



Gladman Developments Limited

Dover Road, Deal

Arboricultural Assessment

February 2017

FPCR Environment and Design Ltd

Registered Office: Lockington Hall, Lockington, Derby DE74 2RH

Company No. 07128076. [T] 01509 672772 [F] 01509 674565 [E] mail@fpcr.co.uk [W] www.fpcr.co.uk

This report is the property of FPCR Environment and Design Ltd and is issued on the condition it is not reproduced, retained or disclosed to any unauthorised person, either wholly or in part without the written consent of FPCR Environment and Design Ltd. Ordnance Survey material is used with permission of The Controller of HMSO, Crown copyright 100018896.

Rev	Issue Status	Prepared / Date	Approved/Date
-	Draft	TCB / 02.02.17	TJR / 07.02.17
	Final	TCB / 24.02.17	TJR / 24.02.17

PAGE LEFT INTENTIONALLY BLANK

CONTENTS

1.0 INTRODUCTION..... 3

2.0 METHODOLOGY..... 4

3.0 RESULTS 7

4.0 ARBORICULTURAL IMPACT ASSESSMENT.....13

5.0 TREE PROTECTION MEASURES.....16

6.0 CONCLUSION19

TABLES

Table 1: Summary of Trees by Retention Category

PHOTOGRAPHS

Photograph 1: Horse manure piled around tree stems within G1

Photograph 2 & 3: Symptoms of Ash Dieback

Photograph 4: Low quality tree cover to the west

PLANS

Assessment Boundary Plan (7573-A-01 REV A)

Tree Survey Plan (7573-A-02 REV B)

Tree Retention Plan (7573-A-03 REV A)

Detailed Access Plan (7573-A-04)

APPENDICES

Appendix A: Tree Schedule REV A

Appendix B: Protective Fencing Specifications

1.0 INTRODUCTION

- 1.1 This report has been prepared by FPCR Environment and Design Limited on behalf of Gladman Developments Limited to present the findings of an Arboricultural Assessment and survey of trees located at Dover Road, Deal (hereafter referred to as the site), OS Grid Ref TR 367 495, as shown in Figure 1. The survey was carried out on 15th November 2016.
- 1.2 The tree survey and assessment of existing trees has been carried out in accordance with guidance contained within British Standard 5837:2012 '*Trees in Relation to Design, Demolition and Construction - Recommendations*' (hereafter referred to as BS5837). The guidelines set out a structured assessment methodology to assist in determining which trees would be deemed either as being suitable or unsuitable for retention.
- 1.3 The guidance also provides recommendations for considering the relationship between existing trees and how those trees may integrate into designs for development; demolition operations and future construction processes so that a harmonious and sustainable relationship between any retained trees and built structures can be achieved.
- 1.4 The purpose of the report is therefore to firstly present the results of an assessment of the existing trees arboricultural value, based on their current condition and quality and to secondly provide an assessment of impact arising from the proposed development of the site.
- 1.5 This report has been produced to accompany a planning application for residential development and has included an assessment of any impact to the tree cover. The survey has therefore focused on any trees present within or bordering the site that may potentially be affected by the future proposals or will pose a constraint to any proposed development.
- 1.6 The site was situated to the south of Walmer, a town located in the district of Dover. Dover Road defined the western boundary with residential properties along Thistledown to the north and open countryside to the south and east. The assessment area comprised a single field parcel, divided into numerous paddocks and an area of new woodland planting to the east. Tree cover to the south associated with the access to Walmer Court Farm Shop was also incorporated. The majority of tree cover was associated with the area of mixed woodland and comprised of semi mature specimens of mixed native species. Mature trees were also located to the north west and along the roadside.
- 1.1 It is understood following consultation with the Local Planning Authority, Dover District Council, that there are no Tree Preservation Orders or Conservation Area designations that would apply to any trees present on, or in close proximity to the assessment site and therefore no statutory constraints would apply to the development in respect of trees.

2.0 METHODOLOGY

- 2.1 The survey of trees has been carried out in accordance with the criteria set out in Chapter 4 of BS5837. The survey has been undertaken by a suitably qualified and experienced arboriculturalist and has recorded information relating to all those trees within the site and those adjacent to the site which may be of influence to any proposals. Trees were assessed for their arboricultural quality and benefits within the context of the proposed development in a transparent, understandable and systematic way.
- 2.2 Trees have been assessed as groups where it has been determined appropriate. The term group has been applied where trees form cohesive arboricultural features either aerodynamically, visually or culturally including biodiversity or habitat potential for example parkland or wood pasture. An assessment of individual trees within groups has been made where a clear need to differentiate between them, for example, in order to highlight significant variation between attributes including physiological or structural condition or where a potential conflict may arise.
- 2.3 Trees have been divided into one of four categories based on Table 1 of BS5837, '*Cascade chart for tree quality assessment*'. For a tree to qualify under any given category it should fall within the scope of that category's definition (see below). Category U trees are those which would be lost in the short term for reasons connected with their physiology or structural condition. They are, for this reason not considered in the planning process on arboricultural grounds. Categories A, B and C are applied to trees that should be of material considerations in the development process. Each category also having one of three further sub-categories (i, ii, iii) which are intended to reflect arboricultural, landscape and cultural or conservation values accordingly.
- 2.4 **Category (U) – (Red):** Trees which are unsuitable for retention and are in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years. Trees within this category are:
- Trees that have a serious irremediable structural defect such that their early loss is expected due to collapse and includes trees that will become unviable after removal of other category U trees.
 - Trees that are dead or are showing signs of significant, immediate or irreversible overall decline.
 - Trees that are infected with pathogens of significance to the health and/ or safety of other nearby trees or are very low quality trees suppressing adjacent trees of better quality.
 - Certain category U trees can have existing or potential conservation value which may make it desirable to preserve.
- 2.5 **Category (A) – (Green):** Trees that are considered for retention and are of high quality with an estimated remaining life expectancy of at least 40 years with potential to make a lasting contribution. Such trees may comprise:
- Sub category (i) trees that are particularly good examples of their species, especially if rare or unusual, or are essential components of groups such as formal or semi-formal arboricultural features for example the dominant and/or principal trees within an avenue.
 - Sub category (ii) trees, groups or woodlands of particular visual importance as arboricultural and / or landscape features.

- Sub category (iii) trees, groups or woodlands of significant conservation, historical, commemorative or other value for example veteran or wood pasture.
- 2.6 **Category (B) – (Blue):** Trees that are considered for retention and are of moderate quality with an estimated remaining life expectancy of at least 20 years with potential to make a significant contribution. Such trees may comprise:
- Sub category (i) trees that might be included in category A but are downgraded because of impaired condition for example the presence of significant though remediable defects, including unsympathetic past management and storm damage.
 - Sub category (ii) trees present in numbers, usually growing as groups or woodlands, such that they attract a higher collective rating than they might as individuals or trees occurring as collectives but situated so as to make little visual contribution to the wider locality.
 - Sub category (iii) trees with material conservation or other cultural value.
- 2.7 **Category (C) – (Grey):** Trees that are considered for retention and are of low quality with an estimated remaining life expectancy of at least 10 years or young trees with a stem diameter below 150mm. Such trees may comprise:
- Sub category (i) unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories.
 - Sub category (ii) trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value or trees offering low or only temporary / transient screening benefits.
 - Sub category (iii) trees with no material conservation or other cultural value.

Tree Schedule

- 2.8 Appendix A presents details of any individual trees and groups of trees found during the assessment including heights, diameters at breast height, crown spread (given as a radial measurement from the stem), age class, comments as to the overall condition at the time of inspection, BS5837 category of quality and suitability for retention and the root protection area.
- 2.9 General observations particularly of structural and physiological condition for example the presence of any decay and physical defect and preliminary management recommendations have also been recorded where appropriate.

Other Considerations

- 2.10 It may be necessary during detailed design to undertake further assessment and accurate positioning of woody species within hedgerows and tree groups to assist structural calculations for foundation design of structures in accordance with current building regulations. Knowledge of soil type was not known at the time of this tree assessment. If a current soil survey of the site has taken place then it must be read in conjunction with the results of the tree survey.

- 2.11 The exact position of individual trees or species included as part of a tree group, hedgerow or woodland should be checked and verified on site prior to any decisions for foundation design, tree operations or construction activity being undertaken. Further survey work would be required for calculating foundation depths in accordance with NHBC Chapter 4.2 Building near Trees.

Conditions of Tree Survey

- 2.12 The survey was completed from ground level only and from within the boundary of the site. Aerial tree inspections or the internal condition of the stem/s or branches were not undertaken at this stage as this level of survey is beyond the scope of the initial assessment. Evaluation of tree condition given within this assessment applies to the date of survey and cannot be assumed to remain unchanged. It may be necessary to review these within 12 months, in accordance with sound arboricultural practice.

Site Plans

- 2.13 The Assessment Boundary Plan identifies the extent of the requested assessment area. Trees positioned beyond this boundary may have been recorded where it is considered that they may pose a constraint upon any future development of the site.
- 2.14 The individual positions of trees and groups have been shown on the Tree Survey Plan. The positions of trees are based on a topographical / land survey, as far as possible, supplied by the client. Where topographical information has not identified the position of trees and hedgerows, their relation to any existing surrounding features has been plotted using a global positioning system and aerial photography to provide approximate locations. The crown spread, root protection area and shade pattern (where appropriate) are also indicated on this plan.
- 2.15 As part of this assessment, a Tree Retention Plan has been prepared to show the proposed layout in relation to the existing tree cover allowing an assessment of any potential conflicts. The plan also identifies which trees would be required to be removed or retained as part of the proposed development.
- 2.16 The Detailed Access Arrangement Plan shows the location of the detailed access position in relation to the surrounding tree cover allowing the identification of any potential conflicts through implementation of the site access.

Tree Constraints and Root Protection Areas

- 2.17 Below ground constraints to future development are represented by the area surrounding the tree containing sufficient rooting volume for the specimen to have the best chance of survival in the long term which is identified as the root protection area (RPA). The RPA has been calculated in accordance with section 4.6 of BS5837 and requires suitable protection in order for the tree to be successfully incorporated into any future scheme. Where applicable the shape of the Root Protection Area has been modified to take into account the presence of any nearby obstacles (existing or past) which may have restricted root growth and the likely root distribution i.e. the presence of hard standing, structures and underground apparatus.

- 2.18 Where groups of trees have been assessed, the Root Protection Area has been shown based on the maximum sized tree in any one group and so may exceed the Root Protection Area required for some of the individual specimens within the group. Further detailed inspection of the individual trees forming a group may be required where development impacts upon the group.
- 2.19 Above ground constraints such as the current crown spread of the trees and an illustration of the shade pattern (where appropriate) have been considered and identified within the Tree Survey Plan and Tree Retention Plan indicates their potential area of shading influence.

3.0 RESULTS

- 3.1 A total of ten individual trees and seven groups of trees were surveyed as part of the Arboricultural Assessment. Trees were surveyed as individual trees and groups of trees where examples are clearly present as per the description. Refer to Tree Survey Plan and Appendix A . Tree Schedule for full details of the trees included in this assessment. The table below summarises the trees assessed. Several of the trees have been discussed in more detail following the table, owing to their physical condition or arboricultural significance.

Results Summary

- 3.2 The majority of tree cover found on site was associated with G1, an area of young and semi mature trees planted to the east covering approximately a third of the site. The remaining tree cover was considered to be low in arboricultural quality and consisted of either out grown hedgerow material, unmanaged roadside planting or heavily browsed individual stems.

Table 1: Summary of Trees by Retention Category

	Individual Trees	Total	Groups of Trees	Total
Category U - Unsuitable	T6, T7	2		0
Category A (High Quality / Value)		0		0
Category B (Moderate Quality / Value)		0	G1	1
Category C (Low Quality / Value)	T1, T2, T3, T4, T5, T8, T9, T10	8	G2, G3, G4, G5, G6, G7,	6

- 3.3 G1 consisted of mixed native species planted to form a small wooded area to the east. Young and semi mature examples of ash *Fraxinus excelsior*, beech *Fagus sylvatica*, English oak *Quercus robur*, sessile oak *Quercus petraea*, holm oak *Quercus ilex*, hawthorn *Crataegus monogyna*, and alder *Alnus glutinosa* were found to be generally fair in condition. Close planting intervals had resulted in low interlocking and dense crowns which also contained dense undergrowth such as bramble and thorn thickets. A large quantity of horse manure was present along the southern edge of G1 where the occupants of the horse paddock to the south had been tipping manure amongst the trees. Due to the potential for G1 to become a key landscape feature in the future this group of trees was considered to be retention category B.

PAGE LEFT INTENTIONALLY BLANK



Photograph 1: Horse manure piled around tree stems within G1

- 3.4 The presence of Chalara dieback of ash *Hymenoscyphus fraxineus* was observed throughout G1. This fungus causes leaf loss, crown dieback and bark lesions and is usually fatal within young tree stock. The presence of this disease would need to be confirmed through DNA testing so the appropriate management can be implemented. Despite this, overall the group was still regarded as being moderate in quality due to the possibility of managing the ash stock.



Photographs 2 & 3: Symptoms of Ash Dieback

- 3.5 Tree cover along the western boundary comprised of low quality specimens either sporadically positioned along the existing stone wall or larger individuals situated within the paddock compartments. Species comprised of sycamore *Acer pseudoplatanus*, hawthorn, elder *Sambucus nigra* and English elm *Ulmus procera*. T1, T2, T3 and T8 had all developed in close proximity to the stone wall resulting in crossing and rubbing branches, bark wounds and basal suckers. G2 consisted of outgrown forms positioned either side of the stone wall with dense undergrowth forming a linear group adjacent to Dover Road. Dead trees were noted with dense ivy and poached ground to the east.

PAGE LEFT INTENTIONALLY BLANK

- 3.6 T4 and T5, both mature sycamores, were recorded separately due to their greater proportions in comparison to the surrounding tree cover of G2. Both of these trees housed branch stubs, broken branches, basal suckers, branch socket cavities and dead wood. Bark wounds were commonly observed due to regular browsing by resident horses and poached ground was also present. T5 had developed a significant secondary leader which extended past the main crown due to the die back of lower branches. All of this tree cover was considered to be low in quality due to the defects present and therefore recorded as category C.



Photograph 4: Low quality tree cover to the west

- 3.7 T6, a mature English elm, and T7, a 1m high stump from a previously failed sycamore tree, were deemed to be unsuitable for retention and assessed as category U. T6 showed signs of significant declining health with no functional crown material present. Multiple fruiting brackets of *Ganoderma australe* were present to the base of T7 which is possibly the cause of this trees failure.
- 3.8 G4 was situated to the north of the site and comprised of mature trees situated outside the site within the rear gardens of a large private property. A wide range of species included sycamore, copper beech *Fagus sylvatica 'purpurea'* and scots pine *Pinus sylvestris* forming over an understory of hawthorn, elder, holly *Ilex aquifolium* and privet *Ligustrum ovalifolium*. Dense ivy and undergrowth restricted clear views of this tree cover however crossing and rubbing branches along with branch stubs and broken branches were noted. Pruning wounds were also present where overhanging branches had been removed. G4 was once again recorded as category C due to the low quality present.
- 3.9 A number of sycamore trees were positioned to the north of the site forming parts of the horse paddocks. Both semi and early mature trees were recorded forming linear tree groups. Multi stemmed forms had resulted in crossing and rubbing stems with bark wounds, browsing damage and poached ground again observed. T9, T10, G3 and G5 were all considered to be low in quality and category C.
- 3.10 G6 and G7 were situated to the east of the site. G6 comprised of mature elder trees growing around an old metal fence which defined the northern boundary. G7 consisted of an outgrown hedgerow which defined the eastern boundary and was separated from G1 by a grass track. Species within G7 included elder, hawthorn and sycamore. Once again both of these tree groups were recorded as category C.

PAGE LEFT INTENTIONALLY BLANK

4.0 ARBORICULTURAL IMPACT ASSESSMENT

- 4.1 The following paragraphs present a summary of the tree survey and discussion of particular trees and groups recorded in the context of any proposed development in the form of an Arboricultural Impact Assessment in accordance with section 5.4 of BS5837. Any final tree retentions will need to be reconciled with the advice contained within this report.
- 4.2 The AIA has been based upon the Development Framework Plan and seeks to outline the relationship between the proposals and the existing trees and hedgerows. The drawing shows the proposals for residential development of up to 85 dwellings with associated access road, which is to be surrounded by new and existing green infrastructure along with a LAP and proposed attenuation. An overlay of the above layout has been incorporated in the Tree Retention Plan to assist in identifying the relationship and any potential conflicts between the proposals and the existing trees and hedgerows.
- 4.3 To facilitate the proposed development as per the Development Framework Plan a small proportion of tree cover will need to be removed due to the requirements for access and the developable area. Remaining trees are to be incorporated and reinforced within landscape buffer strips as part of the green infrastructure.
- 4.4 The proposed main vehicular access for the development is to be positioned to the west off Dover Road and will require a series of highway alterations which will include carriageway widening and a right hand turning lane from the south. In order to facilitate the access and required alterations all of the current trees cover along the western boundary will need to be removed. Trees to be removed comprise of T2 to T8 and G2.
- 4.5 The removal of this tree cover is avoidable due to the presence of an existing stone wall and access requirements. The loss of this tree cover should not constrain the development as the trees were considered to be low in arboricultural quality with a number of poor quality and dead specimens present. New tree planting proposed as part of the landscaping scheme for the development will more than suitably mitigate for the loss, trees will be planted along Dover Road and the new main access road providing high amenity tree cover for the future.
- 4.6 To facilitate the developable area across the site the following tree cover will need to be removed. G3, G5, T9 and T10 all positioned to the north and all low quality sycamore. The most significant impact to the existing trees will be the removal of approximately one quarter of G1. The removal of this tree cover is required to facilitate both the developable area and proposed attenuation to the north east.
- 4.7 The loss of this tree cover should not be considered as detrimental to the overall appearance and amenity value of G1 as the vast majority of this group is to be retained. Due to the young age of this tree stock and evidence of a lack of overall management, the proposed development would provide the opportunity to implement a long term management plan to assure the future development of these trees into an established area of woodland.

- 4.8 Due to the presence of Chalara and age of trees infected it is also recommended that G1 is managed appropriately to reduce the potential for the spread of the disease within the naturally grown trees surrounding area. The removal and burning of the infected ash specimens would be recommended, the removal of the infected trees will also aid in the thinning of G1 to allow the remaining tree cover to mature into quality specimens as part of the future management in accordance with industry best practice.
- 4.9 Along with the proposed formal avenue planting, new tree planting is shown to the north west of the site which will not only offer suitable mitigation for any tree losses occurred due to the proposed development, but from an arboricultural perspective will also enhanced the tree cover generally across the site.

New Tree Planting

- 4.10 New tree planting will form an integral part of the new development however, proposals for new tree planting should be appropriate for the future use of the site and not just aim to improve the existing tree population.
- 4.11 As part of the development proposals an adequate quantity of structured tree planting has been demonstrated within or close to hard landscaped areas alongside the primary access roads within the roadside verges. New tree planting will also form landscape buffer strips. The purpose and function of this new tree planting should be understood from the start of any design stages so that key objectives from a landscape perspective can also be achieved.
- 4.12 The success of any landscaping scheme relies on an adequate provision of a high quality rooting environment within which trees can thrive and reach their full potential. Planting trees with due care and consideration can, in the long term, provide a greater return on a schemes green investment and ensure trees remain healthy and grow to mature proportions. Healthy mature trees integrate well into the built environment; increase the maturity of the landscape; help provide a natural green and leafy urban environment in which people would want to reside whilst also benefiting local wildlife.
- 4.13 The planting of trees within confined urban environments should consider the use of appropriately designed planting pits specifically engineered to promote tree health and longevity. The rooting environment will need to provide an adequate volume of quality soil for roots to suitably develop by calculating the amount of available soil volumes needed and selecting species whose mature size is compatible with the site. This is an integral component of the planning stage (Lindsey & Bassuk, 1991).
- 4.14 Wherever possible, following discussions with the developer and utility company\$, common service trenches should be specified to minimise land take associated with underground service provision and facilitation access for future maintenance.

- 4.15 The landscaping scheme should consider the use of both native tree species (for their low maintenance requirements and nature conservation value) and ornamental species (for their contribution to urban design and amenity value). Species choices should be selected on the basis of their suitability for the final site use. Furthermore, during the design process consultation should be made with the Local Planning Authority to obtain information on their tree strategy and incorporate the planting proposals with any local policies and initiatives and/or Biodiversity Action Plans (BAP).
- 4.16 Careful consideration would need to be given to the following: ultimate height and canopy spread, form, habit, density of crown, potential shading effect, colour, water demand, soil type and maintenance requirements in relation to both the built form of the new development and existing properties. Through careful species selection, the landscape scheme shall reduce the risk of trees being removed in the future on the grounds of nuisance. Nuisance can be perceived in a number of ways and vary from person to person however most commonly, within the context of trees, low overhanging branches, excessive shading, seasonal leaf fall and the misinformed perception that trees close to buildings cause damage.
- 4.17 Tree planting should be avoided where they may obstruct overhead power lines or cables. Any underground apparatus should be ducted or otherwise protected at the time of construction to enable trees to be planted without resulting in future conflicts.

Tree Management

- 4.18 The layout of the development is currently reserved for subsequent approval. In the course of a reserved matters application pursuant to layout, a review of the relationship between the layout and the retained trees should be undertaken by a qualified arboriculturalist to assess the existing tree cover and prepare a schedule of tree works.
- 4.19 All retained trees should be subjected to sound arboricultural management as recommended within section 8.8.3 of BS5837 *Post Development Management of Existing Trees*, where there is a potential for public access in order to satisfy the landowner's duty of care. Additionally, inspections annually and following major storms should be carried out by an experienced arboriculturalist or arborist to identify any potential public safety risks and to agree remedial works as required.
- 4.20 All tree works undertaken should comply with British Standard 3998:2010 and should therefore be carried out by skilled tree surgeons. It would be recommended that quotations for such work be obtained from Arboricultural Association Approved Contractors as this is the recognised authority for certification of tree work contractors.
- 4.21 All vegetation and, particularly, woody vegetation proposed for clearance should be removed outside of the bird-breeding season (March - September inclusive) as all birds are protected under the Wildlife and Countryside Act, 1981 (as amended) whilst on the nest. Where this is not possible, vegetation should be checked for the presence of nesting birds prior to removal by an experienced ecologist.

General Design Principles in Relation to Retained Trees

- 4.22 In a subsequent Reserved Matters application following the final layout of the scheme, assessment of the distance of proposed development in relation to the calculated root protection area of retained trees should be made which will inform the final layout.
- 4.23 The routing of below ground services should also be considered with regard to the retained trees as part of a subsequent reserved matters application pursuant to layout. As recommended by the guidance given in section 7.7 of BS5837 services, where possible, should not encroach within the Root Protection Areas of retained trees. If below-ground services are proposed within a Root Protection Area, modifications to the alignment of the service route may need to be made in order to minimise adverse effects on root stability and overall tree health.
- 4.24 Consideration may also need to be given to the potential for tree roots of newly planted trees and hedgerows to affect or compromise the future services. As far as feasible, it would be preferable that proposed services near both the existing and any new planting should be ducted for ease of access and maintenance and grouped together to minimise any future disturbance.

5.0 TREE PROTECTION MEASURES

- 5.1 Retained trees will be adequately protected during works ensuring that the calculated root protection area for all retained trees can be appropriately protected through the erection of the requisite tree protection barriers. Measures to protect trees should follow the guidance in BS5837 and will be applied where necessary for the purpose of protecting trees within the site whilst allowing sufficient access for the implementation of the proposed layout. These have been broadly summarised below.

General Information and Recommendations

- 5.2 All trees retained on site will be protected by suitable barriers or ground protection measures around the calculated RPA, crown spread of the tree or other defined constraints of this assessment as detailed by section 6 and 7 of BS5837.
- 5.3 Barriers will be erected prior to commencement of any construction work and before demolition including erection of any temporary structures. Once installed, the area protected by fencing or other barriers will be regarded as a construction exclusion zone. Fencing and barriers will not be removed or altered without prior consultation with the Project Arboriculturalist.
- 5.4 Any trees that are not to be retained as part of the proposals should be felled prior to the erection of protective barriers. Particular attention needs to be given by site contractors to minimise damage or disturbance to retained specimens.
- 5.5 Where it has been agreed, construction access may take place within the root protection area if suitable ground protection measures are in place. This may comprise single scaffold boards over a compressible layer laid onto a geo-textile membrane for pedestrian movements. Vehicular movements over the root protection area will require the calculation of expected loading and the use of proprietary protection systems.

- 5.6 Confirmation that tree protective fencing or other barriers have been set out correctly should be gained prior to the commencement of site activity.

Tree Protection Barriers

- 5.7 Tree protection fencing should be fit for the purpose of excluding any type of construction activity and suitable for the degree and proximity of works to retained trees. Barriers must be maintained to ensure that they remain rigid and complete for the duration of construction activities on site.
- 5.8 In most situations, fencing should comprise typical construction fencing panels attached to scaffold poles driven vertically into the ground. For particular areas where construction activity is anticipated to be of a more intense nature, supporting struts, acting as a brace should be added and fixed into position through the application of metal pins driven into the ground to offer additional resistance against impacts. Where site circumstances and the risk to retained trees do not necessitate the default level of protection an alternative will be specified appropriate to the level / nature of anticipated construction activity. The recommended methods of fencing specifications for this site have been illustrated in Appendix B.
- 5.9 It may be appropriate on some sites to use temporary site offices, hoardings and lower level barrier protection as components of the tree protection barriers. Details of the specific protection barriers for the site can be provided should the application be approved, as part of a site specific Arboricultural Method Statement for a Reserved Matters application and in accordance with the guidance contained within BS5837.

Protection outside the exclusion zone

- 5.10 Once the areas around trees have been protected by the barriers, any works on the remaining site area may be commenced providing activities do not impinge on protected areas.
- 5.11 All weather notices should be attached to the protective fencing to indicate that construction activities are not permitted within the fenced area. The area within the protective barriers will then remain a construction exclusion zone throughout the duration of the construction phase of the proposed development. Protection fencing signs can be provided upon request.
- 5.12 Wide or tall loads etc should not come into contact with retained trees. Banksman should supervise transit of vehicles where they are in close proximity to retained trees.
- 5.13 Oil, bitumen, cement or other material that is potentially injurious to trees should not be stacked or discharged within 10m of a tree stem. No concrete should be mixed within 10m of a tree. Allowance should be made for the slope of ground to prevent materials running towards the tree.
- 5.14 No fires will be lit where flames are anticipated to extend to within 5m of tree foliage, branches or trunk, taking into consideration wind direction and size of fire.
- 5.15 Notice boards, telephone cables or other services should not be attached to any part of a retained tree.
- 5.16 Any trees which need to be felled adjacent to or are present within a continuous canopy of retained trees, must be removed with due care (it may be necessary to remove such trees in sections).

Protection of Trees Close to the Site

- 5.17 A number of trees were located on the boundaries of the site and therefore the root protection area and crown spread of these trees will need to be protected in the same way as all the retained trees within the site. All trees located outside the boundaries of the assessment site yet within close proximity to works should be adequately protected during the course of the development by barriers or ground protection around the calculated root protection area.
- 5.18 Any trees which are to be retained and whose Root Protection Areas may be affected by the development should be monitored, during and after construction, to identify any alterations in quality with time and to assess and undertake any remedial works required as a result.

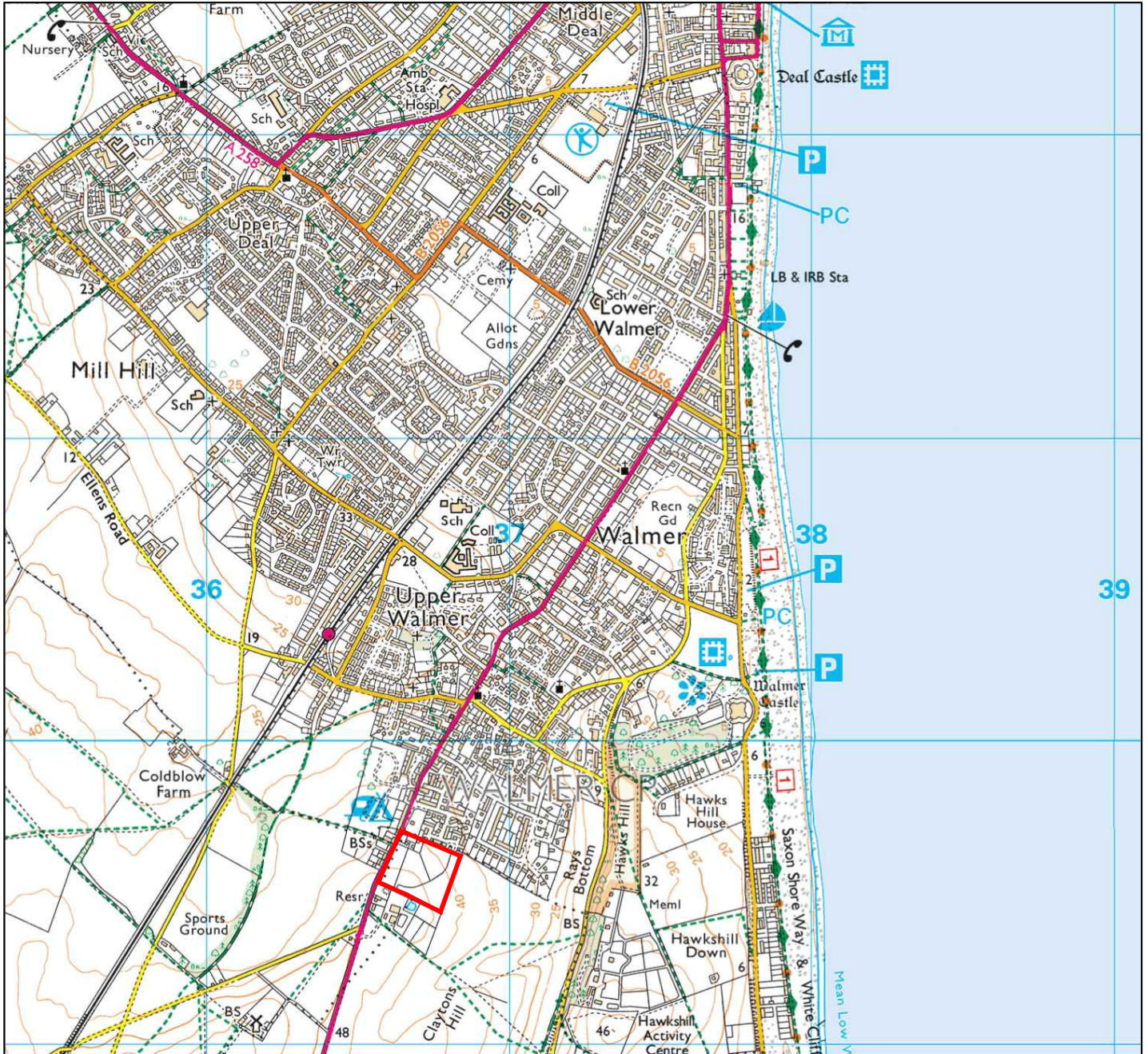
Protection for Aerial Parts of Retained Trees

- 5.19 Where it is deemed necessary to operate a wide or tall load, plant bearing booms, jibs and counterweights or other such equipment as part of the construction works it is best advised that appropriate, but limited tree surgery, be carried out beforehand to remove any obstructive branches. Any such equipment would have potential to cause damage to parts of the crown material, i.e. low branches and limbs, of retained trees within the protective barriers. This is termed as ~~access~~ facilitation pruning within BS5837. Any such pruning should be undertaken in accordance with a specification prepared by an arboriculturalist.
- 5.20 A pre-commencement site meeting with contractors who are responsible for operating machinery will be required, as described above, to firstly highlight the potential for damage occurring to tree crowns and to ensure that extra care is applied when manoeuvring machinery during such operations within close proximity to retained trees to avoid any contact.
- 5.21 In the event of having caused any branch or limb damage to retained trees it is strongly recommended that suitable tree surgery be carried out, in accordance with British Standard 3998:2010 and in agreement with the Local Planning Authority prior to correcting the damage, upon completion of development.

6.0 CONCLUSION

- 6.1 The site was situated to the south of Walmer with Dover Road to the west, residential properties along Thistledown to the north and open countryside to the south and east. The assessment area comprised a single field parcel, divided into numerous paddocks and an area of new woodland planting. Tree cover to the south associated with the access to Walmer Court Farm Shop was also assessed. The majority of tree cover was associated with the area of mixed woodland and comprised of semi mature specimens of mixed native species. Mature trees were also located to the north west and along the roadside.
- 6.2 To facilitate the proposed development a small proportion of tree cover will need to be removed due to the requirements for access and developable area.
- 6.3 The proposed main vehicular access is to be positioned to the west off Dover Road and will require a series of highway alterations which in turn will require the removal of all the current tree cover along the western boundary comprising of T2 to T8 and G2.
- 6.4 To facilitate the developable area across the site G3, G5, T9 and T10 will need to be removed. In addition to this, approximately one quarter of G1 will also need to be removed. The loss of this tree cover should not be considered as a constraint due to the young age tree stock with G1 and opportunity to implement a long term management plan to assure the future establishment of this area of potential woodland.
- 6.5 Due to the presence of Chalara present within G1, it is recommended that infected trees are managed appropriately in accordance with industry best practice.
- 6.6 In conclusion, the proposals would necessitate the loss of tree cover across the site however this will be mitigated for with new tree planting as part of the landscaping scheme. The retention of the vast majority of young tree stock to the east will retain a key landscape feature. The management of this tree cover will, in terms of arboriculture, create the opportunity to improve and enhance tree cover in the local area along with securing high quality trees for the future.

PAGE LEFT INTENTIONALLY BLANK



KEY



Assessment Boundary

rev	date	description	by
-----	------	-------------	----



- masterplanning
 - environmental assessment
 - landscape design
 - urban design
 - ecology
 - architecture
 - arboriculture
- FPCR Environment and Design Ltd
 Lockington Hall
 Lockington
 Derby DE74 2RH

t: 01509 672772
 f: 01509 674565
 e: mail@fpcr.co.uk
 w: www.fpcr.co.uk

client
Gladman Developments Limited

project
**Dover Road
 Deal**

drawing title
ASSESSMENT BOUNDARY PLAN

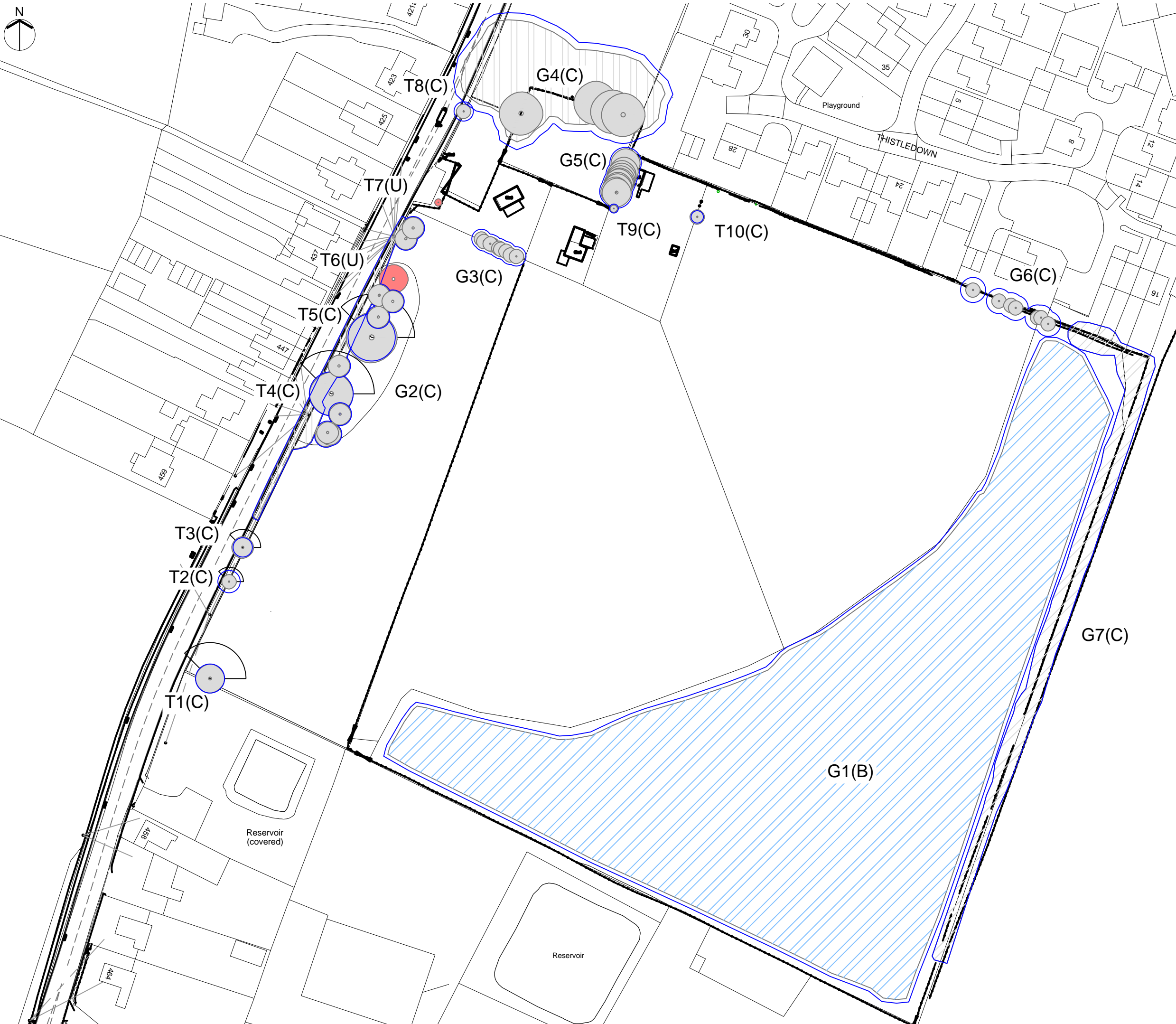
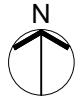
scale 1:25000 @ A4 drawn TCB date Feb 2017

drawing number rev
7573-A-01 A









This drawing is the property of FPCR Environment and Design Ltd and is issued on the condition it is not reproduced, retained or disclosed to any unauthorised person, either wholly or in part with written consent of FPCR Environment and Design Ltd.

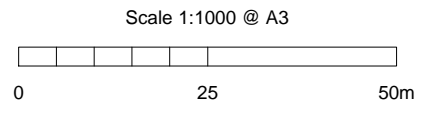
Ordnance Survey material is used with the permission of The Controller of HMSO, Crown copyright 100018896.

PAGE LEFT INTENTIONALLY BLANK



KEY

-  Category U - Trees / Groups Unsuitable for Retention (BS 5837:2012)
-  Category A - Trees / Groups of High Quality (BS 5837:2012)
-  Category B - Trees / Groups of Moderate Quality (BS 5837:2012)
-  Category C - Trees / Groups of Low Quality (BS 5837:2012)
-  Hedgerow (Colour indicates BS5837:2012 Category)
-  Root Protection Area (The RPA has been altered where appropriate to reflect underground constraints)
-  Individual / Group Number and BS5837:2012 Category
-  Indicative Shade Pattern (in accordance with BS5837:2012 where appropriate)



NOTES

All dimensions to be verified on site. Do not scale this drawing, use figured dimensions only. All discrepancies to be clarified with project Arboriculturalist. Drawing to be read in conjunction with Arboricultural Assessment and Appendix A - Tree Schedule.

Drawing has been produced in colour and is based on digital information in .dwg format, aerial images and/or GPS location where appropriate. A monochrome copy should not be relied upon. The exact position of individual trees or species included as part of a tree group, woodland or hedgerow should be checked and verified on site prior to any decisions for foundation design, tree operations or construction activity being undertaken. Further survey work would be required for calculating foundation depths.

Trees are living organisms that change over time, the condition of all trees illustrated herein, are to be checked by the project Arboriculturalist should works commence 12 months after the date of this survey.

SOME TREES MAY BE SUBJECT TO STATUTORY CONSTRAINTS. IT IS THEREFORE ADVISED THAT NO WORKS SHOULD BE UNDERTAKEN TO ANY TREES ILLUSTRATED HEREIN WITHOUT FIRST OBTAINING THE RELEVANT AUTHORISATION TO DO SO UNLESS AGREED AS PER THE APPROVED PLANS THROUGH PLANNING CONSENT.

This drawing is the property of FPCR Environment and Design Ltd and is issued on the condition it is not reproduced, retained or disclosed to any unauthorised person, either wholly or in part without written consent of FPCR Environment and Design Ltd. FPCR Environment and Design Ltd accept no liability for third party use.

Ordnance Survey material is used with the permission of The Controller of HMSO, Crown copyright 100018896.

-	23.11.2016	First Issue (drawn using aerial imagery)	TCB
A	19.01.2017	Topographical survey inserted	TCB
B	24.04.2017	Assessment area updated	TCB

rev	date	description	by



- masterplanning ■
- environmental assessment ■
- landscape design ■
- urban design ■
- ecology ■
- architecture ■
- arboriculture ■

FPCR Environment and Design Ltd
 Lockington Hall
 Lockington
 Derby DE74 2RH

t: 01509 672772
 f: 01509 674565
 e: mail@fpcr.co.uk
 w: www.fpcr.co.uk

client
Gladman Developments Limited

project
Dover Road Deal

drawing title
TREE SURVEY PLAN

scale
1:1000 @ A3

drawn
TCB

date
Feb 2017

drawing number
7573-A-02

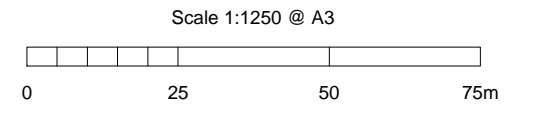
rev
B

This page has been left blank intentionally



KEY

- Tree/Group to be Retained
- Tree/Group to be removed to facilitate the proposals
- Category U - Unsuitable for retention on arboricultural grounds
- Hedgerow Proposed to be Retained and Incorporated into the New Development
- Hedgerow Proposed to be Removed to Facilitate the Development upon Approval of the Application
- Root Protection Area (Shown for retained trees only)
- Individual / Group Number and BS Category
- Indicative Shade Pattern (where appropriate)



NOTES

All dimensions to be verified on site. Do not scale this drawing, use figured dimensions only. All discrepancies to be clarified with project Arboriculturalist. Drawing to be read in conjunction with Arboricultural Assessment and Appendix A - Tree Schedule.

Drawing has been produced in colour and is based on digital information in .dwg format, aerial images and/or GPS location where appropriate. A monochrome copy should not be relied upon. The exact position of individual trees or species included as part of a tree group, woodland or hedgerow should be checked and verified on site prior to any decisions for foundation design, tree operations or construction activity being undertaken. Further survey work would be required for calculating foundation depths.

Trees are living organisms that change over time, the condition of all trees illustrated herein, are to be checked by the project Arboriculturalist should works commence 12 months after the date of this survey.

SOME TREES MAY BE SUBJECT TO STATUTORY CONSTRAINTS. IT IS THEREFORE ADVISED THAT NO WORKS SHOULD BE UNDERTAKEN TO ANY TREES ILLUSTRATED HEREIN WITHOUT FIRST OBTAINING THE RELEVANT AUTHORISATION TO DO SO UNLESS AGREED AS PER THE APPROVED PLANS THROUGH PLANNING CONSENT.

This drawing is the property of FPCR Environment and Design Ltd and is issued on the condition it is not reproduced, retained or disclosed to any unauthorised person, either wholly or in part without written consent of FPCR Environment and Design Ltd. FPCR Environment and Design Ltd accept no liability for third party use.

Ordnance Survey material is used with the permission of The Controller of HMSO, Crown copyright 100018896.

rev	date	description	by
-	02.02.17	First Issue	TCB
A	24.02.17	Assessment area updated	TCB

fpcr

- masterplanning
- environmental assessment
- landscape design
- urban design
- ecology
- architecture
- arboriculture

FPCR Environment and Design Ltd
 Lockington Hall
 Lockington
 Derby DE74 2RH

t: 01509 672772
 f: 01509 674565
 e: mail@fpcr.co.uk
 w: www.fpcr.co.uk

client
Gladman Developments Limited

project
Dover Road Deal

drawing title
TREE RETENTION PLAN

scale
1:1000 @ A3

drawn
TCB

date
Feb 2017

drawing number
7573-A-03






rev
A

CAD file: J:\7500\7573\ARB\Plans\Fig 3 Tree Retention Plan REV A.dwg

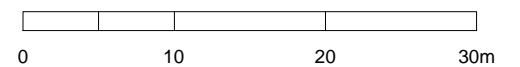
This page has been left blank intentionally



KEY

-  Tree/Group to be Retained
-  Tree/Group to be removed to facilitate the proposals
-  Category U - Unsuitable for retention on arboricultural grounds
-  Root Protection Area (Shown for retained trees only)
-  Individual / Group Number and BS Category

Scale 1:500 @ A3



NOTES

All dimensions to be verified on site. Do not scale this drawing, use figured dimensions only. All discrepancies to be clarified with project Arboriculturalist. Drawing to be read in conjunction with Arboricultural Assessment and Appendix A - Tree Schedule.

Drawing has been produced in colour and is based on digital information in .dwg format, aerial images and/or GPS location where appropriate. A monochrome copy should not be relied upon. The exact position of individual trees or species included as part of a tree group, woodland or hedgerow should be checked and verified on site prior to any decisions for foundation design, tree operations or construction activity being undertaken. Further survey work would be required for calculating foundation depths.

Trees are living organisms that change over time, the condition of all trees illustrated herein, are to be checked by the project Arboriculturalist should works commence 12 months after the date of this survey.

SOME TREES MAY BE SUBJECT TO STATUTORY CONSTRAINTS. IT IS THEREFORE ADVISED THAT NO WORKS SHOULD BE UNDERTAKEN TO ANY TREES ILLUSTRATED HEREIN WITHOUT FIRST OBTAINING THE RELEVANT AUTHORISATION TO DO SO UNLESS AGREED AS PER THE APPROVED PLANS THROUGH PLANNING CONSENT.

This drawing is the property of FPCR Environment and Design Ltd and is issued on the condition it is not reproduced, retained or disclosed to any unauthorised person, either wholly or in part without written consent of FPCR Environment and Design Ltd. FPCR Environment and Design Ltd accept no liability for third party use.

Ordnance Survey material is used with the permission of The Controller of HMSO, Crown copyright 100018896.

rev	date	description	by
-	03.02.2017	First Issue	TCB



masterplanning ■
 environmental assessment ■
 landscape design ■
 urban design ■ FPCR Environment and Design Ltd
 ecology ■ Lockington Hall
 architecture ■ Lockington
 arboriculture ■ Derby DE74 2RH

t: 01509 672772
 f: 01509 674565
 e: mail@fpcr.co.uk
 w: www.fpcr.co.uk

client
Gladman Developments Limited

project
Dover Road
Deal

drawing title
DETAILED ACCESS PLAN
FIGURE 4

scale
1:500 @ A3

drawn
TCB

date
Feb 2017

drawing number
7573-A-04

CAD file: J:\7500\7573\ARB\Plans\Fig 4 Detailed Access Plan.dwg

This page has been left blank intentionally

Appendix A - Tree Schedule

Measurements	Age Class	Overall Condition	Root Protection Area (RPA)
Height - Measured using a digital laser clinometer (m)	YNG: Young trees up to ten years of age	G - Good: Trees with only a few minor defects and in good overall health needing little, if any attention	~ The RPA Radius column provides the extent of an equivalent circle from the centre of the stem (m). ~ The RPA is calculated using the formulae described in paragraph 4.6.1 of British Standard 5837: 2012 and is indicative of the rooting area required for a tree to be successfully retained. Tree roots extend beyond the calculated RPA in many cases and where possible a greater distance should be protected. ~ Where veteran trees have been identified the RPA has been calculated in accordance with Natural England guidance i.e. 15x the stem diameter, uncapped.
Stem Dia. - Diameter measured (mm) in accordance with Annex C of the BS5837	SM: Semi-mature trees less than 1/3 life expectancy	F - Fair: Trees with minor rectifiable defects or in the early stages of stress from which it may recover	
Crown Radius - Measured using a digital laser clinometer radially from the main stem (m)	EM: Early mature trees 1/3 . 2/3 life expectancy	P - Poor: Trees with major structural and/or physiological defects such that it is unlikely the tree will recover in the long term	
Abbreviations est - Estimated stem diameter avg - Average stem diameter for multiple stems upto - Maximum stem diameter of a group	M: Mature trees over 2/3 life expectancy	D - Dead: This could also apply to trees in an advanced state of decline and unlikely to recover	
	OM: Over mature declining or moribund trees of low vigour	The BS category particular consideration has been given to the following ~ The health, vigour and condition of each tree ~ The presence of any structural defects in each tree/group and its future life expectancy ~ The size and form of each tree/group and its suitability within the context of a proposed development ~ The location of each tree relative to existing site features e.g. its screening value or landscape features ~ Age class and life expectancy	
	V: Veteran tree possessing certain attributes relating to veteran trees		

Structural Condition
The following is an example of considerations when inspecting structural condition: <ul style="list-style-type: none"> • The presence of fungal fruiting bodies around the base of the tree or on the stem, as they could possibly indicate the presence of possible internal decay • Soil cracks and any heaving of the soil around the base • Any abrupt bends in branches and limbs resulting from past pruning • Tight or weak Δ/qshaped forks and co-dominant stems • Hazard beam formations and other such biomechanical related defects (as described by Claus Mattheck, Body Language of Trees HMSO Research for Amenity Trees No. 4 1994) • Cavities as a result of limb losses or past pruning • Broken branches or storm damage • Damage to roots • Basal, stem or branch / limb cavities • Crown die-back or abnormal foliage size and colour

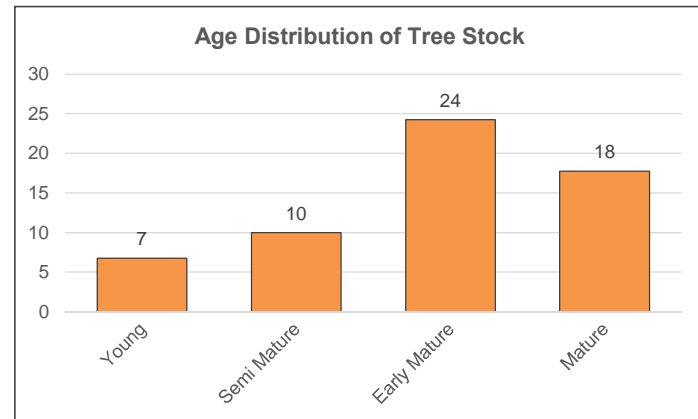
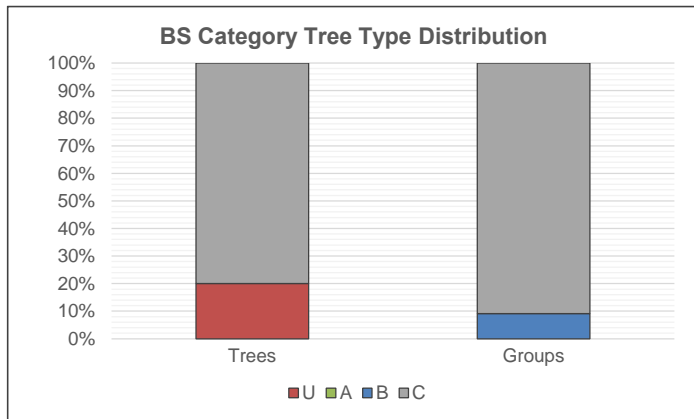
Quality Assessment of BS Category
Category U - Trees in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years.
Category A - Trees of high quality with an estimated remaining life expectancy of at least 40 years.
Category B - Trees of moderate quality with an estimated remaining life expectancy of at least 20 years.
Category C - Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150mm.
Sub-categories: (i) - Mainly arboricultural value (ii) - Mainly landscape value (iii) - Mainly cultural or conservation value

Appendix Summary

	Individual Trees	Totals	Tree Groups and Hedgerows	Totals
Category U	T6, T7	2		0
Category A		0		0
Category B		0	G1	1
Category C	T1, T2, T3, T4, T5, T8, T9, T10	8	G2, G3, G4, G5, G6, G7	6
	Total	10	Total	7

BS Category Tree Type Distribution displays the proportion of trees assessed in each type to enable a better understanding of the category distribution.

Age Distribution of Tree Stock shows the number of trees in each age category across the tree stock allowing assessment of their longevity to be made.

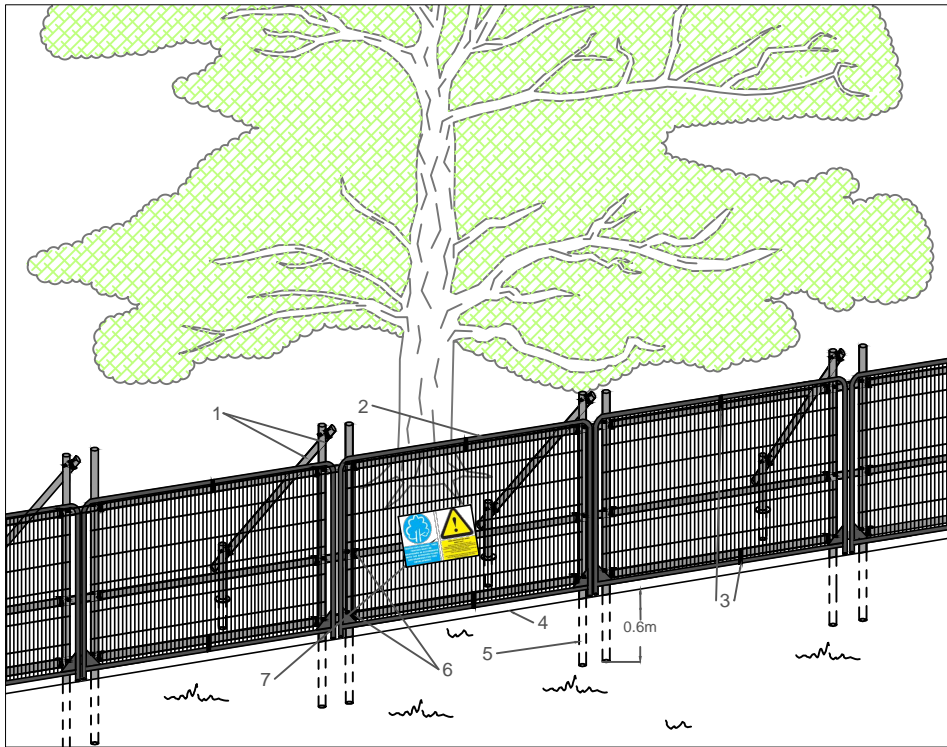


Tree No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
INDIVIDUAL TREES										
T1	Sycamore Acer pseudoplatanus	10	270 200	4	EM	F	Basal suckers present Crossing and rubbing branches Light ivy cover	51	4.0	C (i)
T2	Hawthorn Crataegus monogyna	4	est 130 130 130 130	2	EM	F	Base obscured Dense ivy cover on main stem Overhead cables	31	3.1	C (i)
T3	Sycamore Acer pseudoplatanus	5	est 130 130 130	3	EM	P	Base obscured Dense ivy cover on main stem Overhead cables Situated opposite of wall	23	2.7	C (i)
T4	Sycamore Acer pseudoplatanus	12	510	6	M	F	Branch socket cavities observed Branch stubs evident Broken branches evident Browsing damage noted on main stem Low crown form Minor dead wood evident in the crown (<75mm) Poached ground at the base	118	6.1	C (i)
T5	Sycamore Acer pseudoplatanus	12	550	7	M	F	Basal suckers present Branch socket cavities observed Branch stubs evident Broken branches evident Browsing damage noted on main stem Crossing and rubbing branches Low crown form Minor dead wood evident in the crown (<75mm) Poached ground at the base Significant secondary leader extends above main crown	137	6.6	C (i)
T6	English Elm Ulmus procera	12	460	4	M	D	Dense ivy cover on main stem	N/A	N/A	U
T7	Sycamore Acer pseudoplatanus	3	790	1	M	P	Basal suckers present Old stump from failed tree Multiple brackets of Ganoderma australe (adspersum) Southern bracket present	N/A	N/A	U

Tree No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
T8	Sycamore Acer pseudoplatanus	8	est 130 130 130	2	EM	P	Basal suckers present Base obscured Multi stemmed from base Situated opposite side of wall	23	2.7	C (i)
T9	Sycamore Acer pseudoplatanus	3	avg 60 60 60	1	SM	P	Basal suckers present Crossing and rubbing branches Epicormic growth evident within the crown Pruning wounds noted	5	1.2	C (i)
T10	Sycamore Acer pseudoplatanus	4	est 100 100	2	SM	P	Crown had been topped Epicormic growth evident within the crown Included bark union	9	1.7	C (i)

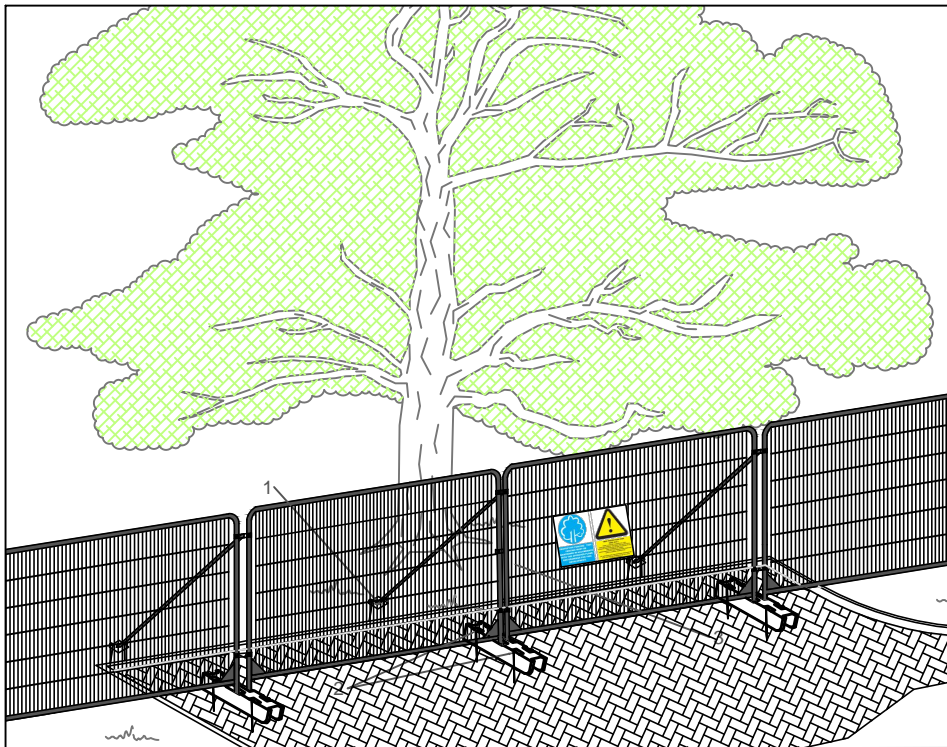
Group No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
GROUPS OF TREES										
G1	Ash Fraxinus excelsior Beech Fagus sylvatica English Oak Quercus robur Hawthorn Crataegus monogyna Alder Alnus glutinosa Holm Oak Quercus ilex Sessile Oak Quercus petraea	8	upto 280	3	Yng / SM	F	Bark wounds noted Crossing and rubbing branches Dense undergrowth at the base Dieback of the crowns observed Epicormic growth evident within the crowns Flail damage evident Interlocking crowns Low crown forms Minor dead wood evident in the crowns (<75mm) No major defects were noted Pruning wounds noted Area of new planting Large quantities of manure around bases to the south South east corner is sparse Chalara fraxinea Ash dieback present	35	3.4	B (ii)
G2	Elder Sambucus nigra Sycamore Acer pseudoplatanus English Elm Ulmus procera	10	upto 270	3	SM / EM	P / F	Bark wounds noted Base obscured Branch stubs evident Broken branches evident Browsing damage noted on main stems Crossing and rubbing branches Dead trees noted Dense ivy cover on main stems Dense undergrowth at the base Dieback of the crowns observed Interlocking crowns Minor dead wood evident in the crowns (<75mm) Overhead cables Poached ground at the base	33	3.2	C (ii)
G3	Sycamore Acer pseudoplatanus	9	upto 170 170 170	3	EM	F	Crossing and rubbing branches Interlocking crowns Low crown forms Minor dead wood evident in the crowns (<75mm) Multi stemmed from base Pruning wounds noted	39	3.5	C (ii)

Group No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
G4	Elder Sambucus nigra Hawthorn Crataegus monogyna Sycamore Acer pseudoplatanus Copper Beech Fagus sylvatica purpurea Holly Ilex aquifolium Privet Ligustrum ovalifolium Scots Pine Pinus sylvestris	14	Over ivy 670	6	M	F	Basal suckers present Base obscured Branch stubs evident Broken branches evident Crossing and rubbing branches Dense ivy cover on main stems Dense undergrowth at the base Interlocking crowns Minor dead wood evident in the crowns (<75mm) Pruning wounds noted Situated offsite	203	8.0	C (ii)
G5	Sycamore Acer pseudoplatanus	10	upto 210 300	4	EM	F	Branch stubs evident Crossing and rubbing branches Epicormic growth evident within the crowns Included bark unions Multi stemmed and single stemmed forms Pruning wounds noted	61	4.4	C (ii)
G6	Elder Sambucus nigra	5	est 170 170 170	2	M	F	Branch stubs evident Broken branches evident Crossing and rubbing branches Dense ivy cover on main stems Interlocking crowns Group of trees growing around old metal fence	39	3.5	C (ii)
G7	Elder Sambucus nigra Hawthorn Crataegus monogyna Sycamore Acer pseudoplatanus	8	upto 250	3	EM / M	F	Basal suckers present Base obscured Branch stubs evident Broken branches evident Coppiced forms Crossing and rubbing branches Dense ivy cover on main stems Interlocking crowns Low crown forms Outgrown hedgerow	28	3.0	C (ii)



Standard specification for protective barrier

1. Standard scaffold poles
2. Heavy gauge 2m tall galvanized tube and welded mesh infill panels
3. Panels secured to scaffold frame with wire ties
4. Ground level
5. Uprights driven into the ground until secure (min depth of 0.6m)
6. Standard scaffold clamps
7. Construction Exclusion Zone signs



Above ground stabilising systems

1. Stabiliser strut with base plate secured with ground pins
2. Feet blocks secured with ground pins
3. Construction Exclusion Zone signs

Protective Fencing to be positioned to the specified dimensions in accordance with Figure 3 Tree Retention Plan

NOTES

This drawing is the property of FPCR Environment and Design Ltd and is issued on the condition it is not reproduced, retained or disclosed to any unauthorised person, either wholly or in part with written consent of FPCR Environment and Design Ltd.



masterplanning ■
 environmental assessment ■
 landscape design ■
 urban design ■ FPCR Environment and Design Ltd
 ecology ■ Lockington Hall
 architecture ■ Lockington
 arboriculture ■ Derby DE74 2RH

t: 01509 672772
 f: 01509 674565
 e: mail@fpcr.co.uk
 w: www.fpcr.co.uk

drawing title

APPENDIX B PROTECTIVE FENCING SPECIFICATIONS

PAGE LEFT INTENTIONALLY BLANK