



Invicta Arboriculture

Tree and Woodland Consultancy

17th October 2023

[REDACTED]
Parks and Open Spaces Manager
Dover District Council
White Cliffs Business Park
Whitfield
Dover
Kent
CT16 3PJ

Our Ref: IA23/673

Dear [REDACTED]

You have instructed me to undertake a visual inspection and risk assessment of the mature Beech trees located within the grounds of Crabble Sports Ground, Crabble Road, Dover and to provide an arboricultural report on their structural and physiological condition and to make recommendations for their immediate and/or future management due to concerns you have over their structural integrity.

I have based this report on my site observations, and I have come to conclusions in the light of my experience as an arboriculturist.

I am a Technician Member of the Arboricultural Association.
I hold a current LANTRA Professional Tree Inspection qualification.

This report is only concerned with the single Beech tree located within the entrance to Crabble Sports Ground, the fifteen Beech trees that stand immediately adjacent Crabble Avenue and the twenty-one Beech trees that form the wooded copse at the far eastern end of Crabble Sports Ground and are shown on the site plan included at Appendix A. This plan is for illustrative purposes only and should not be used for directly scaling measurements.

All of the relevant information on the trees is contained within this report. It takes no account of any other trees. It includes a detailed assessment based on the site visit.

Trees and shrubs are living organisms whose health and stability can change rapidly especially following extreme weather events and therefore the recommendations provided are valid for a period of twelve months from the date of this report.



[REDACTED] Tech Cert (Arbor. A)
Tel: 01303 266958 | Mobile: [REDACTED] | Email: invictaarb@icloud.com



I carried out an accompanied site visit on 29th September 2023 in the presence of Dover District Councils Tree Officer () and an unaccompanied site visit on 17th October 2023. All of my observations were from ground level. The weather conditions at the time of the inspections were sunny and mild with good visibility.

Appraisal:

The Beech trees that extend around the northern, eastern and western boundaries of Crabble Sports Ground are considered to be large specimen trees that have been present for some considerable time. Without knowing their exact planting date it is difficult to age the trees precisely, however they are considered to be fully mature to over-mature specimens, that is to say that they are considered to be within the third to final quarter of their safe expected life spans for trees of this species.

The trees are considered to be even-aged with no obvious succession planting having taken place. The main issue with an even-aged tree stock is that more often than not it will grow and ultimately decline at a similar rate as is evident at Crabble. The trees have formed a dense monoculture with little species diversity due to Beeches propensity to cast dense shade that prevents competition from other species.

The trees are a striking visual feature of the site, however their structural integrity is being increasingly compromised, with many of them beginning to fail either partially or wholly and with increasing regularity. Recent examples of this have occurred within the wooded copse at the eastern end of the site with one of the trees failing completely and falling into the garden of an adjacent property destroying the shed and boundary fence-line. Upon closer inspection of the fallen tree it was obvious that the failure occurred as a result of a structurally defective fork that was also compromised by the presence of the fungal pathogen *Kretzschmaria deusta*. Whilst the structurally defective fork would have been observable, the fungal pathogen within would not have been.



Fungal pathogens aside, a visual inspection of the trees revealed that many of the Beech trees present have observable structural defects such as tight forks, weak unions, un-occluded cavities, pockets of decay and exposed shallow root systems that will in time become compromised and as such are considered to pose an increasing and unacceptable risk to residents, pedestrians, and motorists within Crabble Avenue and those accessing the sports ground via the eastern wooded copse. I include two photographs below showing typical examples of the sub-optimal structural features that many of the trees present display.



Increasing incidents of extreme weather driven by climate change is exacerbating the problem of structural failure with many of the recent issues occurring as a result of gale force winds and/or heavy rainfall events. The shallow chalk soil on which the trees stand is also a cause for concern in terms of its erosion and increased risk of windthrow.

It should however be stated that compared to other everyday risks we readily accept, the overall risk to us from branches or trees falling is extremely low. Our annual risk of being killed or seriously injured is less than one in a million. Given the number of trees we live with, and how many of us pass them daily, being killed or injured by a tree is a rare event and one that usually happens during severe weather although it is not unheard of for trees to fail during calmer weather conditions.

When assessing risk we need to evaluate a number of factors, the main ones being the occupancy of the site in question, the likelihood of failure and the consequences of such failure. Crabble Avenue is a residential street comprised of terrace houses, a public House (The Cricketers), several bus stops and on street parking for residents cars. It is also a popular and well-used thoroughfare for local school children. At weekends the occupancy of the site increases significantly due to Crabble being the home grounds of both Dover Athletic Football Club and Dover Rugby Club with many supporters accessing the respective grounds via Crabble Avenue and the wooded copse at the eastern end of the site.

The trees located immediately adjacent to Crabble Avenue have been measured and stand between fifteen and twenty metres in height. A separation distance of only ten metres exists between the residential properties opposite, placing the trees well within falling distance of them, which understandably leads to increased anxiety for the residents.



Dover District Council has been spending an increasing amount of time, resource and finance in dealing with the Beech trees at Crabble Sports Ground in a reactive manner and as such a management plan for the site is proposed that will see the removal of fifteen roadside trees from Crabble Avenue and the twenty-one trees that form the wooded copse to the east, with a robust and diverse re-planting program prepared by the council that mitigates the loss of the Beech trees and provides the site with continuity tree cover for decades to come. The risk posed by the trees along Crabble Avenue and within the wooded copse has simply become unacceptable to the District Council with whom the duty of care rests.

The short term impact of such a drastic plan is clearly one of the loss of mature canopy cover over a wide and highly populated area; the initial cost to the local authority of removing the trees and ultimately reconciling the loss of the trees with the inevitable environmental consequences that will undoubtedly arise as a result of such a program of work (loss of habitat, biodiversity, pollution filtering and the sense of 'place' that the trees provide having been present for so long). To do nothing places the local authority at greater risk of legal action being taken against it should damage, injury or death occur as a result.

Serious consideration has been given to the removal of just the poorest quality trees present, however the issue with this approach is that as the trees have grown as a dense group and with Crabble Sports Ground occupying such an exposed position that there is a real risk of exposing the remaining trees to environmental factors and forces that they have not had an opportunity to adapt too, which can also lead to incidences of windthrow or partial structural failure, even in seemingly structurally and physiologically sound trees.

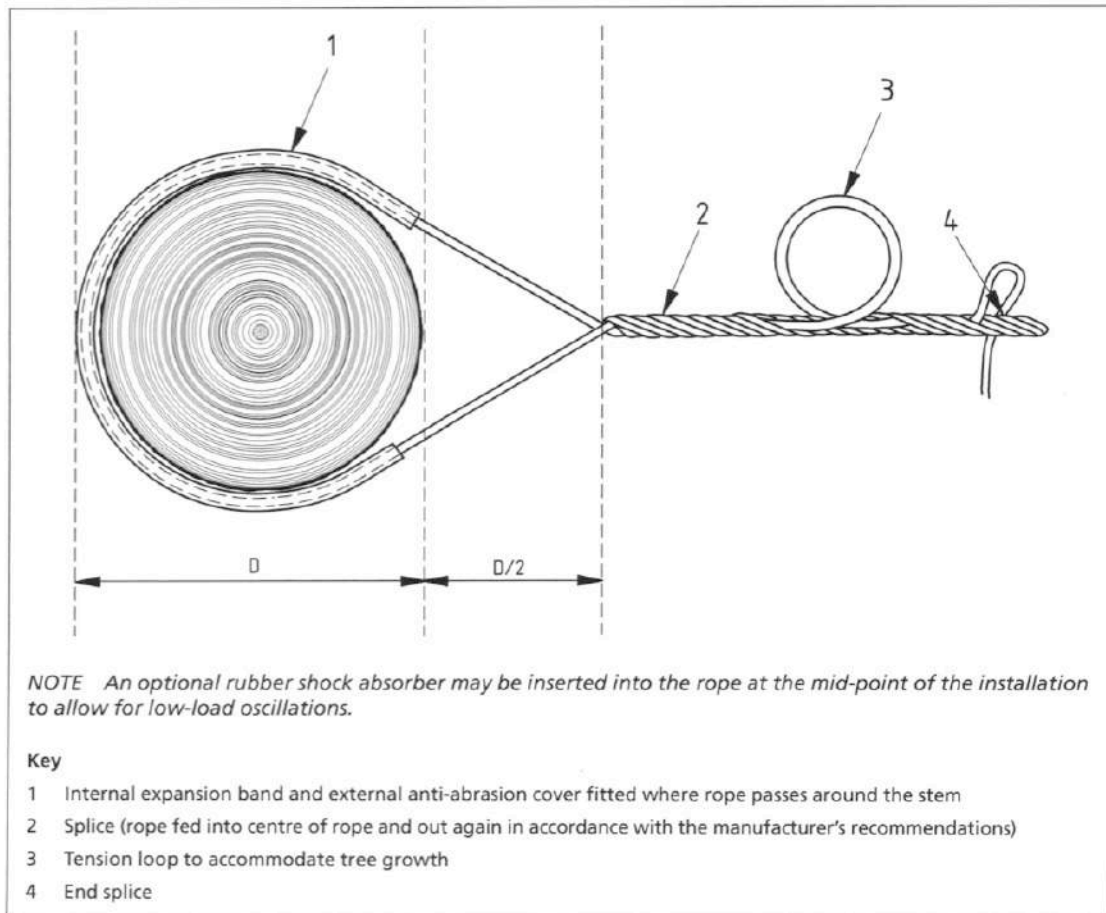
Further consideration has also been given to the overall reduction of the size of the trees in order to ease loading on their compromised structures and retaining them, however the extent of works required using this management approach would, in this instance, require the removal of considerable amounts of the trees canopy and in essence would result in a virtual pollard, which is neither desirable nor recommended for Beech trees, which often decline rapidly following such heavy pruning resulting in their complete loss within a year or two. The financial implications of this approach often prove to be false economy.

The exception to the above is the single Beech tree that stands at the entrance to Crabble Sports Ground off Crabble Road. This large, fully mature specimen tree stands at twenty-five metres in height with a canopy spread of ten metres to all four cardinal points and supports a full, wide spreading canopy that dominates the western boundary of the site. This tree, like those referred to above also has a number of noticeable structural defects; most notably the tight fork within the base of the large diameter (>300mm) north east facing stem arising at three metres above ground level along with numerous large diameter (>150mm) over-extended branches throughout its canopy. In addition to this there are three immature *Ganoderma spp* fungal fruiting bodies present at the base of the tree on the south-western and eastern sides.

Whilst the presence of the immature decay fungi currently poses no significant risk, it is important to reduce the loading within the trees canopy to safeguard the sub-optimal structures referred to above. A prescription is therefore made for the overall reduction of the height of the tree by four metres and its lateral spread by a maximum of three metres. The Beech at the entrance to the sports ground occupies an extremely exposed position to which it has adapted to over many years. The prescribed works are considered to be in accordance with good arboricultural practice. In addition to the overall reduction of the trees canopy a further recommendation is made for the installation of a non-invasive flexible brace to add

further support to the north-east facing stem. The non-invasive flexible brace should be installed in accordance with Figure D.2 BS3998:2010 and is reproduced below for reference. Bracings with an eight tonne rating are recommended.

Figure D.2 Diagrammatic illustration of components used in a non-invasive restraint system: monofilament polypropylene hollow rope system



I have undertaken three separate VALID risk assessments in respect of Crabble Sports Ground; one for the single Beech tree at the entrance of the site, one for the group of fifteen trees along Crabble Avenue and one for the twenty-one trees contained within the wooded copse at the far eastern end of the site and are included at Appendix B of this report.

I trust my appraisal of the situation is acceptable to you, however please feel free to contact me should you have any queries.

Yours sincerely,

A large black rectangular redaction box covering the signature area.Two smaller black rectangular redaction boxes covering contact information, likely a phone number and an email address.

Appendix A: Site Plan:



Appendix B – VALID Risk Assessments

Summary

Risk

Beech (T1)



Highest Risk	Not Tolerable
Risk Reduction	Crown reduce by four metres overall
Tree Management	Crown reduce by four metres overall
Review Year	2024
Date Assessed	2023-09-29 09:13
Assessed By	[REDACTED]
Phone Number	[REDACTED]
Email	invictaarb@icloud.com



Tree Details and Location



Species	Height (m)	Stem Ø (cm)	Crown Ø (m)
Beech Fagus sylvatica	25	1550	20

Risk Inputs

Likelihood of Occupation



People

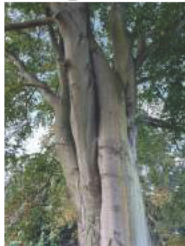


Not Weather



Event

Consequences



Tree



Stem



Branch



Deadwood



Likelihood of Failure

VITALITY	V	crown density woundwood response growth	A
ANATOMY	A	wood properties architecture R/D ratio	G
LOAD	L	exposure changes to the tree changes around tree	A
IDENTITY	I	species profile age of wounds CODIT	G
DEFECT	D	woundwood decay - extent feature or fault	A

Tight union with included bark at eight metres above ground level

Tree occupies an exposed position to which it has adapted over some considerable time.

Immature Ganoderma fungal brackets evident at base of tree on north east and south western sides



Notes

The highest risk is the structural failure of the north east facing stem

Summary

Risk

Beech (G1 (15 Beech Trees)



Highest Risk	Not Acceptable
Risk Reduction	Fell to ground level all fifteen trees
Tree Management	Fell to ground level all fifteen trees
Review Year	2024
Date Assessed	2023-09-29 10:03
Assessed By	[REDACTED]
Phone Number	[REDACTED]
Email	invictaarb@icloud.com



Tree Details and Location



Species	Height (m)	Stem Ø (cm)	Crown Ø (m)
Beech Fagus sylvatica	30 max	1000 max	20

Dover

Risk Inputs

Likelihood of Occupation



Structure



Parked



Services



Train | Tram



Property

Consequences



Tree



Stem



Branch



Deadwood



Likelihood of Failure

VITALITY	V	crown density woundwood response growth	G
ANATOMY	A	wood properties architecture R:D ratio	A
LOAD	L	exposure changes to the tree changes around tree	R
IDENTITY	I	species profile age of wounds CODIT	G
DEFECT	D	soundwood decay - extent feature or fault	C

All fifteen trees currently display good overall vitality

A number of structurally compromised unions are evident in the majority of trees present...

The removal of individual trees will expose others to environmental factors they have not had an opportunity to adapt to



Notes

The highest risk is the partial or total structural failure of roadside trees

Summary Risk

Beech (G2)



Highest Risk	Not Acceptable
Risk Reduction	Fell all twenty-one tree to ground level
Tree Management	Fell all twenty-one trees to ground level
Review Year	202
Date Assessed	2023-09-29 10:22
Assessed By	[Redacted]
Phone Number	[Redacted]
Email	invictaarb@icloud.com



Tree Details and Location



Species	Height (m)	Stem Ø (cm)	Crown Ø (m)
Beech Fagus sylvatica	30+	880	12 max

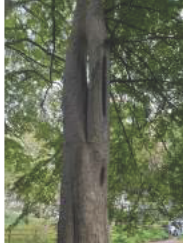
Risk Inputs

Likelihood of Occupation



			0
People	Weather Affected	Group	1 Very High

Consequences



				C
Tree	Stem	Branch	Deadwood	1 Very High

Likelihood of Failure

VITALITY	V	crown density woundwood response growth	C
ANATOMY	A	wood properties architecture R/D ratio	R
LOAD	L	exposure changes to the tree changes around tree	R
IDENTITY	I	species profile age of wounds CODIT	A
DEFECT	D	soundwood decay - extent feature or fault	R

0

All twenty-one trees display good overall vitality

1

Multiple tight unions and evidence of previous structural failures through the group

2

The removal of stems will expose others to environmental factors they have not had an opportunity to adapt to

3

Incomplete wound occlusion evident on the majority of trees present along with multiple cavities and areas of decay

4

Multiple unoccluded cavities evident, large diameter deadwood and areas of decay evident. Many tight structurally compromised unions

Notes

The highest risk is the increasing frequency of structural failure