16
Phase 1 - Execute Agreed Tree Works	17
Remedial tree works:	18
Phase 2 - Tree Protection Barriers	19
Phase 3 – Ground protection.....	19
Phase 4 - Ground works.....	20
Areas of existing hard standing	20
Level Changes in root protection areas	20
Construction of Hard Standing, Drives and Parking Bays	21
Phase 5 - Dismantling Protection Barriers and Landscaping Works.....	22
General Principles for Tree Protection	23
Communication Details and Supervision.....	23
Compliance	23
Appendix 1: Tree survey schedule	24
Appendix 2: Arboricultural Impact Assessment Plans	39
Appendix 3: Tree Protection Plans	44

Introduction

Corsican Associates have been commissioned by Park Holidays UK Ltd. to undertake a detailed tree survey and an Arboricultural Implications Assessment for the site at Marlie Holiday Park, Dymchurch Road, New Romney.

It is proposed to develop the site through construction of new static caravan developments, new touring facilities and upgrades to clubhouse facilities.

A site survey of the existing vegetation on and adjacent to the site was undertaken by Daniel Gospel on 25.07.2017 and 05.10.2017.

This report should be read in conjunction with the following plans and schedules as provided within the appendices of this document:

Tree survey Schedule

Arboricultural Impact Assessment Plans CA15.020-06/7/8/9

Tree Protection Plans CA15.020-10/11/12/13

Aims and Objectives of the Report

The purpose of this report is to:

- Clearly identify and evaluate the significant vegetation on and adjacent to the subject site
- Identify and report on any Legal restrictions to tree works which might affect the site e.g. TPO or Conservation areas
- Identify and report on any initial tree works which may be required to make safe the existing tree stock in the period preceding development
- Inform the design of the development by quantifying the constraints or opportunities provided by the trees
- Provide an objective assessment of the likely effect that the stages of the development could have on existing vegetation
- Determine the significance of such impact in landscape terms
- Make recommendation for appropriate methods to be adopted to reduce or mitigate for any potentially negative impacts
- Make recommendation for appropriate tree planting to provide a long term sustainable tree population within the developed context of the site

Survey Methodology

The survey is concerned with the Arboricultural aspects of the site only.

The trees on site have been surveyed and classified in accordance with British Standard 5837:2012 'Trees in Relation to Design, Demolition and Construction – Recommendations'. Tree survey data has been collated in the survey schedule at Appendix 1.

The baseline survey was undertaken using the Visual Tree Assessment methodology to conduct a preliminary assessment of the above ground portion of the tree.

Trees are large dynamic organisms whose health and condition can change rapidly, therefore due to the changing nature of trees and other site considerations, this report and

any recommendations made within only remain valid for the 12 month period following the site survey; after which time the survey may require updating.

The survey was undertaken from ground level with the aid of binoculars, no excavations were carried out nor soil or root samples taken. Where a more detailed assessment/inspection of a particular feature/defect is deemed necessary it has been recommended in the survey schedule.

No aerial inspection nor invasive probing or drilling has been undertaken as part of this assessment.

Where trees are inaccessible for close inspection either due to physical or legal restrictions or for the purpose of surveyor safety they have been inspected from a distance with all dimensions estimated; in these instances the survey may only relate to those parts of the tree which were visible from available vantage points.

Legal Constraints to Tree Works/ Removals

At the time of writing this report it has not been possible from basic desktop searches to determine the presence of any statutory designations affording legal protection to trees on or adjacent to this site.

Until permission for development has been granted for a scheme which shows the trees to be removed, the status of legal protection should be verified with the Local Planning Authority prior to undertaking any tree works on the site.

Summary of Proposed Development Impact on Vegetation

The following tables provide a brief overview of the survey and development impacts:

Tree Survey Summary	A	B	C	U	Total
Trees	0	0	29	14	43
Groups	0	1	12	2	15
Hedges	0	0	7	0	7
Woodlands	0	0	0	0	0

Tree Removals Summary	A	B	C	U	Total
Trees	0	0	2	14	16
Groups	0	0	2	2	4
Hedges	0	0	1	0	1
Woodlands	0	0	0	0	0

Summary of Trees requiring pruning/surgery or partial removal (groups) due to development impact	A	B	C	U	Total
Trees	0	0	2	0	2
Groups	0	1	3	0	4
Hedges	0	0	2	0	2
Woodlands	0	0	0	0	0

Summary of Trees which necessitate specialist construction methods e.g. piled foundations or Reduced-dig surfacing in RPA	A	B	C	U	Total
Trees	0	0	0	0	0
Groups	0	0	0	0	0
Hedges	0	0	0	0	0
Woodlands	0	0	0	0	0

The Site and Existing Trees

Site Description

The site is Marlie Holiday Park. Topography is generally level with occasional ditches to boundaries of the site. Adjacent land is predominantly agricultural to the north, east and west with Romney Marsh Nature Reserve to the south.

Address of site

Marlie Holiday Park,
Dymchurch Rd,
New Romney,
TN28 8UE

Grid reference

TR075259

Figure 1: site location map



Overview of Existing trees on site

General description of tree population – The sites tree population is of mixed quality and composition, predominantly located to the site boundaries mature hedgerows of mixed scrub and riparian species create compartments representing the historic site uses. These are augmented by internal ornamental and native specimen trees, presumably planted at past phases of development.

Landscape and Amenity significance - The trees offer valuable screening, shelter, and boundary definition to the site as well as contributing to the general character of the site as experienced from within.

Trees of particular note – GOOD – Of the trees included within the survey only G12 has been identified as having significant merit. G12 is a linear planting of early mature sycamore with a dense hedgerow understory; this feature is expected to provide valuable backdrop to the new development in this area and should establish to become a worthwhile feature in the future provided it received appropriate protection during development.

Trees of particular note – BAD - A number of Large Hybrid poplars are present scattered throughout the site which have become over large and have been periodically topped in response; these trees represent a potential long term management challenge and ideally replacement planting should be made early in anticipation of future removal. Other trees of low quality with manageable remaining contribution expected to be less than 10 years have been designated Category U as detailed in the tree survey schedule.

Remedial Tree works

As part of the initial survey works several trees were identified which require management irrespective of the outcomes of any planning application for the development of the site; but may still require permission in order to avoid potential breach of legislation as identified above in the section entitled Statutory Tree Protection.

These works have been identified due to potential risks posed by the trees to users of the site or surrounding areas within the existing site context and are fully detailed within the works section of the tree survey schedule along with the recommended timeframe for their completion at Appendix 1.

All proposed works will be completed in accordance with best practice guidance 'BS3998:2010 Tree Work Recommendations' unless otherwise stated.

Failure to complete the recommended tree works within the recommended timeframes may render the landowner (or other responsible party) liable to prosecution in the event of any incident whereby harm is caused to any person where the incident was foreseeable and appropriate management action had not been taken.

Impacts of The Proposed Development on Existing Trees

Trees differ in their tolerance of pruning, surgery, disturbance to roots and root loss according to their species, condition, individual physiology and their age. Each tree is assessed according to its own merits or limitations against the likely impacts during the high intensity period of development activity, as well as for its potential value within the finished development.

A significant part of the assessment of potential development impact on trees relates to underground parts of the tree (Roots). Whilst root growth, is typically concentrated in the top metre of soil, they can be affected by existing site features or activities, including existing natural and man-made topography, structures that can restrict tree root growth, hard surfacing which can encourage or discourage root development or regular ploughing which may cause deeper root development. As actual root development is widely variable and difficult to predict consideration is given to all relevant factors wherever possible when ascertaining the viability of tree retention.

Tree Removals

In order to achieve the successful construction of the proposed development sixteen trees, four groups of trees, one hedge and sections of two hedges and two groups are required to be removed as detailed in the following summary table:

Tree Number	BS Category	Reason for Removal
G1	C	Conflicts with proposed caravan units and road infrastructure.
G2	U	Unsuitable for retention in proposed setting due to safety concerns.
G7	U	Unsuitable for retention in proposed setting due to safety concerns.
G9	C	Partial removal required as shown on AIA plan CA15/020-08 to accommodate proposed maintenance yard area.
G13	C	Conflicts with proposed caravan units.
G14	C	Partial removal required as shown on AIA plan CA15/020-09 to accommodate proposed Clubhouse
H1	C	Partial removal required as shown on AIA plan CA15/020-09 to accommodate proposed Clubhouse.
H2	C	Partial removal required as shown on AIA plan CA15/020-09 to accommodate proposed caravan units.
H3	C	Conflicts with proposed caravan units.
T3	U	Unsuitable for retention in proposed setting due to safety concerns.
T5	U	Unsuitable for retention in proposed setting due to safety concerns.
T9	U	Unsuitable for retention in proposed setting due to safety concerns.
T11	U	Unsuitable for retention in proposed setting due to safety concerns.
T12	U	Unsuitable for retention in proposed setting due to safety concerns.
T13	U	Unsuitable for retention in proposed setting due to safety concerns.
T14	U	Unsuitable for retention in proposed setting due to safety concerns.
T17	C	To provide suitable construction access space for proposed touring block and maintenance yard.

Tree Number	BS Category	Reason for Removal
T22	U	Unsuitable for retention in proposed setting due to safety concerns.
T24	U	Unsuitable for retention in proposed setting due to safety concerns.
T28	U	Unsuitable for retention in proposed setting due to safety concerns.
T30	C	Conflicts with proposed road widening.
T31	U	Unsuitable for retention in proposed setting due to safety concerns.
T37	U	Unsuitable for retention in proposed setting due to safety concerns.
T41	U	Unsuitable for retention in proposed setting due to safety concerns.
T42	U	Unsuitable for retention in proposed setting due to safety concerns.

The tree removals required to achieve the proposed development as listed in the summary table above will have a moderate impact on the immediate locality and little impact on the wider landscape.

Tree removals are generally concentrated to the central area of the site with limited visibility from offsite areas and where possible trees have been retained to the site boundaries to soften/compliment the development as viewed from outside.

Low quality trees to the western boundary are required to be removed for safety reasons which may result in the loss of a degree of screening however these trees are of low quality and offer only poor screening and substantial planting is proposed in the site landscape plans to mitigate this impact and provide better screening in the longer term.

Tree Surgery and Pruning

In order to achieve the successful construction of the proposed development two trees and two groups of trees require to be subject to surgery or pruning either above or below ground as detailed in the following summary table:

Tree Number	BS Category	Surgery/Pruning Specification
T1	C	Re-pollard crown and undertake root pruning to edge of excavations for pumping station construction as shown on AIA plan CA15/020-06.
T39	C	Re-pollard crown to enable appropriate access for installation of adjacent caravan units as shown on AIA plan CA15/020-09.
G11	C	Crown lift to 5 metres over proposed roadway as shown on AIA plan CA15/020-07.
G12	B	Crown lift to 5 metres over proposed roadway as shown on AIA plan CA15/020-07.

N.B. All tree surgery and pruning works will be specified and completed in accordance with BS 3998:2010 'Tree Works – Recommendations'.

Tree Planting

In order to mitigate for the tree removals which are necessary to achieve the proposed development a scheme of replacement tree planting is included within the site landscape proposals.

The proposed tree planting scheme will complement the retained tree stock to provide a long term sustainable tree population which relates to the future site use.

Tree protection

Tree Protection Fencing

Following completion of site vegetation clearance, Tree Protection Fencing will be installed in accordance with BS:5837 specification 1 as shown on Tree Protection Plans CA15.020-10/11/12/13 and maintained in situ for the duration of development or until the soft landscape phase.

The provision of tree protection fencing will create a Construction Exclusion Zone (CEZ) where no site activity will be permitted.

For full details of tree protection systems please refer to Arboricultural Method Statement and BS5837:2012 GUIDELINES.

Ground Protection

Following removal of hard surfaces within the RPA of T39 it will be necessary to cover the exposed ground with clean topsoil to 100mm depth as described within the demolition section below. Once completed the ground will be protected from compaction through installation of temporary ground protection as detailed within the Arboricultural Method Statement below. Beyond this there is no anticipated requirement for pedestrian or vehicular access into the root protection area of any tree to be retained therefore no ground protection systems will be necessary for arboricultural purposes elsewhere.

For full details of ground protection systems please refer to Arboricultural Method Statement and BS5837:2012 GUIDELINES.

Temporary Access to Construction Exclusion Zone

If an unforeseen requirement for access to the CEZ should arise this will be notified to the project arboriculturalist who will devise a suitable system of tree protection and provide suitable supervision for the duration of works prior to entering the exclusion zone. The nature, duration and outcomes of activities within the CEZ will be recorded by the project arboriculturalist.

Structural Landscape Areas

In addition to those areas within the CEZ which require protection due to constraints posed by the retained trees (RPA, Crown spread) where possible some further areas may be protected from development activity to prevent soil compaction and allow for new planting or future root development for existing trees.

Access to site

Access for development related traffic is proposed to utilise the existing site road network. Tree works or removals required to enable unrestricted access are detailed in the above tables.

Site Office, Welfare Facilities and Parking

At the time of writing insufficient information is available to determine what site facilities will be required. On this site, there is ample available space to accommodate these facilities outside of the CEZ defined by the tree protection barriers as shown on Tree Protection Plans CA15.020-10/11/12/13 therefore it is anticipated that no conflict need arise.

Spoil, Waste and Materials Handling/Storage/Mixing

Inert and/or Bulk Materials

At the time of writing insufficient information is available to determine what site facilities will be required. On this site, there is ample available space to accommodate the stockpiling of chemically inert materials (soil, aggregates, bricks, blocks, timber, tiles, plastics, metals, ceramics) outside of the CEZ defined by the tree protection barriers as shown on Tree Protection Plans CA15.020-10/11/12/13 therefore it is anticipated that no conflict need arise.

Cement/Silos/Mixing/Wash Out Areas/Marine Aggregates

All facilities for the storage, mixing or cleaning down of any cement based product or marine aggregates will be located outside of the CEZ defined by the tree protection barriers as shown on Tree Protection Plans CA15.020-10/11/12/13. Care will be taken to locate these facilities in a location where there is no danger of runoff entering the CEZ or where such a location is unavailable due to site topography a suitable system of measures will be installed to prevent the occurrence of such incidents (ditches, bunds, membranes).

Chemicals/Lubricants/Fuels/Admixtures – any phytotoxic materials

All facilities for the storage, mixing, filling or disposal of any potentially phytotoxic materials (harmful to plants) will be located outside of the CEZ defined by the tree protection barriers as shown on Tree Protection Plans CA15.020-10/11/12/13. All chemicals will be stored in an appropriate container (bunded tanks where necessary) as defined by best practice for chemical storage. Care will be taken to locate these facilities in a location where in the event of a spillage there is no danger of runoff entering the CEZ or where such a location is unavailable due to site topography a suitable system of measures will be installed to prevent the occurrence of such incidents (ditches, bunds, membranes).

Demolition

Structures

Demolition works required as part of the development proposals are remote from trees to be retained therefore, other than the prior installation of tree protection systems comprising the CEZ, there are no Arboricultural related constraints to demolition works.

Hard Surfacing

Removal of Hard surfacing affects one tree to be retained (T39) this area will be completed with care under the supervision of the appointed project arboriculturalist using hand tools and/or a small machine mounted breaker. The surface and any associated kerbing will be “peeled back” working from the unbroken surface with no vehicles entering unsurfaced ground within the RPA at any time. Following completion of these works temporary ground protection will be installed for the remainder of the development and suitable measures (e.g. topsoil, temporary or permanent mulch) may be required to protect newly exposed roots prior to final landscaping or other construction.

Services

Removal of underground services is not anticipated to affect any trees to be retained therefore no arboricultural impacts are envisaged.

Site Preparation, Civilising and Soil Stripping

Following completion of demolition works and site set up it is common practice to prepare the site for construction stages by levelling out the site and/or stripping and stockpiling of topsoil. Provided that these works are not undertaken until after the CEZ is correctly established with all tree protection measure correctly installed there will be no encroachment into these areas and therefore no arboricultural impact can occur.

It is imperative that all construction areas located within RPA’s (specialist foundations, reduced-dig surfacing) area clearly marked and protected from excavation or compaction until such time as their construction is undertaken.

Construction

Structures Close to Retained Trees

The proposed caravan units and pumping station structures are located in close proximity to trees to be retained (T1 and T39). In order to enable proper construction access, including provision for the placement of scaffolding and space to operate site machinery it will be necessary to prune these specimens above and/or blow ground to enable safe and practical construction.

Foundation design

The foundations required to achieve the proposed construction do not encroach within the root protection areas of any trees to be retained therefore no special foundation design will be required and standard foundations are appropriate in Arboricultural terms. Any proposed foundations should account for the existing trees and vegetation (retained or otherwise) and their influence on the surrounding soil moisture and changes in seasonal demand. All foundations should be designed by a chartered structural engineer.

Hard surfaces in Root Protection Area of trees

It is proposed to construct new hard surfaces within the root protection areas of trees to be retained (G11, G12). In each case the level of excavation incursion is low and judged to be sustainable (with sufficient unaltered ground contiguous to the RPA available to enable future root growth). The use of this area long term as informal access track for farm and

maintenance machinery has resulted in a dense packed informal road structure which is likely to have discouraged significant rooting in this area.

In order to ensure that the impact on the trees is minimised the excavation required for this activity will be completed under Arboricultural supervision and all roots encountered will be cleanly pruned to the outer limits of the excavation. Following completion of the supervised excavation the surface may be installed using standard construction techniques.

Services in Root Protection Area of trees

It is proposed to install underground services as shown on Tree Protection Plan CA15/020-10. The layout of the services encroaches significantly within the RPA of T10 however as this tree is of low quality/life expectancy it is deemed appropriate to mitigate for this through a combination of root pruning and re-pollarding works. This will provide the ability to retain the tree in the short to medium term with appropriate regular maintenance.

Level Changes in Root Protection Areas

Tree roots are generally concentrated in the upper metre of soil where there is the greatest availability of water from rainfall, nutrients from topsoil and oxygen from the atmosphere. Typically, there are high numbers of fine feeder roots within the top 300mm of soil which perform the bulk of water and nutrient uptake for the tree. Excavation in the root environment however shallow has the potential to significantly damage the trees root system and building up or covering the ground above has the potential to asphyxiate and significantly reduce the performance of normal root function. In many cases either of these events occurring during development results in prolonged decline of the tree and eventual death caused by secondary pathogens or nutrient starvation.

On this site, the topography is generally level and no significant level changes are anticipated therefore there should be no arboricultural impact provided tree protection systems are correctly installed and maintained.

Post Development Implications of Tree Retention and Mitigation Planting

Tree Planting Methodology

The proposed tree planting included within the soft landscape proposals will mitigate the tree losses proposed above and will improve the general landscape around the development bringing a new age class of trees into the site; which further helps to ensure trees exist on site for many years to come.

Existing Trees to new development

The trees included for retention within the development proposals have been selected for their mid to long term viability within the developed setting and should provide considerable benefit to the site in the future if afforded appropriate maintenance and care.

Conclusions

In order to achieve the proposed development it will be necessary to remove sixteen trees, four groups of trees, one hedge and sections of two hedges and two groups of low quality and/or short remaining safe useful life.

The pruning works required to provide unobstructed access are achievable without significant impact to the amenity value or health of the trees, are sustainable, and unlikely to have any long term detrimental effect on the trees.

Provided that effective tree protection measures are installed and maintained in accordance with this report the sites trees should suffer little or no impact.

The redevelopment of this piece of land and its longer-term benefits far outweigh the short-term effect on the landscape from the tree removals and more suitable trees are proposed in mitigation.

Recommendations

It is recommended that the findings of this report are complied with in full in order to have greatest benefit to the sites trees and those who stand to benefit from their ongoing presence and values they provide to the landscape.

All tree works recommendations made within the survey schedule should be completed in accordance with the advised timescales in order to avoid any predictable damage or harm to site users or their property.

Report written by

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Corsican Associates

Arboricultural Method Statement

Introduction

This method statement is written, taking guidance from BS5837:2012 and BS3998:2010. These set out guidance to the protection of existing trees through demolition to completion.

BS 5837: 2012 'Trees in relation to design, demolition and construction – Recommendations'

BS3998:2010 'Tree work. Recommendations'

Purpose

The purpose of this report is to aid the preservation of trees shown to be retained on the Tree protection plan in appendix 3 during the proposed construction works by setting out the tree protection methods, construction techniques and working practices that are to be adopted in their vicinity with supervision where required. The success of the document is dependent upon development adhering to the principles set out within, which are to be approved and enforced by the local planning authority.

Methodology

With reference to relevant published guidance BS5837:2012 and BS3998:2010, the methodology of this statement follows a logical sequence essential to the efficacy of the protection measures.

Sequenced Methods of Construction and Tree Protection

Phase 1: Execute Agreed Tree Works

Phase 2: Tree Protection Barriers

Phase 3 – Ground protection

Phase 4 - Ground works

Phase 5 - Dismantling Protection Barriers and Landscaping Works

Phase 1 - Execute Agreed Tree Works

All tree works are to conform to BS 3998:2010 'Tree Work' (with amendments) and to the current Arboricultural best practice. Tree works are to be undertaken by a professional and specialist Arboricultural contractor, who carries the appropriate experience, qualifications and insurance cover.

The following trees, are to be removed or pruned to facilitate the development and remedial works.

Tree Number	BS Category	Reason for Removal
G1	C	Conflicts with proposed caravan units and road infrastructure.
G2	U	Unsuitable for retention in proposed setting due to safety concerns.
G7	U	Unsuitable for retention in proposed setting due to safety concerns.
G9	C	Partial removal required as shown on AIA plan CA15/020-08 to accommodate proposed maintenance yard area.
G13	C	Conflicts with proposed caravan units.
G14	C	Partial removal required as shown on AIA plan CA15/020-09 to accommodate proposed Clubhouse
H1	C	Partial removal required as shown on AIA plan CA15/020-09 to accommodate proposed Clubhouse.
H2	C	Partial removal required as shown on AIA plan CA15/020-09 to accommodate proposed caravan units.
H3	C	Conflicts with proposed caravan units.
T3	U	Unsuitable for retention in proposed setting due to safety concerns.
T5	U	Unsuitable for retention in proposed setting due to safety concerns.
T9	U	Unsuitable for retention in proposed setting due to safety concerns.
T11	U	Unsuitable for retention in proposed setting due to safety concerns.
T12	U	Unsuitable for retention in proposed setting due to safety concerns.
T13	U	Unsuitable for retention in proposed setting due to safety concerns.
T14	U	Unsuitable for retention in proposed setting due to safety concerns.
T17	C	To provide suitable construction access space for proposed touring block and maintenance yard.
T22	U	Unsuitable for retention in proposed setting due to safety concerns.
T24	U	Unsuitable for retention in proposed setting due to safety concerns.

Tree Number	BS Category	Reason for Removal
T28	U	Unsuitable for retention in proposed setting due to safety concerns.
T30	C	Conflicts with proposed road widening.
T31	U	Unsuitable for retention in proposed setting due to safety concerns.
T37	U	Unsuitable for retention in proposed setting due to safety concerns.
T41	U	Unsuitable for retention in proposed setting due to safety concerns.
T42	U	Unsuitable for retention in proposed setting due to safety concerns.

Tree Number	BS Category	Surgery/Pruning Specification
T1	C	Re-pollard crown and undertake root pruning to edge of excavations for pumping station construction as shown on AIA plan CA15/020-06.
T39	C	Re-pollard crown to enable appropriate access for installation of adjacent caravan units as shown on AIA plan CA15/020-09.
G11	C	Crown lift to 5 metres over proposed roadway as shown on AIA plan CA15/020-07.
G12	B	Crown lift to 5 metres over proposed roadway as shown on AIA plan CA15/020-07.

Remedial tree works:

There are a number of remedial tree works required to trees to be retained which have been identified as part of the preliminary survey, these are set out in tree survey schedule data in appendix 1 and should be actioned in accordance with the specified timescales irrespective of development proposals or planning approval.

N.B. Where applicable these works may be subject to legal restrictions as detailed in the AIA report.

Phase 2 - Tree Protection Barriers

In order to protect retained trees from root damage caused by storage of materials, vehicular movement or construction parking, protection barriers will be erected to exclude trees from the construction site, to ensure trees and their root plates are not damaged.

BS tree protection barriers to be erected, these will consist of a vertical and horizontal scaffold framework, well braced to resist impacts. The vertical tubes should be spaced at a maximum interval of 3 m and driven securely into the ground. Onto this framework, welded mesh panels should be securely fixed. Care should be exercised when locating the vertical poles to avoid underground services and, in the case of the bracing poles, also to avoid contact with structural roots. Please refer to appendix 3 for tree protection fence figure 2.

Once the barriers have been properly erected in position, they are to be considered as sacrosanct and will not be removed or altered in any way without prior approval from the LPA.

Clear notices are to be fixed to the outside of the fencing with words such as **'TREE PROTECTION AREA – NO ACCESS AND NO STORAGE OF MATERIALS OR WORKING WITHIN THIS AREA'**.

All operatives and other relevant personnel are to be informed of the role of the exclusion barriers and their importance. A copy of the TPP will be displayed on site at all times during construction.

Location of tree protection fencing please refer to appendix 3.

The barriers will be erected prior to any works on site in the vicinity of retained trees, including demolition or the delivery of machinery, materials, plant or equipment to the site or any adjacent land. The barriers will remain in situ until final completion or a time agreed between the LPA and Contractor.

Phase 3 – Ground protection

Ground protection will be laid prior to any construction traffic entering the RPA of any retained trees. Where ground protection is required (as shown on the tree protection plan) and if required at other location on site if root plates are found after hand digging and if machinery weight causes more than pressure of 55 kPa as this is the kPa by a human. Ground protection will consist of a layer of geotextile e.g. Terram 4000, 4 meters wide with ground-guards GG48 or similar and approved, these are to be laid 3 wide, these should be centred in the middle of the geotextile, so there is 500mm either side of the track way of geotextile, then a minimum of 150mm woodchip which will cover the 4 metres width of geotextile, with a final layer of ground-guards GG48 laid 3 wide and length of required ground protection.

Phase 4 - Ground works

Spoil, including soil and rubble will be removed from site and not stored against any protection barriers or over any ground protection. Only predetermined access routes away from RPAs will be used to during this process.

When an excavator does require to enter the RPA of existing trees, then it will follow ground protection methods as detailed in phase 3 of this report. When these works are being carried out they will be supervised by the project arboriculturalist. Works will be stopped if required and before reversible damage is caused and LPA will be contacted to discuss further actions. If remedial works are required to a tree, these will be set out in a report to the LPA and agreed prior to the remedial works undertaken.

If root pruning is required, this will be undertaken using sharp cutting tools to ensure that minimum damage is caused. No roots, greater than a diameter of 25mm, are to be pruned without prior agreement with the appointed Arboricultural supervisor or LPA representative.

Areas of existing hard standing

To be removed within the CEZ can be broken up using a vehicle mounted pneumatic drill starting from the end point of excavation working on the hard standing moving backwards as the surface is broken up. At no point will the vehicle enter soft ground within the RPA. Material can then be removed by hand without monitoring, but if a vehicle is to be used monitoring by the project arboriculturalist will be required. Any vehicle used in this way must work from the existing hard standing and not enter soft ground at any time.

Level Changes in root protection areas

No level should occur in the root protection area of the retained existing trees. If minor level changes are required (up to 100mm change), then this should be undertaken by hand and careful to not to damage any roots over 25mm.

If unforeseen level changes (over 100mm change), are required then a detailed specification will need to be completed between Arboriculturalist and Engineer.

Construction of Hard Standing, Drives and Parking Bays

The sections below relate to the construction of hard surfaces, for example, roads and paths parking areas and bases for bicycle or bin stores not required to be to an adoptable standard and within the CEZ of retained trees.

With reference to BS 5837:2012 clause 11.8, where the construction of permanent hard surface is approved within the CEZ, a non-dig design should be used to avoid root loss caused by excavation.

The construction area is to be levelled by filling hollows and removing protrusions and hard landscaping. No soil excavation, other than the removal of a 'turf or vegetation layer' is to be carried out during this process and filling material should be of good quality topsoil to allow water and oxygen to reach the soil below.

If roots are required to be pruned, sharp secateurs are to be used to ensure that minimum damage. No root, greater than a diameter of 25mm, are to be pruned without prior agreement with the appointed Arboricultural supervisor or LPA representative.

A geotextile membrane (Terram 4000 or similar) is then to be laid over the whole surface, including any retained hard surfaces. The geotextile should be wide enough to wrap around the sub base and be secured to its self.

Where edging blocks or stone are to be used to retain the drive surface within the CEZ, the mix into which they are set will be laid directly onto the geotextile membrane over the supporting base. No deeper excavations are to be made to accommodate the footing of the edging detail.

Sub base should be no less than 100mm and the aggregate should be a granular no fines material (typically 40-20mm). Not only will this material dissipate the load and reduce soil compaction, it will permit easy passage of air (oxygen) to the rooting area of the tree below the surface. The depth of sub base will need to be agreed with the project engineer.

This surface can also be used as a temporary works access route prior to the laying of the final surface.

Final surface details for will be of a porous nature such as gravel, block paviors or small paving slabs and should be approved by the LPA. In the usual way these should be bedded into a lean mix that is also highly porous. Final surface treatment can be installed as part of the landscaping works.

Phase 5 - Dismantling Protection Barriers and Landscaping Works

A minimum of seven days' notice will be given to the local authority tree officer prior to the dismantling of the protection barriers.

Any landscaping once the barriers have been removed will avoid soil re-grading where possible and disturbance within the RPA and no soil levels be altered after the protection barriers have been removed.

General Principles for Tree Protection

1. A copy of this AMS and the attached TPP is to be retained on site at all times and all personnel associated with the construction process will be made familiar with the principals within.
2. If 360-degree excavators are to be used during construction, at no time is the excavating arm to encroach over the position of the protection barriers.
3. No fires are to be lit on site at any stage during the construction process. Unless prior agreed location is set.
4. Designated storage areas will be created away from retained trees. All materials for construction purposes are to be stored in this compound. Care must be taken to avoid the leakage or leaching of noxious materials into the soil. No materials will be stored or left stacked in positions around the site other than within the storage compound area.

Communication Details and Supervision

In order to ensure that the principals of tree protection set out in the statement and appendix 2 are adhered to, it is important to set out communication details for key individuals. All relevant parties should retain these details and they should be available on site at all times. Relevant parties will be advised of any changes in personnel or contractor during the development process.

Whilst any works are being carried out near the retained existing trees, these works will be supervised by the project arboriculturalist and a tool box talk will be given to each site operative to ensure there is no damage caused by their work. This will be followed up by a report will be sent to the council development management department. The report will show works undertaken and if any remedial works are required to the tree or its root zone of the retained trees.

Compliance

Before construction begins written confirmation that the developer/contractor or its agents agree to comply in full with the principles set out within this Method Statement will be lodged with the LPA.

Report written by

Daniel Gospel ND Arb, Tech ArborA
Arboricultural Consultant
Corsican Associates

Appendix 1: Tree survey schedule

Tree Schedule Explanatory Notes

Ref.no	Identifies trees, groups and hedges on the accompanying plan.
Species	Common names are provided to aid wider comprehension.
Height	Describes the approximate height of the tree measured in metres from ground level.
Canopy Spread	Indicates the crown radius from the base of the tree in four compass directions, recorded to the nearest half a metre.
Ground Clearance	Height of crown clearance above adjacent ground in metres.
DBH (mm)	DBH is the diameter of the stem measured in cm at 1.5m from ground level. Stem Diameter may be estimated where access is restricted.
RPR (cm)	Root Protection Radius (RPR) is the minimum area required to be protected measured radially from the trunks centre.
RPA (m²)	Root Protection Area (RPA) is the minimum rooting area in m ² which should remain undisturbed around each tree.
Age Class	Age of the tree expressed as Y- Young, SM – Semi Mature, MA- Middle-Aged, EM- Early Mature, M- Mature or OM- Over-Mature
General Condition	Overall condition of tree expressed as :G-Good, F-Fair, P-Poor, D-Dead
Structural defects/Comments	May include general comments about growth characteristics, how it is affected by other trees and any previous surgery works. Also specific problems such as dead wood, pests, diseases, broken limbs or any other Bio-mechanical defects that are apparent.
Estimated Remaining Years	Categorised in year bands of less than <10, 10 to 20 yrs, 20 to 40 yrs or 40+ yrs.
BS Category	B.S. Cat refers to (BS 5837:2012 Table 1) and refers to tree/overall group quality and value; 'A' - High; 'B' - Moderate; 'C' - Low; 'U' - Remove.
Sub Category	Sub Cat refers to the retention criteria values where 1 is Arboricultural, 2 is landscape and 3 is cultural including conservational, historic and commemorative

BS5837:2012 Tree Survey

Corsican Associates

Client: Park Holidays Uk Ltd
 Project: Marlie BS 2017
 Survey Date: 25/07/2017 - 05/10/2017
 Surveyor: Daniel Gospel

The Chestnuts
 Mill Road
 Buxhall
 Suffolk
 IP14 3DS
 Phone: 01449 737499

Tree and Tag No Species		Hght (m)	Stems		Crown		Age	RP A (m²) R (m)	Phys Condition	Structural Condition	Preliminary Recommendations		Cat ERC
			No	Ø (mm)	Spread (m)	Clear (m)					Survey Comment		
G1											Estimated Measurements		
A Group	5	1	150	N	2.5	0	SM	A: 10.2	Fair	C: Fair	No action :: Unspecified		C.2
- -				E	2.5			R: 1.8		S: Fair	Small group of plum and hawthorn behind stables. No access		10 to 20 yrs
				S	2.5					B: Fair			
				W	2.5								
G2											Estimated Measurements		
A Group	15	1	500	N	5	2	OM	A: 113.1	Poor	C: Poor	Fell :: Fell to ground level		U.2
- -				E	5			R: 6		S: Poor	Over mature leylandii group. Crown collapse ongoing with multiple fractured and hanging branches.		<10 yrs
				S	5					B: Fair			
				W	5								
G3											Estimated Measurements		
A Group	4.5	1	200	N	2.5	0	M	A: 18.1	Fair	C: Poor	No action :: Unspecified		C.2
- -				E	2.5			R: 2.4		S: Poor	Small linear group of leylandii elder hawthorn and wild plum. Poor		10 to 20 yrs
				S	2.5					B: Fair			
				W	2.5								
G4											Estimated Measurements		
A Group	6.5	4	453 (Eq)	N	2	1	M	A: 92.8	Fair	C: Fair	No action :: No action		C.2
- -				E	3.5			R: 5.43		S: Poor	Group of multi stem goat willow. Typical form and condition. Could be coppiced down. Ownership unclear		10 to 20 yrs
				S	6					B: Poor			
				W	4								
Age Classifications:		N	Newly planted	EM	Early Mature	Condition:		C	Crown	Stems:		Ø	Diameter
		Y	Young	M	Mature			S	Stem			(Eq)	Equivalent stem diameter using BS5837:2012 definition
		SM	Semi-mature	OM	Over Mature			B	Basal area				

Tree and Tag No Species	Hght (m)	Stems		Crown		Age	RP A (m²) R (m)	Phys Condition	Structural Condition	Preliminary Recommendations		Cat ERC
		No	Ø (mm)	Spread (m)	Clear (m)					Survey Comment		
G5												
A Group	5.5	1	200	N	2.5	0	SM	A: 18.1	Fair	C: Fair	See Comment :: Unspecified	C.2
- -				E	2.5			R: 2.4		S: Fair	Linear group of hawthorn elm elder sycamore and willow forming rough hedge. Remove dead specimens	10 to 20 yrs
				S	2.5					B: Fair		
				W	2.5							
G6												
											Estimated Measurements	
A Group	20	1	650	N	8	2	M	A: 191.2	Fair	C: Fair	See Comment :: Unspecified	C.2
- -				E	8			R: 7.8		S: Fair	Group of mature hybrid poplar on both sides of ditch. All feature hornet moth damage. Sounding mallet inconclusive except in one case. Fell specimen indicated on plan due to basal decay and verify basal integrity of remainder by Resistograph drilling.	10 to 20 yrs
				S	8					B:		
				W	8							
G7												
A Group	9	1	350	N	1	1	OM	A: 55.4	Poor	C: Poor	Fell :: Fell to ground level	U
- -				E	3			R: 4.19		S: Poor	Poor group of overhead suppressed leylandii. Form and condition is poor. Several are hung up in adjacent vegetation	<10 yrs
				S	4					B: Poor		
				W	3							
G8												
A Group	13	1	350	N	4	2	M	A: 55.4	Fair	C: Poor	No action :: Unspecified	C.2
- -				E	4			R: 4.19		S: Fair	Group of sycamore. All topped out at 5m and regrown. Not long term asset	10 to 20 yrs
				S	4					B: Fair		
				W	4							
G9												
											Estimated Measurements	
A Group	3.5	1	100	N	2	0	SM	A: 4.5	Fair	C: Fair	No action :: Unspecified	C.2
- -				E	2			R: 1.19		S:	Blackthorn scrub	10 to 20 yrs
				S	2					B:		
				W	2							
G10												
A Group	4	8	141 (Eq)	N	2	0	M	A: 9	Fair	C: Fair	No action :: Unspecified	C.2
- -				E	2			R: 1.69		S: Fair	Self set hawthorn along ditch line	20 to 40 yrs
				S	2					B: Fair		
				W	2							
Age Classifications:	N Y SM	Newly planted Young Semi-mature	EM M OM	Early Mature Mature Over Mature	Condition:			C S B	Crown Stem Basal area	Stems:	Ø (Eq)	Diameter Equivalent stem diameter using BS5837:2012 definition

Tree and Tag No Species	Hght (m)	Stems		Crown		Age	RP A (m²) R (m)	Phys Condition	Structural Condition	Preliminary Recommendations		Cat ERC
		No	Ø (mm)	Spread (m)	Clear (m)					Survey Comment		
G11												
A Group	10	1	300	N	4	0	M	A: 40.7	Fair	C: Poor	No action :: Unspecified	C.2
- -				E	4			R: 3.59		S: Fair	Group of topped sycamore with hawthorn and plum understory. Monitor for re-topping interval	10 to 20 yrs
				S	4					B: Fair		
				W	4							
G12												
A Group	12	1	350	N	4	2	M	A: 55.4	Fair	C: Fair	No action :: Unspecified	B.2
- -				E	4			R: 4.19		S: Fair	Linear group of sycamore with hedgerow understory of hawthorn plum willow blackthorn	20 to 40 yrs
				S	4					B: Fair		
				W	4							
G13												
A Group	4	6	184 (Eq)	N	1.5	0	SM	A: 15.3	Fair	C: Poor	No action :: Unspecified	C.2
- -				E	1.5			R: 2.2		S: Poor	Small croup of coppice willows and crab apples. Small and insignificant.	10 to 20 yrs
				S	1.5					B: Fair		
				W	1.5							
G14												
A Group	9	1	300	N	3	3	M	A: 40.7	Fair	C: Poor	No action :: Unspecified	C.2
- -				E	2			R: 3.59		S: Fair	Group of seven sycamore and pne birch heavily pruned to accommodate adjacent power lines to east.	10 to 20 yrs
				S	3					B: Fair		
				W	3							
G15												
Common Hawthorn	3.5	1	85	N	1.5	1.5	SM	A: 3.3	Fair	C: Fair	No action :: Unspecified	C.2
<i>Crataegus monogyna</i>				E	1.5			R: 1.02		S: Poor	Group of three small hawthorn.	10 to 20 yrs
				S	1.5					B: Fair		
				W	1.5							
H1												
A Hedgerow	4	1	130	N	1	0	M	A: 7.6	Fair	C: Fair	See Comment :: Unspecified	C.2
- <i>Unknown</i>				E	1			R: 1.55		S: Fair	Overgrown hedge of hawthorn and elder. Reduce height to manageable size and trim as required to maintain.	20 to 40 yrs
				S	1					B: Fair		
				W	1.5							
Age Classifications: N Newly planted EM Early Mature Condition: C Crown Stems: Ø Diameter												
	Y Young		M Mature					S Stem			(Eq) Equivalent stem diameter using BS5837:2012 definition	
	SM Semi-mature		OM Over Mature					B Basal area				

Tree and Tag No Species		Hght (m)	Stems		Crown		Age	RP A (m²) R (m)	Phys Condition	Structural Condition	Preliminary Recommendations		Cat ERC
			No	Ø (mm)	Spread (m)	Clear (m)					Survey Comment		
H2													
A Hedgerow - <i>Unknown</i>		2.5	1	120	N E S W	0.7 0.7 0.7 0.7	0 M	A: 6.5 R: 1.43	Good	C: Fair S: Fair B: Fair	No action :: Unspecified Well maintained formal clipped hedge of hawthorn and blackthorn	C.2 20 to 40 yrs	
H3													
A Hedgerow - <i>Unknown</i>		5	1	270	N E S W	3 3 3 3	2 M	A: 33 R: 3.24	Fair	C: Fair S: Fair B: Fair	No action :: Unspecified Overgrown hedgerow of wild plum elder Norway maple.	C.2 10 to 20 yrs	
H4											Estimated Measurements		
A Hedgerow - <i>Unknown</i>		4.5	1	150	N E S W	1.5 1.5 1.5 1.5	0 M	A: 10.2 R: 1.8	Fair	C: Fair S: Fair B: Fair	No action :: Unspecified Mixed hedgerow of hawthorn wild cherry hazel elder. Provides valuable screening from Romney Warren Country Park.	C.2 10 to 20 yrs	
H5													
A Hedgerow - <i>Unknown</i>		2.3	1	100	N E S W	0.7 0.7 0.7 0.7	0 SM	A: 4.5 R: 1.19	Fair	C: Fair S: Fair B: Fair	No action :: Unspecified Typical ornamental hedge. Mostly blackthorn and elder.	C.2 10 to 20 yrs	
H6													
A Hedgerow - <i>Unknown</i>		2.5	1	100	N E S W	0.8 0.8 0.8 0.8	0 SM	A: 4.5 R: 1.19	Fair	C: Fair S: Fair B: Fair	No action :: Unspecified Collection of ornamental shrubs creating loose hedge. Garya Hebe Euronymous rose escalonia.	C.2 10 to 20 yrs	
H7													
Leyland Cypress <i>X Cupressocyparis leylandii</i>		6	1	370	N E S W	2.2 2.2 2.2 2.2	0 M	A: 61.9 R: 4.43	Fair	C: Fair S: Fair B: Fair	No action :: Unspecified Typically overgrown leylandii hedge. Cut to 3.5m below cables remainder at 6m.	C.1.2 10 to 20 yrs	
Age Classifications:		N Y SM	Newly planted Young Semi-mature	EM M OM	Early Mature Mature Over Mature	Condition:		C S B	Crown Stem Basal area	Stems:		Ø Diameter (Eq) Equivalent stem diameter using BS5837:2012 definition	

Tree and Tag No Species	Hght (m)	Stems		Crown		Age	RP A (m²) R (m)	Phys Condition	Structural Condition	Preliminary Recommendations			Cat ERC
		No	Ø (mm)	Spread (m)	Clear (m)					Survey Comment			
T1													
Hybrid Black Poplar <i>Populus x canadensis</i>	9.5	1	850	N E S W	4 5.5 3.5 3.5	2.5	M	A: 326.9 R: 10.2	Fair	C: Poor S: Fair B: Fair	Pollard :: Re-pollard Poor topped tree. Pollard to maintain safe dimensions	C.2 10 to 20 yrs	
T2													
Plum <i>Prunus Domestica</i>	4	1	180	N E S W	1.5 2.5 2 1.2	1	SM	A: 14.7 R: 2.16	Fair	C: Fair S: Fair B: Fair	No action :: Unspecified Small wild plum. Profuse basal suckers.	C.2 10 to 20 yrs	
T3												Estimated Measurements	
Leyland Cypress <i>X Cupressocyparis leylandii</i>	8	1	450	N E S W	4 4 1 2	2	OM	A: 91.6 R: 5.39	Poor	C: Poor S: Poor B: Poor	Fell :: Fell to ground level Remnant of failed multi stem tree. Unstable	U <10 yrs	
T4												Estimated Measurements	
Myrobalan Plum <i>Prunus cerasifera</i>	5	3	338 (Eq)	N E S W	3 6 3 1	1.2	M	A: 51.6 R: 4.05	Fair	C: Fair S: Poor B: Fair	No action :: Unspecified Leaning. Bark wounds to main stems	C.2 10 to 20 yrs	
T5												Estimated Measurements	
Unknown - -	3	1	250	N E S W	2 3 2 3	0	Dead	A: 28.3 R: 3	Dead	C: S: B:	Fell :: Fell to ground level Dead	U n/a	
T6												Estimated Measurements	
Myrobalan Plum <i>Prunus cerasifera</i>	3.5	1	230	N E S W	1.5 1.5 4 3	1	M	A: 23.9 R: 2.75	Fair	C: Poor S: Poor B: Poor	No action :: Unspecified Overhead suppression. Poor form	C.2 10 to 20 yrs	
Age Classifications:	N Y SM	Newly planted Young Semi-mature	EM M OM	Early Mature Mature Over Mature		Condition:	C S B	Crown Stem Basal area	Stems:	Ø (Eq)	Diameter Equivalent stem diameter using BS5837:2012 definition		

Tree and Tag No Species	Hght (m)	Stems		Crown		Age	RP A (m²) R (m)	Phys Condition	Structural Condition	Preliminary Recommendations		Cat ERC
		No	Ø (mm)	Spread (m)	Clear (m)					Survey Comment		
T7											Estimated Measurements	
Myrobalan Plum <i>Prunus cerasifera</i>	5	5	382 (Eq)	N E S W	2 3.5 3.5 1	1.5	M	A: 66.1 R: 4.58	Fair	C: Poor S: Poor B: Fair	No action :: Unspecified Overhead suppression. Poor form	C.2 10 to 20 yrs
T8											Estimated Measurements	
Myrobalan Plum <i>Prunus cerasifera</i>	3.5	1	150	N E S W	1 3 2 0.5	1	SM	A: 10.2 R: 1.8	Poor	C: Poor S: Poor B: Fair	No action :: Unspecified Overhead suppression. Poor form	C.2 10 to 20 yrs
T9												
Sycamore <i>Acer pseudoplatanus</i>	7.5	4	287 (Eq)	N E S W	1.5 2.5 3.5 1.5	1	M	A: 37.1 R: 3.43	Decline	C: Poor S: Poor B: Fair	Fell :: Fell to ground level Poor. Sooty bark disease advanced. Predominantly deadwood	U <10 yrs
T10												
Sycamore <i>Acer pseudoplatanus</i>	7.5	1	250	N E S W	1.6 3 5 2	2	SM	A: 28.3 R: 3	Fair	C: Fair S: Fair B: Fair	No action :: Unspecified Asymmetric. Small foliage	C.2 10 to 20 yrs
T11												
Sycamore <i>Acer pseudoplatanus</i>	13	1	500	N E S W	4 3 6 4	2	M	A: 113.1 R: 6	Fair	C: Fair S: Poor B: Fair	Fell :: Fell to ground level Major bark inclusion at bifurcation from 1.5m with elephants ears swelling	U.2 <10 yrs
T12											Estimated Measurements	
White Willow <i>Salix alba</i>	13	1	750	N E S W	4 5.6 5.5 3	2.5	OM	A: 254.5 R: 9	Poor	C: Fair S: Poor B: Poor	Further inspection :: On internal trunk decay. Ownership unclear. Evident decay in main stem. Potential hazard to new development. Further assessment recommended	U <10 yrs
Age Classifications:	N Y SM	Newly planted Young Semi-mature	EM M OM	Early Mature Mature Over Mature		Condition:	C S B	Crown Stem Basal area	Stems:	Ø (Eq)	Diameter Equivalent stem diameter using BS5837:2012 definition	

Tree and Tag No Species	Hght (m)	Stems		Crown		Age	RP A (m²) R (m)	Phys Condition	Structural Condition	Preliminary Recommendations		Cat ERC
		No	Ø (mm)	Spread (m)	Clear (m)					Survey Comment		
T13											Estimated Measurements	
Myrobalan Plum <i>Prunus cerasifera</i>	7	4	345 (Eq)	N E S W	3 2.5 4 3.5	2	M	A: 53.9 R: 4.14	Poor	C: Fair S: Poor B: Poor	Fell :: Fell to ground level Ganoderma decay at base	U <10 yrs
T14											Estimated Measurements	
Myrobalan Plum <i>Prunus cerasifera</i>	7	4	345 (Eq)	N E S W	3 2.5 4 3.5	2	M	A: 53.9 R: 4.14	Poor	C: Fair S: Poor B: Poor	Fell :: Fell to ground level Ganoderma decay at base	U <10 yrs
T15												
Hybrid Black Poplar <i>Populus x canadensis</i>	15	1	850	N E S W	8 6 6 6	5	M	A: 326.9 R: 10.2	Fair	C: Poor S: Fair B: Fair	No action :: Unspecified Fair. Typical large poplar. Previously topped. Potentially problem in future	C.2 10 to 20 yrs
T16											Estimated Measurements	
Sycamore <i>Acer pseudoplatanus</i>	4	1	100	N E S W	1.5 1.5 1.5 1.5	1	Y	A: 4.5 R: 1.19	Fair	C: Fair S: Fair B: Fair	No action :: Unspecified Typical form and condition	C.2 20 to 40 yrs
T17											Estimated Measurements	
White Willow <i>Salix alba</i>	4.5	10	316 (Eq)	N E S W	3.5 4 4 3	0	SM	A: 45.2 R: 3.79	Fair	C: Fair S: B:	No action :: Unspecified Multi stem. Possible coppice. Inaccessible	C.2 10 to 20 yrs
T18												
Common Hawthorn <i>Crataegus monogyna</i>	4	8	141 (Eq)	N E S W	2 2 2 2	0	M	A: 9 R: 1.69	Fair	C: Fair S: Fair B: Fair	No action :: Unspecified Typical form and condition	C.2 20 to 40 yrs
Age Classifications:	N Y SM	Newly planted Young Semi-mature	EM M OM	Early Mature Mature Over Mature		Condition:	C S B	Crown Stem Basal area	Stems:	Ø (Eq)	Diameter Equivalent stem diameter using BS5837:2012 definition	

Tree and Tag No Species	Hght (m)	Stems		Crown		Age	RP A (m²) R (m)	Phys Condition	Structural Condition	Preliminary Recommendations		Cat ERC
		No	Ø (mm)	Spread (m)	Clear (m)					Survey Comment		
T19												
Common Hawthorn <i>Crataegus monogyna</i>	4	8	141 (Eq)	N E S W	2 2 2 2	0 M	A: 9 R: 1.69	Fair	C: Fair S: Fair B: Fair	No action :: Unspecified ----- Typical form and condition	C.2 20 to 40 yrs	
T20												
Sycamore <i>Acer pseudoplatanus</i>	5	4	120 (Eq)	N E S W	1 1.5 1.5 1	1 SM	A: 6.5 R: 1.43	Fair	C: Fair S: Fair B: Fair	No action :: Unspecified ----- Small multi stem	C.2 10 to 20 yrs	
T21												
White Willow <i>Salix alba</i>	4	1	120	N E S W	2 2 2 1.5	0 SM	A: 6.5 R: 1.43	Fair	C: Fair S: Fair B: Fair	No action :: Unspecified ----- Typical form and condition	C.2 10 to 20 yrs	
T22											Estimated Measurements	
White Willow <i>Salix alba</i>	13	2	636 (Eq)	N E S W	5 6 7 7	3 OM	A: 183.2 R: 7.63	Poor	C: Poor S: Poor B: Poor	Fell :: Fell to ground level ----- Twin stem with severe basal decay at tight union. Previously topped.	U <10 yrs	
T23											Estimated Measurements	
Hybrid Black Poplar <i>Populus x canadensis</i>	15	1	700	N E S W	7 7 7 7	5 M	A: 221.7 R: 8.4	Fair	C: Poor S: Fair B: Fair	Pollard :: Re-pollard ----- Previously topped. Visibility severely restricted by vegetation. Snapped out and hanging limbs.	C.2 10 to 20 yrs	
T24											Estimated Measurements	
White Willow <i>Salix alba</i>	13	2	636 (Eq)	N E S W	5 6 7 7	3 OM	A: 183.2 R: 7.63	Poor	C: Poor S: Poor B: Poor	Fell :: Fell to ground level ----- Twin stem with severe basal decay at tight union. Previously topped.	U <10 yrs	
Age Classifications:	N Y SM	Newly planted Young Semi-mature	EM M OM	Early Mature Mature Over Mature		Condition:	C S B	Crown Stem Basal area	Stems:	Ø (Eq)	Diameter Equivalent stem diameter using BS5837:2012 definition	

Tree and Tag No Species	Hght (m)	Stems		Crown		Age	RP A (m²) R (m)	Phys Condition	Structural Condition	Preliminary Recommendations		Cat ERC
		No	Ø (mm)	Spread (m)	Clear (m)					Survey Comment		
T25												
Common Hawthorn <i>Crataegus monogyna</i>	3.5	1	95	N E S W	1 2 0.5 0.5	1.8	SM	A: 4.1 R: 1.14	Fair	C: Fair S: Poor B: Fair	No action :: Unspecified Leaning. Poor	C.2 10 to 20 yrs
T26												
Weeping Willow <i>Salix chrysocoma</i>	14	1	690	N E S W	6 5 6 7	2	M	A: 215.4 R: 8.28	Fair	C: Fair S: Poor B: Fair	Further inspection :: On internal trunk decay. Large branches removed. Rib formations on main stem up to 2.5m may indicate internal decay or structural weakness.	C.2 10 to 20 yrs
T27												
Sycamore <i>Acer pseudoplatanus</i>	13	1	360	N E S W	5.5 5 5 2	2.5	M	A: 58.6 R: 4.31	Fair	C: Fair S: Fair B: Fair	No action :: Unspecified Asymmetric but otherwise OK. Branch structure suitable to grow out better with sufficient space and light.	C.1.2 20 to 40 yrs
T28												
Monterey Cypress <i>Cupressus macrocarpa</i>	12	2	636 (Eq)	N E S W	6 2.5 1 2	5	OM	A: 183 R: 7.63	Poor	C: Poor S: Poor B: Poor	Fell :: Fell to ground level Severely decayed stem. Very poor form. Overhanging children's play area. Major hazard.	U <10 yrs
T29												
Hybrid Black Poplar <i>Populus x canadensis</i>	18	1	900	N E S W	9 11 11 8	3	OM	A: 366.5 R: 10.8	Fair	C: Poor S: Fair B:	Pollard :: Re-pollard Further inspection :: On internal trunk decay. Previously topped. Branches overgrown and weakly attached to parent limbs. Overhangs play area. Re-top/pollard. Severe hornet moth activity round base. Resistograph lower stem and roots to verify structural condition.	C.2 10 to 20 yrs
Age Classifications:	N Y SM	Newly planted Young Semi-mature	EM M OM	Early Mature Mature Over Mature		Condition:	C S B	Crown Stem Basal area	Stems:	Ø (Eq)	Diameter Equivalent stem diameter using BS5837:2012 definition	

Tree and Tag No Species		Hght (m)	Stems		Crown		Age	RP A (m²) R (m)	Phys Condition	Structural Condition	Preliminary Recommendations		Cat ERC
			No	Ø (mm)	Spread (m)	Clear (m)					Survey Comment		
T30													
Silver Birch <i>Betula pendula</i>	8	2	269 (Eq)	N E S W	3 2.5 3 3	1	M	A: 32.8 R: 3.23	Fair	C: Fair S: Poor B: Fair	Raise low canopy :: To 2.5m Poor condition due to past pruning. Dense Epicormic on lower stem obstructs roadway.	C.2 10 to 20 yrs	
T31													
Common Horse Chestnut <i>Aesculus hippocastanum</i>	8	1	510	N E S W	4.5 7 7 5	2.5	M	A: 117.7 R: 6.12	Decline	C: Poor S: Poor B: Poor	Fell :: Fell to ground level Severe infection of bleeding canker with classic sapwood decay strips associated with advanced damage prior to major structural failures.	U <10 yrs	
T32 63													
Sycamore <i>Acer pseudoplatanus</i>	7	1	130	N E S W	1.5 2 1 2	2	SM	A: 7.6 R: 1.55	Fair	C: Fair S: Poor B: Fair	No action :: Unspecified Swept base. Suppressed	C.1 10 to 20 yrs	
T33													
Common Hawthorn <i>Crataegus monogyna</i>	4	1	100	N E S W	1 1 1 1.5	2	SM	A: 4.5 R: 1.19	Fair	C: Poor S: Poor B: Fair	No action :: Unspecified Suppressed	C.2 10 to 20 yrs	
T34													
Grey Poplar <i>Populus canescens</i>	9	1	210	N E S W	2 3 3 1	3	SM	A: 20 R: 2.52	Fair	C: Poor S: Poor B: Fair	No action :: Unspecified Contorted stem growth due to competing trees. Poor crown form.	C.2 10 to 20 yrs	
T35													
Norway Maple <i>Acer platanoides</i>	8.5	1	240	N E S W	2.5 3 2.5 2.5	3.5	SM	A: 26.1 R: 2.88	Fair	C: Fair S: Fair B: Fair	No action :: Unspecified Narrow form. Tight unions on branches. Exposed roots.	C.2 20 to 40 yrs	
Age Classifications: N Newly planted EM Early Mature Condition: C Crown Stems: Ø Diameter Y Young M Mature S Stem (Eq) Equivalent stem diameter using BS5837:2012 definition SM Semi-mature OM Over Mature B Basal area													

Tree and Tag No Species	Hght (m)	Stems		Crown		Age	RP A (m²) R (m)	Phys Condition	Structural Condition	Preliminary Recommendations		Cat ERC
		No	Ø (mm)	Spread (m)	Clear (m)					Survey Comment		
T36												
Sycamore <i>Acer pseudoplatanus</i>	6	1	210	N E S W	1.3 2 1 1	3	SM	A: 20 R: 2.52	Fair	C: Poor S: Fair B: Fair	No action :: Unspecified Severely pruned to clear overhead cables.	C.2 10 to 20 yrs
T37												
Sycamore <i>Acer pseudoplatanus</i>	7.5	1	280	N E S W	2 2 2 3	3	M	A: 35.5 R: 3.36	Poor	C: Poor S: Fair B: Poor	Fell :: Fell to ground level Severely pruned to clear overhead cables. Basal decay by fungal pathogen.	U.1 <10 yrs
T38												
Silver Birch <i>Betula pendula</i>	7	1	200	N E S W	2 3.5 1.5 1	3	SM	A: 18.1 R: 2.4	Fair	C: Poor S: Fair B: Fair	No action :: Unspecified Severely pruned to clear overhead cables.	C.2 10 to 20 yrs
T39												
Norway Maple <i>Acer platanoides</i>	9	1	350	N E S W	4 4.5 2 4	3.5	M	A: 55.4 R: 4.19	Fair	C: Fair S: Fair B: Fair	Pollard :: Re-pollard Maple Pollard. Good general health. Slightly overgrown. Overhead cables pass through crown.	C.1.2 20 to 40 yrs
T40												
Myrobalan Plum <i>Prunus cerasifera</i>	4	1	140	N E S W	1.3 1.3 1.3 1.3	1	SM	A: 8.9 R: 1.68	Fair	C: Fair S: Fair B: Fair	No action :: Unspecified Small tree tended into neat form.	C.2 10 to 20 yrs
T41												
Myrobalan Plum <i>Prunus cerasifera</i>	8	4	530 (Eq)	N E S W	7 3.5 2.5 2	1.5	M	A: 127.3 R: 6.36	Poor	C: Poor S: Poor B: Poor	Fell :: Fell to ground level Large leaning tree with decay throughout main stems. Overhangs gas cylinder storage compound. Major hazard.	U.1 <10 yrs
Estimated Measurements												
Age Classifications:	N Y SM	Newly planted Young Semi-mature	EM M OM	Early Mature Mature Over Mature	Condition:		C S B	Crown Stem Basal area	Stems:	Ø (Eq)	Diameter Equivalent stem diameter using BS5837:2012 definition	

Tree and Tag No Species		Hght (m)	Stems		Crown		Age	RP A (m²) R (m)	Phys Condition	Structural Condition	Preliminary Recommendations		Cat ERC
			No	Ø (mm)	Spread (m)	Clear (m)					Survey Comment		
T42											Estimated Measurements		
Myrobalan Plum <i>Prunus cerasifera</i>		4.5	1	260	N E S W	4 2 1 1	1.5 M	A: 30.6 R: 3.12	Poor	C: Poor S: Poor B: Poor	Fell :: Fell to ground level Major basal decay. Overhangs gas cylinder storage compound. Major hazard.		U.1 <10 yrs
T43													
Hybrid Black Poplar <i>Populus x canadensis</i>		14	1	830	N E S W	4.5 4.5 5 5	4 M	A: 311.7 R: 9.96	Fair	C: Fair S: Fair B:	Further inspection :: Of roots Poplar Pollard. Crown structure appears good from ground level. Regrowth vigorous but not yet requiring re-pollard. Basal area shows extensive hornet moth activity. Resistograph roots and lower stem to verify structural condition.		C.2 10 to 20 yrs

Report selection criteria.

Projects.

Marlie BS 2017

Date Range.

Any Date

Work types.

----> Fell :: Fell to ground level
 ----> Further inspection :: Of roots
 ----> Further inspection :: On internal trunk decay.
 ----> No action :: No action
 ----> No action :: Unspecified
 ----> Pollard :: Re-pollard
 ----> Raise low canopy :: To 2.5m
 ----> See Comment :: Unspecified

Latest Survey.

All surveys for the selected trees.
 ---> Last survey for each selected tree.

Work Completed.

---> Work Completed
 ---> Work Not Completed

Number of trees in selected Project(s) 65

Number of trees in Report selection 65

Age Classifications: N Newly planted EM Early Mature
 Y Young M Mature
 SM Semi-mature OM Over Mature

Condition: C Crown
 S Stem
 B Basal area

Stems: Ø Diameter
 (Eq) Equivalent stem diameter using BS5837:2012 definition

Appendix 2: Arboricultural Impact Assessment Plans



KEY

Tree Constraints

- Category B Existing Tree Group of Moderate Clarity and Value
- Category C Existing Tree of Low Clarity and Value
- Category C Existing Tree Group of Low Clarity and Value
- Category C Existing Hedge of Low Clarity and Value
- Category U Existing Tree in Immediate Vicinity of Development
- Category U Group of Trees in Immediate Vicinity of Development
- Existing Shrubs or Vegetation not to BS5837 survey standard
- Root Protection Area as calculated in accordance with BS5837

Tree Works

- Ground Level Works as specified in the Appendix
- Ground Reduction Works as specified in the Appendix
- Trees to be retained to establish a new pattern
- Root Pruning Area
To undertake root pruning you will require underpinning by hand digging to a depth of 100mm. Ensure there is no damage caused to the tree roots on the side and back of the tree. From the side and back of the tree, ensure the tree is completely cut off. The tree will be removed. Tree Protection Fencing should be erected to protect the retained roots.

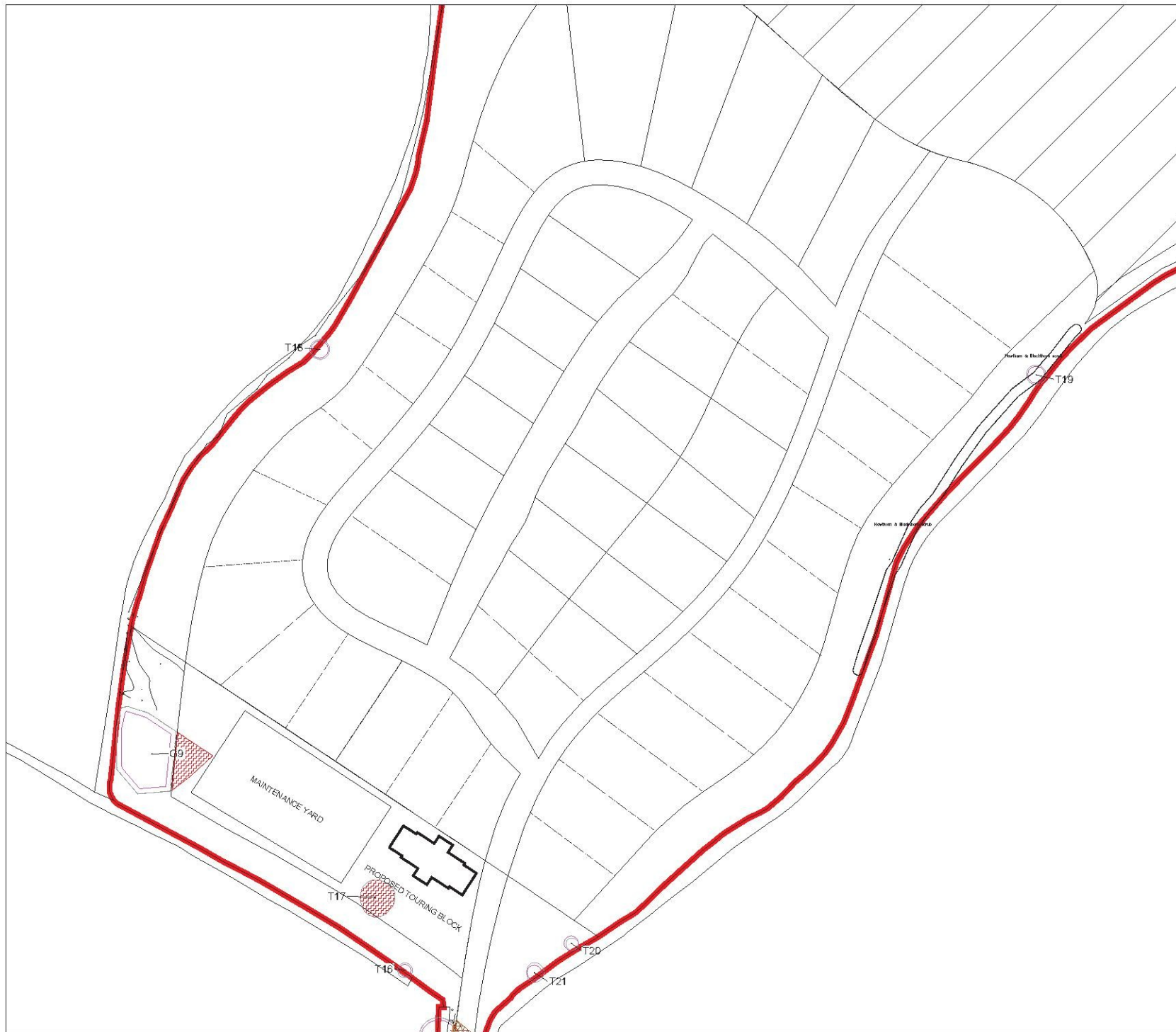


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Drawing Title: Arboriculture Impact Assessment
 Project: Marie Hooley Park
 Client: Park Hooley UK Ltd. CA Ref: 15/020-07
 Scale: 1:250 @ A0 Date: Oct 2017 Revisions
 Purpose of drawing: Discussion



Corsican Associates
 Landscape Architects & Arboriculturists
 Tel: 01449 727499 Email: info@corsican.co.uk



KEY

Tree Constraints

- Category B Existing Tree Group of Moderate Quality and Value
- Category C Existing Tree of Low Quality and Value
- Category C Existing Group of Low Quality and Value Trees
- Category C Existing Hedge of Low Quality and Value
- Category U Existing Tree in severe decline and/or dead
- Category U Group of trees in severe decline and/or dangerous
- Existing Shrubs or Vegetation not to BS5821 survey standard
- Root Protection Area as calculated in accordance with BS5821

Tree Works

- Crown Lifting Works as specified in A.A report
- Crown Reduction Works as specified in A.A report
- Trees to be felled to establish a new option



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Drawing Title: Arboriculture Impact Assessment

Project: Marie Holiday Park

Client: Park Holidays UK Ltd. CA Ref: 15/020-08

Scale: 1:250 @A0 Date: Oct 2017 Revisions

Purpose of drawing: Discussion



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KEY

Tree Constraints

- Category B Existing Tree Group of Moderate Clarity and Value
- Category C Existing Tree of Low Clarity and Value
- Category C Existing Tree Group of Low Clarity and Value
- Category C Existing Hedge of Low Clarity and Value
- Category U Existing Tree in sensitive location and/or dead
- Category U Group of trees in sensitive location and/or dead
- Existing Shrubs or Vegetation not to be removed
- Root Protection Area as calculated in accordance with BS5837

Tree Works

- Crown Lifting Works as specified in A.A report
- Crown Reduction Works as specified in A.A report
- Trees to be felled to establish new options



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Drawing Title: Arboriculture Impact Assessment

Project: Marie Hooley Park

Client: Park Hooley UK Ltd. CA Ref: 15/020-09

Scale: 1:250 @ A0 Date: Oct 2017 Revisions

Purpose of drawing: Discussion



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Appendix 3: Tree Protection Plans



KEY

Tree Classification

- Category B: Existing Tree (Over 10m Diameter) and Value
- Category C: Existing Tree (6-10m Diameter) and Value
- Category D: Existing Tree (3-6m Diameter) and Value
- Category E: Existing Tree (1-3m Diameter) and Value
- Category F: Existing Tree (0.5-1m Diameter) and Value
- Category G: Existing Tree (0.1-0.5m Diameter) and Value
- Category H: Existing Tree (0.05-0.1m Diameter) and Value
- Category I: Existing Tree (0.01-0.05m Diameter) and Value

Tree Protection

- Tree Protection Zone (TPZ) - Area of protection around a tree, defined by the tree's canopy spread and its root system.
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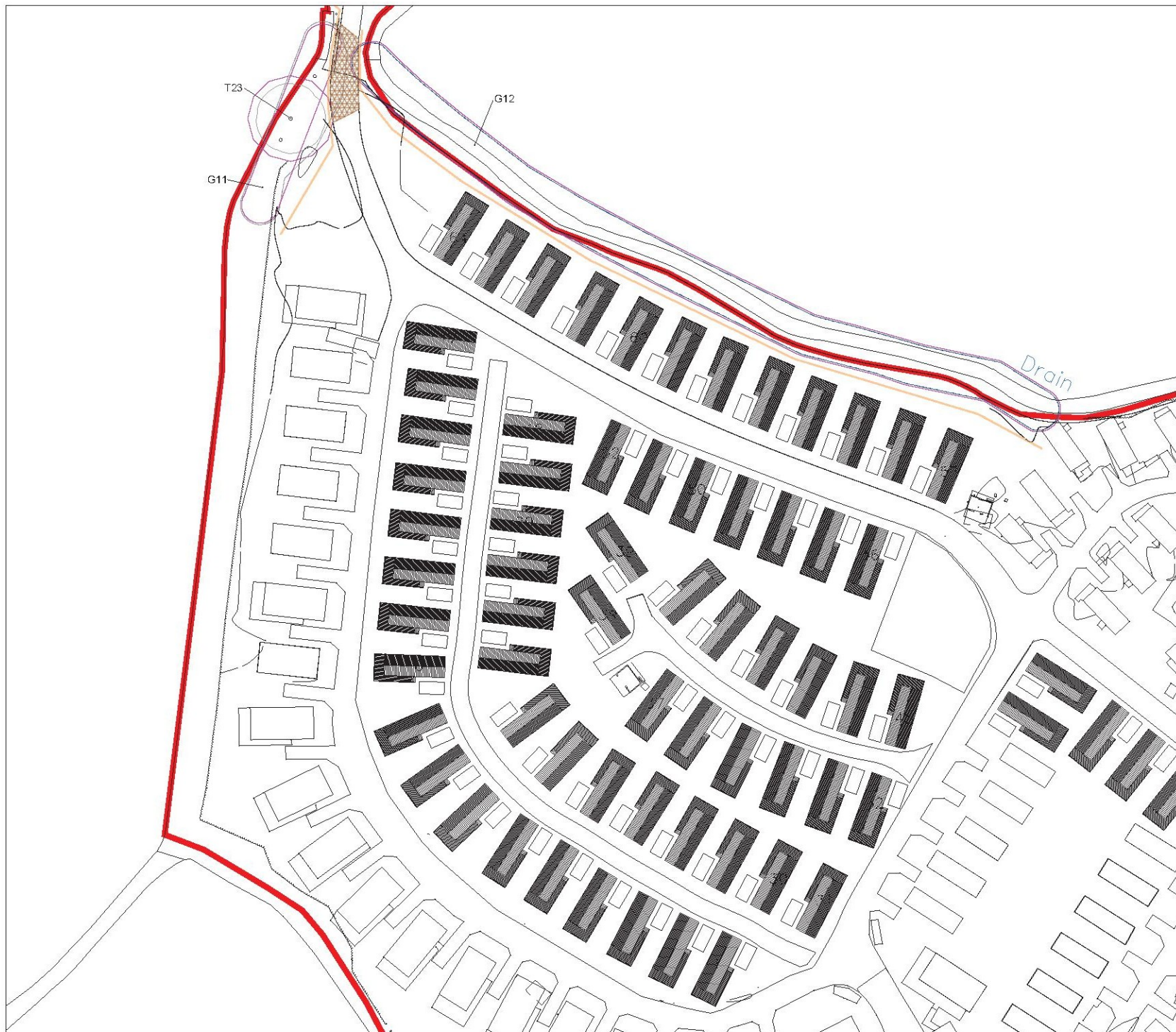
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Project: Marie Hokey Park	
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Purpose of drawing: Discussion	



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KEY

Tree Constraints

- Category: B-1 Existing Tree Group of 10 or more trees and/or value
- Category: C-1 Existing Tree of 10 or more trees and/or value
- Category: C-2 Existing Tree of 10 or more trees and/or value
- Category: C-3 Existing Tree of 10 or more trees and/or value
- Existing Tree in Vegetation Area of 10 or more trees and/or value
- Final Protection Area as indicated on site plan with 10m buffer

Tree Protection

- B-1 Tree protection boundary to be maintained. These are trees of a substantial size and/or value and/or are in a sensitive area. These trees should be protected at all times and any work should be carried out in a way that does not damage the tree or its root system. The boundary should be marked with orange paint and/or flags.
- Area of Operation or excavation within protection area to be completed and to begin the work should be indicated with additional signage.
- Ground protection area of 10m or more (e.g. 10m x 10m) to be maintained within the protection area. This area should be marked with orange paint and/or flags. The area should be kept clear of any work and any work should be carried out in a way that does not damage the tree or its root system.



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 Scale: 1:250 @ A0 Date: Oct 2017 Revision:
 Purpose of drawing: Discussion



