



NYM / 2011 / 0111 / FL 4

barnes & associates

independent arboricultural consultants

ARBORICULTURAL REPORT
RELATING TO PROPOSED DEVELOPMENT AT
LADYCROSS PLANTATION CARAVAN PARK – EGTON

Prepared by:

BARNES & ASSOCIATES
RIVERMEAD
SKELTON ROAD
LANGTHORPE
NORTH YORKSHIRE
YO51 9BZ

NYMNPA
18/10/2019

On behalf of:

LADY CROSS PLANTATION
EGTON
WHITBY
NORTH YORKSHIRE
YO21 1UA

Contents:

Title	Tree Survey	DATE COMPLETED	06/04/2011
AUTHOR	Ian Barnes	OUR REF.	BA3253TS
SIGNED		PRINTED DATE	11/04/2011



Licensed User

NYMNP

EXECUTIVE SUMMARY

The site at Ladycross Plantation benefits from a range of trees that almost encircle the site to provide almost entire privacy and separation of the site from the broader landscape.

In general the site has limited species and age diversity, with the majority of trees being Scots Pine established in dense wooded groups within the last 40 to 50 years. These groups have had limited management with many of the trees being adversely affected by the competitive environment. Many of the trees have become suppressed and offer little potential for the future. Alternative species are generally limited to locally found species which have established through natural regeneration in the occasional opening in the woodland areas and the around the margins of the groups.

A number of trees in the centre of the site appear to have been adversely affected by the historic demolition / construction processes and appear to be in decline.

The trees provide screening for the site and as a result have a high-inferred value and should be fully considered within the design phase of any development.

I understand from the proposal that the intention is to install the proposed cabins within small clearings, to retain as many trees as possible, providing both internal and external screening for the cabins. Which is a significantly different approach to a current approval to form an additional open glade by wholesale tree removal in the northern section of the site to locate a series of static caravans.

The proposal is to develop the site located within the woodland compartments close to the northern and western boundaries. These works will result in direct tree losses to provide development spaces and can be expected to result in changes within the Root Protection Area of retained trees. These retained trees will require management to enable them to be protected and avoid the negative effects of the development processes. This can be achieved through fencing and adoption of specialist construction methods which can be detailed within an Arboricultural Implication Assessment.

Providing that the recommendations within this report are implemented both within the design and the management of the site the retained trees should be largely unaffected.

The site requires some remedial tree pruning irrespective of development proposals. Such works are required due to tree proximity to public accessible areas and due to an ongoing requirement to maintain safety through the removal of recently failed branches within the canopy for example.

The tree losses associated with the proposals can be reasonably offset through a combination of improved management and the establishment of succession tree planting to help ensure tree cover for the medium to long-term. In addition I would suggest that the planting scheme can be expanded to help develop an understory to enhance the privacy and biodiversity of the site further, underpinning the treescape for the future.

The development can be undertaken with limited risk to retained trees, providing correct protective measures, management and planning accompany the proposals. Providing that the risks and protection techniques can be defined and agreed the risk should be sufficiently low to enable the scheme to be approved on Arboricultural grounds.



1 INTRODUCTION

- 1.1 **Objective:** To assess the condition of the trees and provide sufficient information to enable a decision on the planning aspects of the site and its potential development in relation to trees.
- 1.2 **Surveyor:** My name is Ian Barnes; I am an Arboricultural Association Registered Consultant, a Chartered Environmentalist, and Fellow of the Arboricultural Association and an International Society of Arboriculture Certified Arborist and Professional member of the Consulting Arborist Society.
- 1.3 **Qualifications and experience:** I have based this report on my site observations and the provided information; I have come to conclusions in the light of my experience. I have experience and qualifications in arboriculture and list the details in Appendix 1.
- 1.4 **Documents and information provided:** I have been provided with a digital topographical plan of the existing site layout, which has formed the basis of my site plan.
- 1.5 **Scope of this report:** report is only concerned with the current condition of the trees and their retention value in relation to the redevelopment of the site. The trees have been assessed in line with the guidelines outlined in British Standard BS5837:2005 'Trees in Relation to Construction'. This provides information for the retention and protection of trees upon development sites. In addition site safety is also considered, remedial recommendations are based on the continuing safety of the site.
- 1.5.1 The statements made in this Report do not take account of the effects of extremes of climate, vandalism or accident, whether physical, chemical or fire. Barnes & Associates cannot therefore accept any liability in connection with these factors, nor where prescribed work is not carried out in a correct and professional manner in accordance with current good practice. The authority of this report ceases at any stated time limit within it, or if none stated after two years from the date of the survey or when any site conditions change, or pruning or other works unspecified in the Report are carried out to, or affecting, the Subject Tree(s), whichever is the sooner.
- 1.6 **Limitations of use and copyright:** This assessment has been prepared for Ladycross Plantation Caravan Park in connection to proposed development of the site at Egton. All rights in this report are reserved. No part of it may be reproduced or transmitted, in

any form or by any means, electronic, mechanical, photocopying, recording or otherwise, or stored in any retrieval system of any nature, without our written permission.

- 1.7 **Condition of Trees:** This inspection provides an initial assessment of tree condition, within the existing site, landscape and environmental constraints. Alteration of a trees (even healthy trees) environment can be either detrimental to its health or affect its aerodynamic characteristics, the affects of site redevelopment upon tree health / stability cannot be fully forecasted or speculated within this report. The retention category for trees may need reviewing following the finalisation of development proposals.
- 1.8 **Visual Assessment of Trees:** The trees have been assessed from ground level only in line with the guidelines outlined in British Standard BS5837:2005 'Trees in Relation to Construction'. This provides information for the retention and protection of trees upon development sites. Information upon the trees is located in the Tree Schedule in Appendix 2.
- 1.9 **Duration of validity:** Trees and shrubs are living organisms whose health and condition can change rapidly. This assessment is valid for a period of 12 months from the date above. The health of trees should be checked upon at regularly intervals, ideally annually or alternating eighteen monthly assessments, alternating between the trees being in and out of leaf, unless findings suggest more regular inspection is recommended.

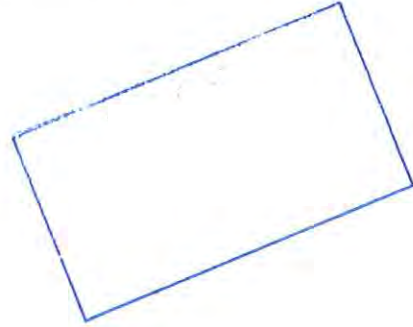


2 SITE OBSERVATIONS

- 2.1 **Site visit:** I carried out the site assessment on the 6th April 2011. Assessment of the trees was undertaken from ground level only.
- 2.2 **Brief site description:** The site is located approximately 8 kilometres (5 miles) southwest of Whitby and lays approximately 350 metres south of the busy A171 Guisbrough to Whitby Road.
- 2.2.1 The site is enclosed within a maturing Pine plantation that appears to have been established in the last 40 years. The site is an active caravan park with various internal roads, grassed clearings and other infrastructures with the main central section of the site being cleared glades within the plantation.
- 2.2.2 The trees are predominantly located close to the boundaries though a number of individuals and several groups of trees can be seen within the site.
- 2.3 **Identification and location of the trees:** I have illustrated the location of the key groups on the site plan included as Plan Ref BA3253TS, a numbered copy is included at Appendix 3, to the rear of the report. This plan is for illustrative purposes only and should not be used for directly scaling measurements.
- 2.4 **Land Use.** The site has been established as a woodland and historically areas have been cleared into glades to create areas for caravans and tents. A basic road system provides access to the various areas with toilet block facilities being located within the site. Several informal footpaths run throughout the site along with a dog walk areas.
- 2.5 **Soils.** I referred to the soil information on Canfield University sites, "Soilscapes Viewer" which details the information of the National Soils Resources Institute, which refers to southern section of the site being on **lowly permeable seasonally wet slightly acid but base-rich loamy and clayey soils that may suffer seasonal drainage issues.**
- 2.5.1 The northern section of the site is a **Freely draining very acid sandy and loamy soil** which is in line with the results of site observations following ongoing excavation of the internal drainage system.
- 2.5.2 The boundary between these soils appears to broadly follow the northern boundary of the site and would appear to explain the differences in the local vegetation.

- 2.6 **Treescape.** The site is enclosed within a developing closely planted collection of trees, which provide almost full closure for the site.
- 2.6.1 The northern section of the site is a little more sparse, likely in response to the more impoverished growing conditions due to the changing soils. This area is dominated by maturing Scots Pine which have been established in several compartments. These groups appear to have had limited management and the groups are dominated by poorly developing, straggly trees which have been affected by the competitive growing conditions.
- 2.6.2 The southern section of the site appears to be a little more open and the has resulted in a significant improvement in the condition of the trees.
- 2.7 The southern, western and northern boundaries are connected to other woodland areas on neighbouring land and provide continuity of screening and habitat for the area.
- 2.8 To the east the landscape is more open with individual trees within headland and open grazing.
- 2.8.1 **Amenity Value.** The overall amenity value of the trees is high by virtue of the general tree numbers, the privacy that is provided and the extent to which trees can be seen from the public domain and due to the extent to which they combine with other trees locally to help soften and link the site to the general landscape.
- 2.9 **Age Class Mix.** There is a poor range of age classes on site. The trees tend to be either young or maturing, which will develop and offer long-term tree cover.
- 2.10 **Species Diversity.** The species diversity is typical for the local area and appears to have developed from a single species plantation which has begun to be affected by limited natural regeneration, no rare species were recorded.
- 2.11 **Development History.** I understand that the site currently has approval dating from 2008 for the formation of a new glade for Static caravans to be formed by the clear felling of a section of wood in the northern section of the site.
- 2.12 **Development:** Finalised proposals have been provided, in light of the sites former development and the current existing disturbance, development of the site should be

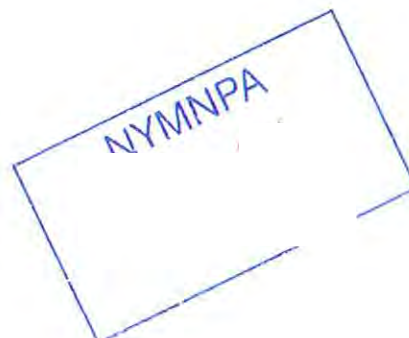
relatively straightforward, although the proposals are located within the root protection area of retained trees, their protection can be enhanced through the adoption of various means – these can be detailed within an Arboricultural Implication Assessment.



3 TREE ANALYSIS

- 3.1 **Legal Status of Trees.** I have not made enquiries to the Local Planning Authority (LPA) regarding the level of protection offered to the trees. It is reasonable to expect the LPA to consider protection of trees through the planning process such as Tree Preservation Orders (TPO), should they feel that trees be worthy of such protection or be threatened significantly by development proposals. This is a duty of the LPA under the Town and Country Planning act 1990. Such orders tend to offer initial protection to all trees regardless of their individual condition and aim to encourage rational discussion and consideration of trees within the design process.
- 3.2 **Overview of trees.** The trees have been assessed from ground level only in line with the guidelines outlined in British Standard BS5837:2005 'Trees in Relation to Construction'. This provides information for the retention and protection of trees upon development sites. Information upon the compartments and individual trees is located in the Tree Schedule in Appendix 2.
- 3.3 The site benefits from maturing trees located close to the boundaries to the north, south and the east, which provides separation from the public space.
- 3.3.1 The trees on site appear to have had limited management. The majority of the compartments appear to have been closely planted in line with normal forestry practice, though subsequent thinning works have not been undertaken, resulting in the development of poor trees striving to access light in a competitive environment. Dead and dying suppressed trees can be seen throughout and as a result of the low light levels the development of a secondary understory is very limited other than in the natural glades or around the compartment margins.
- 3.3.2 Several trees are suffering from decline and / or inherent structural defects, generally, these are generally related to tight and included unions which when found in combination with co-dominant leaders or branches with increasing end loading are increasingly likely to fail and pose a risk to site users. These individual trees have been tagged their details recorded on the attached schedule in Appendix 2 and the site plan in Appendix 3 – ideally the recommended works should be undertaken urgently.
- 3.3.3 A number of the trees located within the centre of the site have responded poorly to the historical construction works, with a number of the trees being affected through direct damage or through changes in their root zones.

- 3.3.4 A high number of trees have suffered branch failures throughout the site, which is expected to be in response to the high snow fall in the early winter. A number of these failed branches are located close to the areas of public access and ideally these should be controlled through formative pruning as soon as possible.
- 3.3.5 Ivy can be seen to be developing on a number of trees throughout many tree canopies; although this has a positive effect upon wildlife habitat it can have a negative effect upon trees stability. Extensive Ivy growth can obscure defects, reduce the ability of the tree to photosynthesise in addition to increasing the likelihood of branch / canopy failure due to increased weight and wind loading.
- 3.4 **Woodland Groups.** Several significant groups are located throughout the site. These trees were assessed briefly whilst undertaking a walk over survey of the site. The inspection of the trees was carried out from ground level and the disclosure of hidden crown defects cannot, therefore, be expected. My inspection was restricted where trees were ivy-clad or located wholly or partially on neighbouring land or where basal growth or other vegetation obscured lower stems and root collars. Where more detailed assessment is required, my recommendations are set out in the Tree Survey Schedule in Table 1 below. Invasive investigation was not used.
- 3.5 **Urgent Works.** Works are required to deal with the cracked and broken branches damaged by snowfall during the winter. Several dead and severely declining trees have been recorded (these are generally highlighted in red upon the plan) these are generally located in low population areas. Ideally these should be removed as soon as practicable.



NYMNP

4 CONCLUSIONS

- 4.1 **Generally**, the trees on site are an asset, offering screening and separation to the broader landscape from within the site.
- 4.1.1 A reasonable number of good quality trees are located around the site, in general terms these trees should be retained wherever possible, though a proportion of poor quality trees can be seen throughout the site and will require either removal or remedial pruning regardless of the proposals to develop the site.
- 4.1.2 These more urgent works could be broadened to include more general landscape improvement works through general thinning of the tree centres within the compartments, removal of problem trees and the establishment of secondary population to increase the biodiversity of the site is required in the medium to long-term.
- 4.1.3 A proportion of lower grade trees are to be found around the site, in general terms these trees offer short term screening and can be used to offer maturity until replacement planting becomes established. Their removal and replacement can be considered within the design stages.
- 4.1.4 A number of poorer trees are located around the site, these are highlighted red upon the site plan, ideally these should be dealt with as soon as possible.
- 4.1.5 Several of the trees offer a moderate risk to the site; again, this can be controlled through ongoing remedial pruning works and monitoring.
- 4.2 **Tree Removals**, from a general point the Local Planning Authority are likely to accept the removal of the poorer condition trees, in light of their current condition, particularly if this is part of more general landscape improvements and is accompanied with a programme of tree replanting which will help improve the species and age distribution whilst softening any proposed development.
- 4.3 **Tree Planting**. In light of the size of the site, I would assume that proposed site changes could make provision for new tree plantings to mitigate losses and underpin the amenity of the site.

- 4.3.1 Generally, tree planting close to the buildings, roads and the car parking areas will require trees that have upright canopies, ideally ornamental species with a long season of interest. Trees, such as Rowan, Whitebeam or Crab Apple which provide year round interest could be considered avoiding the need for repeated pruning works.
- 4.3.2 The specific species should be detailed by an Arboriculturalist to avoid long-term management problems. Ideally, these can be agreed and made conditional at the detailed planning stage to cover these aspects.
- 4.4 **Site Protection**, where development or site alterations occur, the retained trees will require protection within a **Root Protection Area (RPA)** that will need to be fenced and managed. Once in place all involved upon the site should regard this as the site boundary.
- 4.4.1 The minimum protective distances out lined with BS5837:2005 Table 2 Section 5.0. These distances are detailed within the tree schedule in Appendix 2 and have been included upon the site plan BA3253TS in Appendix 3.
- 4.4.2 Tree protection will need to be installed following the initial tree works and before the onset of any demolition or ground works. The RPA should remain in position for the whole of the construction and demolition phase.
- 4.4.3 To enable the retention of trees as part of the planning process, the local authority are likely to and entitled to require detailed information that can form the basis of planning conditions for the trees protection on site which can be detailed within an Arboricultural Implication Assessment.
- 4.5 **Site Organisation:** In addition to the creation of the RPA, the site should be arranged to provide sufficient space for the normal materials handling, storage and office requirements, which do not infringe the RPA.
- 4.5.1 The creation, protection and management of the RPA can be confirmed within an Arboricultural Method Statement. Such a document is typically conditional item.

NYMNP

5 RECOMMENDATIONS

- NYM / 2011 / 0111 / FEL-1
NYM/NPA
- 5.1 **Remedial Tree Works:** Many of the trees contain defective material in the form of crossing, structural defects, rubbing branches and additionally deadwood. Much of this is present in direct response to the historical neglect and site conditions.
- 5.2 **General Tree Pruning.** The trees require management to improve their condition. General works are detailed within the tree schedule in Appendix 2. This work is required regardless of development proposals and should ideally be undertaken within the next 12 months. These works should be viewed in isolation to the development proposal in planning terms.
- 5.3 **Trees subject to statutory controls:** If the trees are covered by a tree preservation order or located in a conservation area or other legal planning constraint, works may be restricted. The works specified are necessary for reasonable management and should be acceptable to the local authority.
- 5.4 In light of the scale of the site and the potential numbers of trees requiring works there may be a requirement for a Felling License depending of the land designation. Felling Licences will be required from the Forestry Commission to thin any crop with breast height diameters exceeding 7cms. The Forestry Commission have visited the site and agree, in principle, to thinning the existing crops and have indicated a willingness to provide a license in due course. Areas prescribed for clearing /thinning are saplings mostly below this diameter these would be exempt from a felling license.
- 5.5 **Implementation of works:** You should ensure that any contractor employed for the above works is suitably qualified and experienced, familiar with current best practice and covered by current public, products and employee liability insurance, to an adequate level. Contractors must also abide by all relevant legislation for health and safety including highway requirements (You may be held liable if your contractor has insufficient insurance / training).
- 5.5.1 All tree works must be carried out in accordance with BS3998 – 1989 – *Recommendations for Tree Works*, and or the *European Tree Pruning Guide (Version 2)* - European Arboricultural Council (English Version) and in strict accordance with current arboricultural best practice ensuring that any pruning works accord with current target pruning methodology.

- 5.5.2 Contractors must be fully conversant with current arboricultural best practice and adhere to all relevant legislation including the New Road & Street Works Act 2005 for works in proximity of highways, and The Working at Heights Regulation 2004.
- 5.5.3 Additionally they should be aware of the Wildlife and Countryside Act 1981 Plus the amendments of 1985 and its implications to tree works. Works should be planned to avoid times when birds are nesting.
- 5.5.4 I understand that a site wide assessment has been undertaken and found to offer no significant impacts of bats in relation to trees. An individual bat survey may be needed on significant tree hollows, though in light of the relative young age and small diameter of the trees on site this is expected to be in very unlikely at the current time.
- 5.6 **Development Potential**, the proposed area for development can be undertaken with limited risk to the retained trees, as these can be afforded protection in accordance with this report and guidance provided by BS5837 – 2005.
- 5.6.1 Development has limited implications upon the safe retention of important trees, the perceived risks can be managed through appropriate site protection.
- 5.7 Providing that the points suggested within this report are incorporated within the design, and the protection methods agreed and the site is regularly assessed by an independent arboriculturalist as part of the site management strategy. Providing that the recommendations within this report are implemented the retained trees should not be significantly affected.

Yours Sincerely

Ian Barnes

HND Arb, F.Arbor.A, ND HI/Arb Tech.Cert (Arbor.A), MI Hort, C.Env
Arboricultural Association Registered Consultant
Chartered Environmentalist
International Society of Arboriculture Certified Arborist



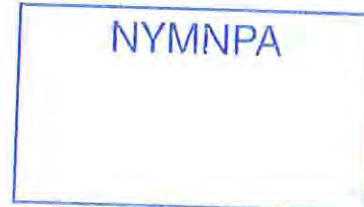
APPENDIX 1 - BRIEF QUALIFICATIONS AND EXPERIENCE OF IAN BARNES

Qualifications:

Higher Diploma in Arboriculture (H.N.D Arb)
 National Diploma in Horticulture & Arboriculture (N.D.Ht/Arb)
 Arboricultural Association Technicians Certificate (Tech.Cert. (Arbor.A))
 ISA Certified Arborist

Membership grades by peer review:

Chartered Environmentalist (CEnv)
 Corporate Member Institute of Horticulture (MI Hort)
 Fellow of the Arboricultural Association (F.Arbor.A)
 Professional member Consulting Arborist Society UK.



Registration Schemes:

Arboricultural association Registered Consultant (49)
 Trustmark Approved Tree Consultant

Practical experience:

I have worked in the Arboricultural Industry since 1987. Firstly as a climbing Arborist in both the public and private, sector, undertaking a wide range of practical operations on a variety of sites, before becoming a gang foreman. I set up and ran my own Arboricultural contracting business for 15 years, though this is now under new ownership. I have developed an arboricultural consultancy practice over the last 12 years, working throughout England for clients in both the public and private sector.

Continuing professional development:

As part of my ongoing education, I am a member of a range of related Arboricultural bodies. Including the Arboricultural Association (AA), International Society of Arboriculture (ISA), Royal Forestry Society (RFS), Forestry Contracting Association (FCA), and Arboricultural Mortgage & Insurance Users Group (AMUIG), which has been incorporated into the Consulting Arborist Society (CAS) of which I am a professional member. I am a corporate member of the Institute of Horticulture (MI Hort) and a Fellow of the Arboricultural Association (F.Arbor.A). An inclusive member of the British Mycology Society (BMS) in addition to being a Chartered Environmentalist (CEnv).

I am a registered consultant of the Arboricultural Association.

I regularly attend seminars and training events on issues relevant to Arboriculture these include events focusing on General Tree Management, Veteran Tree Management, Tree Health, Tree Pest management, Tree Diseases management, Trees Biology & Morphology, Tree Stability, Wind Loading of Trees, Tree Risk Assessment, in addition to keeping an upto date level of CPD.

I am a licensed user of the Quantified Tree Risk Assessment (QTRA) System and regularly attend updates.

I am a trained user of Picus 'Acoustic' Tomography and Picus Treetric and have attended training to extend my knowledge in this area.

I am trained and a licensed user of tree thermography as an aid to detecting defects in trees.

Relevant experience:

My career to date has involved me in a variety of tree care, dealing with trees in many different environments, and with differing management aims, these included: Tree planting schemes, including Woodland Design & Management, Detailed Health and Safety Appraisals, Tree inventories / population surveys, Management & selection on both proposed and active development sites, Advice upon trees in relation to structures, Additional areas of work such as Contract Specification & Management, Planning applications, Expert Witness. This has provided me with a range of experience, enabling me to comment upon trees and their management, in line with current best practice. Full CPD and training record can be forwarded upon request.

D - Dead A dead or very low vitality tree
P - Poor A tree of low vitality
G - Good A tree of high vitality

L - Low / Declining A tree in noticeable poor state
F - Fair A tree of normal vitality

Safe Life: Is a personal assessment of the trees likely expected remaining safe life span assuming the tree is protected from significant change.

>40 Greater than 40 Years
 10-40 Years
 <5 Less than 5 years

20-40 years
 <10 Less than 10 years
 <1 Less than 1 years

Category / Condition Rating: This is based upon the criterion of BS5837: 2005 Recommendations for trees in relation to construction and describes the condition of the tree based on age, vigour, structure and health as follows:

TREES FOR REMOVAL - Category and definition Criteria Identification on plan

Category R - DARK RED Those in such a condition that any existing value would be lost within 10 years and which should, in the current context, be removed for reasons of sound arboricultural management

- Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other R category trees (i.e. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning)
 - Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline
 - Trees infected with pathogens of significance to the health and/or safety of other trees nearby (e.g. Dutch elm disease), or very low quality trees suppressing adjacent trees of better quality
- NOTE Habitat reinstatement may be appropriate (e.g. R category tree used as a bat roost: installation of bat box in nearby tree).

TREES TO BE CONSIDERED FOR RETENTION

Category and definition Criteria — Subcategories:

- 1 Mainly arboricultural values,
- 2 Mainly landscape values,
- 3 Mainly cultural values, including conservation

Category A - LIGHT GREEN

Those of high quality and value: in such a condition as to be able to make a substantial contribution (a minimum of 40 years is suggested)

- 1 Trees that are particularly good examples of their species, especially if rare or unusual, or essential components of groups, or of formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue)
- 2 Trees, groups or woodlands which provide a definite screening or softening effect to the locality in relation to views into or out of the site, or those of particular visual importance (e.g. avenues or other arboricultural features assessed as groups)
- 3 Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture).

Category B - MID BLUE

Those of moderate quality and value: those in such a condition as to make a significant contribution (a minimum of 20 years is suggested)

- 1 Trees that might be included in the high category, but are downgraded because of impaired condition (e.g. presence of remediable defects including unsympathetic past management and minor storm damage).
- 2 Trees present in numbers, usually as groups or woodlands, such that they form distinct landscape features, thereby attracting a higher collective rating than they might as individuals but which are not, individually, essential components of formal or semi-formal arboricultural features (e.g. trees of moderate quality within an avenue that includes better, A category specimens), or trees situated mainly internally to the site, therefore individually having little visual impact on the wider locality
- 3 Trees with clearly identifiable conservation or other cultural benefits.

Category C - GREY

Those of low quality and value: currently in adequate condition to remain until new planting could be established (a minimum of 10 years is suggested), or young trees with a stem diameter below 150 mm

- 1 Trees not qualifying in higher categories.
- 2 Trees present in groups or woodlands, but without this conferring on them significantly greater landscape value, and/or trees offering low or only temporary screening benefit
- 3 Trees with very limited conservation or other cultural benefits.

NOTE Whilst C category trees will usually not be retained where they would impose a significant constraint on development, young trees with a stem diameter of less than 150 mm should be considered for relocation.

Comments / Observations: General comments referring to tree health, structure and condition.

Management Options: Comments detailing remedial works required improving immediate safety or improve the management of the tree.

Priority: Guidance for the time scale in which works should be completed, from the date of the report.

Minimum RPA – Root Protection Area: Minimum distance in metres of position of protective fencing in line with Table 2 BS5837:2005. In order to avoid damage to the roots or rooting environment of retained trees, an area equivalent to a circle with a radius 12 times the stem diameter for single stem trees and 10 times basal diameter for trees with more than one stem arising below 1.5 m above ground level.

RPA – Root Protection Area (Radius) (M) – RPA given in metres from the centre of the stem.

RPA – Root Protection Area (Area) (M²) – The ideal total area for the RPA given in metres squared.

Comp	Species	Age	Height	Vitality	Safe Life	Category	Diameter (mm) @ 1.5m	Observations / Comments	Recommendations	Minimum RPA (Radius) (m)	Minimum RPA (Area) (m ²)
Comp A	Mixed Pine & Birch Woodland	MA	6m to 9m	Fair	10-20	C2	Upto 450m	Road side close to ditch area contains a higher number of Gorse, Blackberry and Goat Willow. The main group is a mix of Birch, Goat Willow and occasional Pine. Understorey contains Blackberry and occasional bracken. Towards the northern end Birch is dominant with more heather/ heath characteristics.	The Goat Willows to the highway side require some ongoing management to control sizes and prevent issues with the carriageway. Thinning of the group should be considered to remove the problem trees & improve growing conditions for the remaining trees.	4.5	63.6
B	Mixed Pine & Birch Woodland	MA	6m to 9m	Fair	10-20	B2	Upto 400m	Similar to compartment 'A' though partially thinned in places. X1 Holly noted NE of area. X5 Major Pines which have suffered branch failures, some broken and hanging branches remain. A small quantity of Rhododendron exists. Dog walk is located nearby. Limited understorey noted suggesting thinning.	Consider control of Rhododendron. Control loose branches due to locality of dog walk.	4	50.3
C	Mixed Pine Woodland	MA	8m to 10 m	Fair	10-20	B2	Upto 400m	To the east of the compartment a number of coppiced Birch, these will require ongoing management. An increase of Pine, a small number of Goat Willow and increasing numbers of Birch. Some crown lifting works have been undertaken. Some natural regeneration is occurring. Occasional dead Birch to monitor. Deadwood forming throughout. Understorey of Blackberry, Blueberry, occasional Bracken.	Monitor the dead / dying Birch - removal of some canopies maybe required to improve safety and improve habitat values. Control / manage loose branches due to proximity of dog walk.	4	50.3
D	Pine Woodland	MA	8m to 10 m	Fair	10-20	B2	Upto 550m	Compartment contains larger sized Pines with Pines being almost 100% 10 metres in from the eastern edge. Occasional feature Pine (550m) with lower forming canopies. Occasional suppressed Birch and very occasional Holly. Seedling Holly's beginning to develop. Pine stems diameters 170-230mm for the larger trees. On the northern side Raspberry's noted and occasional bracken. Compartment is quite dense and suppressed with numerous aborted trees. Several branch failures presumably due to recent snow.	Ongoing requirement to remove broken branches monitor for branch failures close to public access areas. Remove dead & suppressed trees to improve safety and improve habitat values. Consider thinning out the group to regular centres to improve growing conditions for the remaining trees.	5.5	95

NYM / 2011 / 0191 / FL

NYMNPA

E	Pine Woodland	MA	8m to 10 m	Fair	10-20	B2	Upto 550m	Nearly entirely Pines at close centres. Occasional character trees of up to 550mm diameter. Larger stems of up to 200mm. Appears more open than compartment 'D'. Broken branches due to snow damage visible. A recycling centre to the south of the compartment, with a ditch close by. Some trees close to the recycling centre have failed. Some crown lifting works have been undertaken. A few small Leylandii have been planted close to the ditch, presumably in an attempt to screen the area.	Ongoing requirement to remove broken branches monitor for branch failures close to public access areas. Remove dead & suppressed trees to improve safety and improve habitat values. Consider thinning out the group to regular centres to improve growing conditions for the remaining trees.	5.5	95
F	Pine Woodland	MA	6m to 8m	Fair	10-20	B2	280 Upto 550m	A slighter denser compartment with some larger specimens of Pines up to around 280mm. Several character trees upto 550m. Ivy has begun to develop. Occasional Holly small and medium. Understory of Blackberry, Holly and Bilberry. To the southern edge a series of Goat Willow are establishing near a drainage ditch. On western end Downy Birch and increasing numbers of Holly were noted.	Ongoing requirement to remove broken branches monitor for branch failures close to public access areas. Remove dead & suppressed trees to improve safety and improve habitat values. Consider thinning out the group to regular centres to improve growing conditions for the remaining trees.	2.8	24.6
G	Pine Woodland	MA	5m to 7m	Fair	10-20	B2	280 Upto 550m	On the windward (western edge) Goat Willow, Birch, Pine and occasional Holly. Leading edge trees more squatter with Heather understory. Some more open areas with Heather and occasional Birch. Some large Goat Willows, some loose in the ground. A younger aged compartment in an exposed position.	Consider coppicing some of the loose Goat Willow close to the western boundary. Ongoing requirement to remove broken branches monitor for branch failures close to public access areas. Remove dead & suppressed trees to improve safety and improve habitat values. Consider thinning out the group to regular centres to improve growing conditions for the remaining trees.	2.8	24.6
H	Willow, Birch & Pine Woodland	MA	8m to 10 m	Fair	10-20	B2	Upto 500m	Compartment close to pond area. Small sized Goat Willow, Birch and Pine. The Goat Willow close to the pond require management. Occasional Holly. Some pruning works have been undertaken. Pines between the pond and the internal road have suffered branch failures.	Consider coppicing the Goat Willow around the pond area. Management of pond should be undertaken to ensure habitat is preserved – consider removing the trees to the south to improve light levels.	5	78.5

NYMNP

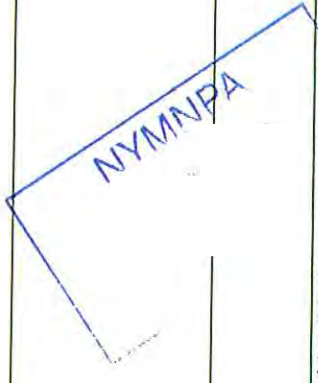
I	Pine Woodland	MA	8m to 10 m	Fair	10-20	B2	Upto 550m	Mainly Pine with occasional Rowan. On the western edge Goat Willow and Birch. Very closely developing maturing at 10 meters height. Standing small dead trees, recently failed limbs. Some desire walk lines visible. Ditch located in the compartment with Goat Willow to the edge. On the exposed edge with occasional Holly.	Ongoing requirement to remove broken branches monitor for branch failures close to public access areas. Remove dead & suppressed trees to improve safety and improve habitat values. Consider thinning out the group to regular centres to improve growing conditions for the remaining trees.	5.5	95
J	Pine Woodland	MA	8m to 10 m	Fair	10-20	B2	Upto 500m	Similar to 'I' though towards the south becomes more established with Holly. Less understorey due to foot traffic, desire lines evident. Some character Pines of 500m size. The majority of trees are 300mm. The compartment is more protected due to the neighbouring woodland. Towards the boundary increased Birch and Goat Willow. Inside face a thick thicket of Birch. A small Oak on the edge. Some Bilberry and Heather understorey.	Ongoing requirement to remove broken branches monitor for branch failures close to public access areas. Remove dead & suppressed trees to improve safety and improve habitat values. Consider thinning out the group to regular centres to improve growing conditions for the remaining trees.	5	78.5
K	Birch & Willow Woodland	MA	8m to 10 m	Fair	10-20	B2	Upto 350m	Predominantly Downy Birch and Goat Willow with occasional Rowan. A large multi-stemmed Rowan 450m in the centre of the compartment. The majority of trees are 350mm. The occasional Holly is present. Some of the Pines have snow damage. Towards the eastern end the compartment becomes predominantly Goat Willow with nettle understorey towards the eastern end.	Ongoing requirement to remove broken branches monitor for branch failures close to public access areas. Remove dead & suppressed trees to improve safety and improve habitat values. Consider thinning out the group to regular centres to improve growing conditions for the remaining trees.	3.5	38.5
L	Pine Woodland	MA	8m to 10 m	Fair	10-20	B2	Upto 500m	Predominantly Pines to the rear edge Birch with the occasional Holly. Pine sizes similar to 'J'. To the eastern end the compartment becomes more dense, some snow damage is evident.	Ongoing requirement to remove broken branches monitor for branch failures close to public access areas. Remove dead & suppressed trees to improve safety and improve habitat values. Consider thinning out the group to regular centres to improve growing conditions for the remaining trees.	5	78.5

M	Pine Woodland	MA	8m to 10 m	Fair	10-20	B2	Upto 500m	<p>Similar to 'L' though slightly denser planting centres. Some crown lifting works have been undertaken for the dog walk area. One tree require removal having a curved, spindly stem to avoid collapse. Some snow damage hanging branches noted. The occasional small Oak and one very small Beech.</p> <p>Road side area of the compartment contains Pine, Goat Willow and Birch. A fungal bracket was noted on a Goat Willow close to the highway.</p> <p>Occasional Alder on the ditch side and occasional Elder and Hawthorn was also noted.</p>	<p>Remove the curved stem and remove the hanging broken branches from the Pines close to the dog walk path area.</p> <p>Remove the Goat Willow close to the Highway with fungal brackets.</p> <p>The Goat Willows will need management and control close to the highway – ideally these should be cut back.</p>	5	78.5
N	Pine Copse	MA	8m to 10 m	Fair	10-20	B2	Upto 400	<p>Predominantly Pine, the western end becoming more open with Pines. A Rhododendron was noted to the eastern end. Ivy has begun this will require control. Goat Willow to the southern side presently small in size, will require control. The occasional Cherry. Some works to crown lift have been undertaken. Habitat piles were evident. The area lacks understory having minor quantities of Blackberry and the occasional Rose stem. A planted Oak with stake to the north of the compartment.</p>	<p>Remove stake on the Oak. Control Ivy development. Ideally, the broken branches throughout the canopy should be removed close to the drive and the caravans.</p> <p>Consider thinning out the group to regular centres to improve growing conditions for the remaining trees & Establishing an understory with replacement trees.</p>	4.8	72.4
O	Pine Copse	MA	8m to 10 m	Fair	10-20	B2	Upto 400	<p>Predominantly Pine with Holly understory, more evenly spaced planting. Small diameter broken branches visible. Signs of recent crown lifting works.</p>	<p>Ideally, the broken branches throughout the canopy should be removed close to the drive and the caravans.</p> <p>Consider thinning out the group to regular centres to improve growing conditions for the remaining trees & Establishing an understory with replacement trees.</p>	4.8	72.4
P	Pine Copse	MA	8m to 10 m	Fair	10-20	B2	Upto 400	<p>Predominantly Pines with Birch, Holly is beginning to develop. Several large failures of the Pines. Some Goat Willows close to the Highway. Desire line footpaths noticeable. Some occasional Raspberry in the understory.</p>	<p>Ideally, the broken branches and deadwood should be controlled throughout close to the drive & desire lines.</p> <p>Single large Goat Willow close to toilet block consider removal or coppicing to control the size.</p> <p>Consider thinning out the group to regular centres to improve growing conditions for the remaining trees & Establishing an understory with replacement trees.</p>	4.8	72.4
Q	Pine Copse	MA	8m to 10 m	Fair	10-20	B2	Upto 400	<p>Predominantly Pine planted at close centres, occasional Birch, Goat Willow and Holly. Compartment appears to have been historically thinned and has even centres. Very little understory.</p>	<p>Monitor development of the Goat Willows.</p> <p>Consider thinning out the group to regular centres to improve growing conditions for the remaining trees & establishing an understory with replacement trees.</p>	4.8	72.4

NYMNP

NYMNP / 2011 / 0111 / FL 1

R	Pine Copse	MA	8m to 10m	Fair	10-20	B2	Upto 350	Predominantly Pines with occasional Holly and Oak, fairly evenly spaced. Pine stems being 300 / 350. Minimal understorey which appears to have been controlled / failed? Some Blackberry, Bracken with Heather. A small group of Pines with several broken branches.	Consider thinning out the group to regular centres to improve growing conditions for the remaining trees & establishing an understorey with replacement trees.	4.2	55.4
S	Pine Copse	MA	8m to 10m	Fair	10-20	B2	Upto 350		Consider thinning out the group to regular centres to improve growing conditions for the remaining trees & establishing an understorey with replacement trees.	4.2	55.4
T	Pine Copse	MA	8m to 10m	Fair	10-20	B2	Upto 350	Predominantly Pines, some stumps left high at approx 1 Metre. Occasional Hawthorn, Oak and Rowan. Consider understorey planting to increase diversity. On SE side a hanging limb over a plot.	Remove the hanging limb. Consider under planting.	4.2	55.4
U	Pine Copse	MA	8m to 10m	Fair	10-20	B2	Upto 400	Predominantly Pines with some Holly. Some recent tree removals have been undertaken. Ditch runs through the compartment. Blackberry's have been recently failed / trimmed. On the ditch side there are more Birch along the edge with some Heather understorey. A block of Holly to the rear of plot 110/111. One large Rowan to the toilet block side.		4.8	72.4
V	Pine Copse	MA	10m	Fair	10-20	B2	Upto 350	A group of 7 Pine to the side of the toilet block. A very open area, consider under planting to prevent foot traffic and compaction.		4.2	55.4
W	Mixed Pine, Willow & Birch Woodland	MA	6m to 9m	Fair	10-20	B2	Upto 400m	Same as compartment 'K'. Pine, Goat Willow and Birch. On the road edge remnants of Hawthorn, Goat Willows with some semi-collapsed. Gorse more prevalent along the road side with some Raspberry. The central area contains a high number of nettles and Bull rushes within the damper areas. Occasional larger Hawthorn.	Consider thinning out the group to regular centres to improve growing conditions for the remaining trees & establishing an understorey with replacement trees.	4	50.3



Preliminary BS5837 Arboicultural Assessment - This should not be referred to as a specification of Arboicultural Works																
TAG No.	Species	Age	Height	Canopy Height	North Canopy	South Canopy	East Canopy	West Canopy	Vitality	Safe Life	Category	Diameter @ 1.5m (mm)	Observations / Comments	Recommendations	Minimum RPA (Radius) (m)	Minimum RPA (Area) (m ²)
2156	Scots Pine	M	6.5	2	3	3	3	3	Dead	<5	R	650m	A dead tree located close to the dog walk – limited potential.	Remove the canopy and retain the stem as habitat.	6.5	132.7
2157	Scots Pine	M	12	2	4	4	4	4	Fair	10-20	C3	700m	Branch failures are visible within the canopy. A poorly developing tree.	Either remove or reduce the south eastern leader.	7	153.9

Preliminary BS5837 Arboricultural Assessment - This should not be referred to as a specification of Arboricultural Works

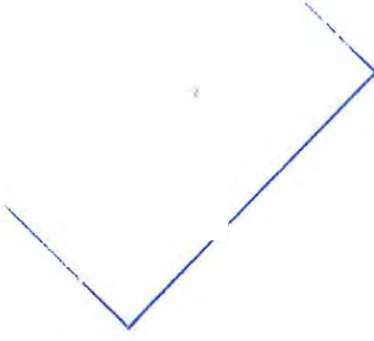
TAG No.	Species	Age	Height	Canopy Height	North Canopy	South Canopy	East Canopy	West Canopy	Vitality	Safe Life	Category	Diameter @ 1.5m (mm)	Observations / Comments	Recommendations	Minimum RPA (Radius) (m)	Minimum RPA (Area) (m ²)
2158	Scots Pine	M	11	2	3	3	3	3	Poor	<5	R	280	Compaction within rootzone can be seen. Branch failures are visible within the canopy.	Remove the canopy and retain the stem as habitat.	3.36	35.5
2159	Scots Pine	M	11	2	3	3	3	3	Poor	<5	R	280	Compaction within rootzone can be seen. Branch failures are visible within the canopy.	Remove the canopy and retain the stem as habitat.	3.36	35.5
2160	Downy Birch	M A	8	2	3	3	3	3	Fair	<10	R	400m	Biforked close to ground level. Crack running vertically through the stem A poorly developing tree.	Remove the canopy and retain the stem as habitat.	4	50.3
2161	Scots Pine	M	11	1	3	3	3	3	Fair	<5	R	200	Hung up branches can be seen within the canopy. Branch failures are visible within the canopy. A poorly developing tree.	Remove the canopy and retain the stem as habitat.	2.4	18.1
2162	Scots Pine	M	11	1	3	3	3	3	Fair	<5	R	200	Hung up branches can be seen within the canopy. Branch failures are visible within the canopy. A poorly developing tree.	Remove the canopy and retain the stem as habitat.	2.4	18.1
2163	Scots Pine	M	11	1	3	3	3	3	Scots Pine	M	C3	250	Small hollow visible in the main stem the site of failed leader. A poorly located tree likely to become a problem.	Remove the canopy and retain the stem as habitat. Establish a replacement tree nearby.	3	28.3
2164	Scots Pine	M	11	2	4	4	4	4	Good	20-40	C2	300	Branch failures are visible within the canopy. Hung up branches can be seen within the canopy. A good example of the species.	Formative pruning required to improve main branch architecture.	3.6	40.7
2165	Scots Pine	M	11	2	4	4	4	4	Good	20-40	C2	300	Branch failures are visible within the canopy. Hung up branches can be seen within the canopy. A good example of the species.	Formative pruning required to improve main branch architecture.	3.6	40.7
2166	Scots Pine	M	11	2	4	4	4	4	Good	20-40	C2	300	Branch failures are visible within the canopy. Hung up branches can be seen within the canopy. A good example of the species.	Formative pruning required to improve main branch architecture.	3.6	40.7

Preliminary BS5837 Arboricultural Assessment - This should not be referred to as a specification of Arboricultural Works

TAG No.	Species	Age	Height	Canopy Height	North Canopy	South Canopy	East Canopy	West Canopy	Vitality	Safe Life	Category	Diameter @ 1.5m (mm)	Observations / Comments	Recommendations	Minimum RPA (Radius) (m)	Minimum RPA (Area) (m ²)
2167	Scots Pine	M	11	2	4	4	4	4	Good	20-40	C2	300	Branch failures are visible within the canopy. Hung up branches can be seen within the canopy. A good example of the species.	Formative pruning required to improve main branch architecture.	3.6	40.7
2168	Scots Pine	M	11	2	4	4	4	4	Good	20-40	C2	300	Branch failures are visible within the canopy. Hung up branches can be seen within the canopy. A good example of the species.	Formative pruning required to improve main branch architecture.	3.6	40.7
2169	Scots Pine	M	9	2	3	3	3	3	Dead	<5	R	550	Growing close to road. Large deadwood can be seen in the outer canopy. A good example of the species.	Remove the canopy and retain the stem as habitat.	6.6	136.8
2170	Goat Willow	M	9	2	4	4	4	4	Declining	<5	R	450m	Growing within a lawn. Soil level has been raised over rootzone. Bark is lifting off the stem. Canopy has been reduced (topped) & redeveloped. Significant quantities of deadwood can be seen within the canopy. Retention not thought to be sustainable.	Reduce stem to a 200mm stool and allow to re-grow as coppice. Or Remove and treat stump to prevent regrowth. Establish replacement trees nearby.	4.5	63.6
2171	Goat Willow	M	9	2	4	4	4	4	Declining	<5	R	450m	Growing within lawn. Soil level has been raised over rootzone. Bark lifting off the stem. Canopy has been reduced (topped) & redeveloped. Significant quantities of deadwood can be seen within the canopy in addition to significant epicormic shoots within the canopy. Retention not thought to be sustainable.	Reduce stem to a 200mm stool and allow to re-grow as coppice. Or Remove and treat stump to prevent regrowth. Establish replacement trees nearby.	4.5	63.6

NYMNP

APPENDIX 3 - TREE SURVEY PLAN



16-04-2011 7 0 1 1 1 / F 12-11

NYMNP

18/10/2019

BADGER AND BAT SURVEY REPORT

Ladycross Plantation, Whitby

Mr Kieran Robinson

February 2011



access
ECOLOGY

survey • management • training

Access Ecology Ltd
R1b Riverside Block
Sheaf Bank Business Park
Sheffield
S2 3EN



TABLE OF CONTENTS

Introduction	3
Species Legal Status	4
Methodology	6
Results	8
Discussion and Recommendations	9
References	10

Appendix A

Figure 1. Location Plan

Figure 2. Site plan

Appendix B

North & East Yorkshire Ecological Data Centre consultation response

INTRODUCTION

Access Ecology Ltd were commissioned in July 2008 by Mr Kieran Robinson to carry out a badger and bat survey at the Ladycross Plantation Caravan Park, located approximately 8km to the southwest of Whitby, to the north of the village of Egton, within the North York Moors National Park (OS grid reference: NZ818079).

These surveys were commissioned in response to a condition placed upon a planning application submitted to and approved by North York Moors National Park Authority (NYM/2008/0881/FL), to permit the stationing of 60 holiday static caravans alongside the existing 115 touring caravan pitches at the site. This application was granted permission on 26th January 2009, and the relevant condition (#13) states:

No work shall commence to clear trees and the site in preparation for the development hereby permitted until details of a programme of works to mitigate the impact of the development on any bats or badgers at the site have been submitted to and approved in writing by the Local Planning Authority. The programme shall include a survey of the buildings to determine the extent of any bat or badger presence and a written scheme of mitigation measures. The work shall not be carried out otherwise than in the accordance with the details so approved.

Ladycross plantation currently provides 175 touring caravan pitches. These are interspersed within areas of pine sp. Plantation and heavily managed amenity grassland. There are several buildings on site, including a domestic residence, office/shop, and two toilet blocks. All of the buildings are located outside of the proposed work area.

The aim of these surveys was to record any evidence of bat or badger activity associated with the site. Within this report we will develop a suitable mitigation strategy, if necessary, for any bats or badgers which may be affected by the proposals.

This initial survey was extended to include three more areas for extension. A survey of these further areas was undertaken on 1st August 2010. A further area was added in February 2011. The whole site was re-surveyed on 21st February 2011 to assess the new area and to ensure that conditions remained the same as previously found.

SPECIES LEGAL STATUS AND RATIONALE

Badger

Badgers *Meles meles* are protected by a number of laws. The Badgers Act, 1973 and the Protection of Badgers Act, 1992 make it illegal to wilfully kill, injure or take, or attempt to kill, injure or take, a badger. It is also an offence to cruelly ill-treat a badger, dig for badgers, use badger tongs or use a firearm other than the type specified under the exceptions within the Act.

Furthermore, badger setts are protected. It is an offence to interfere with a badger sett by damaging, destroying or obstructing it (for example, with debris from tree works), causing a dog to enter a sett or disturbing an occupied sett - either by intent or by negligence. Selling or offering for sale a live badger, having possession or control of a live badger, marking a badger or attaching any ring, tag, or other marking device to a badger is also an offence.

Any of the offences listed above are punishable by up to 6 months in prison and a fine of up to £5000. Any equipment or vehicles used in committing the offence may be confiscated. Any dogs that have entered a sett may also be confiscated and euthanised.

A few of these acts are made legal by having a licence from Natural England to disturb or handle badgers, or destroy all or part of a sett. In no cases may dogs be allowed to enter the sett. This particular point is the focus of the Badgers (Further Protection) Act 1991.

Other laws that are used to protect badgers (and dogs) include the:

- Wildlife and Countryside Act 1981 (as amended)
- Criminal Justice Act 1988 (Section 69): confiscation of equipment and/or dogs used in committing the offence
- Protection of Animals Act (1911): against cruelty to dogs, fighting or baiting animals and animal abandonment
- Abandonment of Animals Act 1960: conveying an animal in a way that is likely to cause suffering

Bats

Due to recent declines all UK bat species are classed as European Protected Species and are afforded a high level of legal protection. Despite these recent declines bats are frequently encountered during development and construction works as a result of bat species' use of buildings (old and new), trees, bridges and underground areas for roosting.

Depending upon the type of roost, resident bats are often very sensitive to disturbance, which can in extreme circumstances result in the death of adult bats, abandonment of young and/or colony collapse. Bats within summer maternity roosts are particularly sensitive to disturbance given the high numbers of breeding females that often gather and the presence of dependant young while disturbance of bats using winter hibernation roosts can lead to the depletion of precious energy reserves. Habitat alterations within areas used by bats also have the potential to isolate bat populations and sever roost sites from favoured feeding areas.

All bat species and their roosts in Britain are protected under the Wildlife and Countryside Act 1981 (as amended) (WCA) through their inclusion on Schedule 5. They are also included on Annex IV of Council Directive 92/43/EEC of 21st May 1992 on the Conservation

of Natural Habitats and of Wild Fauna and Flora (known as the Habitats Directive). As a result of the United Kingdom ratifying this directive, all British bats are protected under The Conservation Regulations 1994 (the Habitat Regulations). Combined, these make it an offence to kill, injure, capture or disturb bats or obstruct access to, damage or destroy bat roosts.

The implementation of the Countryside and Rights of Way Act 2000 (CRoW 2000) has amended the WCA 1981 to include 'reckless' damage to, or destruction of a roost, or disturbance of bats whilst in a roost. For more detailed information on the relevant sections of the legislation summarised above see Part A of the Appendix.

Under law, a bat roost is any structure or place used for shelter or protection e.g. a building, bridge or tree. Bats use many roost sites and feeding areas throughout the year and since they tend to re-use the same roosts for generations Natural England's current guidance states that once bats have occupied a roost, it is, under normal circumstances, protected indefinitely.

Nesting Birds

All British birds, their nests and eggs are protected in law under Part 1 of the Wildlife and Countryside Act 1981 (WCA 1981) (as amended). It is an offence (with exception to species listed in Schedule 2) to deliberately take, kill or injure any wild bird or to take, damage, or destroy any nest or egg of any wild bird.

Planning Policy Statement 9

The Planning Policy Statements (PPS) set out the Government's national policies on different aspects of planning in England with PPS 9 setting out planning policies on the protection of biodiversity and geological conservation through the planning system.

One of the Key Principles of PPS 9 states that 'planning decisions should aim to maintain, and enhance, restore or add to biodiversity'. Consequently where practical development projects should aim to improve the biodiversity value of a site.

METHODOLOGY

Desktop study

A desktop survey was undertaken. Bat records for the site and surrounding environs (up to two kilometres) were requested from:

- North & East Yorkshire Ecological Data Centre
- North Yorkshire Bat Group

Badgers

The entire site was surveyed for evidence of badgers. Surveys were carried out according to recommended guidelines (Harris *et al* 1989; Macdonald *et al* 1998). The site was surveyed on foot with special attention paid to all boundary features such as hedgerows and woodland edges.

Surveys were carried out by experienced ecologist Nick Bonsall MIEEM, on 19th March 2010, 1st August 2010 and 21st February 2011. Evidence was sought which could indicate that badgers were present. This evidence includes:

Setts - Varying in size from single holes to a series of holes probably connected underground.

Latrines - Shallow dug dun pits often marking territorial boundaries.

Hair - Often caught on fences or thorny shrubs such as bramble

Trails - Between setts or leading to feeding areas. Badger's bodies are low to the ground and relatively wide, leaving characteristic depressions in badger path vegetation and rubbing marks on stones and logs crossing paths.

Tracks - Badgers have wide paws and the pads are in a fairly straight line. Claw marks can often be observed

Feeding - Snuffle holes are formed during foraging.

Any entrance holes located were described as either active, partially active or not active (see Table 1) and setts were ascribed a status (main, annexe or subsidiary) based on the definitions given in Table 2 (Reynolds & Harris,2005)

Table 1. Entrance hole classifications

Entrance Hole Status	Description
Well used	One or more of the features: well worn entrance; freshly excavated soil; bedding material
Partially used	Vegetation in entrance and/or mosses growing in and/or around entrance
Disused	Partially or completely blocked, considerable excavation would be required to re-open hole

Table 2. Sett classifications

Sett Type	Description
Main	Several large holes with large spoil heaps and obvious paths emerging from and between sett entrances
Annexe	Normally less than 150m from main sett. May be in use all the time, even if main sett very active
Subsidiary	Usually at least 50m from main sett with no clear paths connecting to other setts. May be used only intermittently
Outlier	Small amounts of spoil outside entrance holes. No clear paths connecting to other setts and used only sporadically. May be used by foxes and rabbits

Bats

External building assessment

An external building assessment was undertaken to assess which of the buildings were most likely to contain roosting bats and inform the decisions of where to position surveyors during surveys. The building exteriors were visually assessed for potential access points and evidence of bat activity. Features such as small gaps in barge/soffit/fascia boards, raised or missing ridge tiles and gaps at gable ends, which have potential as access points were sought.

Visual Tree Assessments

Each tree assess was inspected using binoculars for features which may be used by roosting bats including natural holes, woodpecker holes, cracks/splits in major limbs, loose bark, dense thick stemmed ivy, hollows/cavities and birds or bat boxes. Signs indicating use of tree features by roosting bats include scratches and/or staining around entry points, bat droppings in/around/below entrance, audible squeaking at dusk or in warm weather, flies around entry points, the distinctive smell of bats and the smoothing of surfaces around cavities. Trees were also inspected for evidence of nesting birds including nests, distress calling of nestlings and bird activity indicative of nesting birds. Based upon observations made during the visual assessment the surveyed trees will be attributed to one of the risk categories outlined in Table 1.

Table 3. Features typical of trees within the different risk categories

Low Risk	Medium Risk	High Risk
Located within coniferous plantation or within groups of young trees with simple growth forms	Located within an area offering some habitat features likely to be used by bats	Located within ancient woodland or parkland
No cracks or crevices	Few small cracks and crevices	Woodpecker holes
No flaking bark	Deadwood in canopy or stem	Cracks/crevices
Low/no ivy cover	low ivy cover	Loose or flaking bark
		Medium-dense ivy cover
		Deadwood in canopy or
		Snagged branches
		Hollow stem or limb
		Hole between buttresses
		Hollow core

These surveys were also carried out by Mr Nicholas Bonsall (Bat Licence: 20104731) on 19th March 2010, 1st August 2010 and 21st February 2011.

RESULTS

Desktop study

North Yorkshire Bat Group provided the following records, none of which were from the site.

Table 4. NYBG records.

Species	Site	Grid ref.	Date	Comment
Unknown	Dale View, Egton	NZ808064	08 Oct 2007	3 bats found behind house alarm box during repairs.
Unknown	Red House Farm, Egton	NZ809062	04 Oct 2006	In flight
Brown Long-eared Bat	Newbiggin High Farm, Aislaby	NZ8307	01 Jul 2008	Flying in large barn and roosting on metal frame
Common Pipistrelle	Newbiggin High Farm, Aislaby	NZ8307	01 Jul 2008	Emerged from large barn

North & East Yorkshire Ecological Data Centre did not hold any records of protected or notable species from the site or its immediate environs (see Appendix B).

Badgers

No field signs of badgers were recorded within the curtilage of the site.

Bats

External building assessment

Buildings 1 and 2 presented few features which would be considered suitable for use by roosting bats, and given their recent construction they would be considered unlikely to be utilised by roosting bats.

Table 2. External building assessment results

Building number ID	Building description	Features associated with roosting bats
1	Modern two storey stone built residential dwelling with clay pantile roof, well sealed uPVC windows, pointed stonework and parapetted gables. No fascia or soffit. Approx. 5 years old.	Clay pantile roof. Very well sealed.
2	Single storey office/shop of similar construction as building 1.	Clay pantile roof. Very well sealed
3	Toilet Block 1. Timber framed structure, with a large metal sheeted single pitch roof. Timber weather boarding on all aspects. No fascia or soffits.	Very good opportunity for roosting bats behind weather boarding.
4	Toilet Block 2. Timber framed structure, with a large metal sheeted single pitch roof, with skylights. Large rough sawn timber weather boarding on all aspects. No fascia or soffits.	Very good opportunity for roosting bats behind weather boarding.

Visual Tree Assessments

All the trees observed in association with the current proposals held little or no potential for use by roosting bats, being uniformly semi-mature/mature examples of pine sp. They presented no features which would be suitable for use by roosting bats.

DISCUSSION AND RECOMMENDATIONS

There was no evidence of badger activity on site, and no records of badger activity were returned during the consultation exercise. Therefore there are considered to be no constraints offered by this species to the proposed development.

There were bat records returned from the local area, although none from the site itself, and the habitats present on site are considered to be conducive to foraging bat activity. However, there were no trees present within the working area, or the wider site, that would be considered as suitable for use by roosting bats.

Of the buildings on site, two were considered to offer potential for roosting bats, given the features present (3 and 4), whilst two were considered unlikely to be used as roosting locations (1 and 2). None of the buildings are located close enough to the proposed working area for there to be a direct impact, in terms of affecting access or egress points to a possible roost location through changes in surrounding habitat. Therefore, any possible direct impact on roosting bats is considered highly unlikely from the proposed activities.

Original approved planning would affect 1.4 hectares of woodland and with the additional proposed areas the combined woodland affected will total 2.16 hectares. However, the aim is to create a woodland feel for the proposed lodge locations, with as many trees as possible left *in situ*, with the access road following a roughly crescent shape overall, with heavily scalloped woodland edges. Although there will be a net loss of woodland habitat, this scalloping will create additional woodland edge habitat, used by many species as foraging habitat.

Any lighting proposals should be designed and installed carefully to ensure minimal disturbance to foraging or commuting bats. Ideally, lighting should be:

- Uni-directional
- Not shine on vegetation or upwards towards the sky
- Be low-level
- Be movement activated

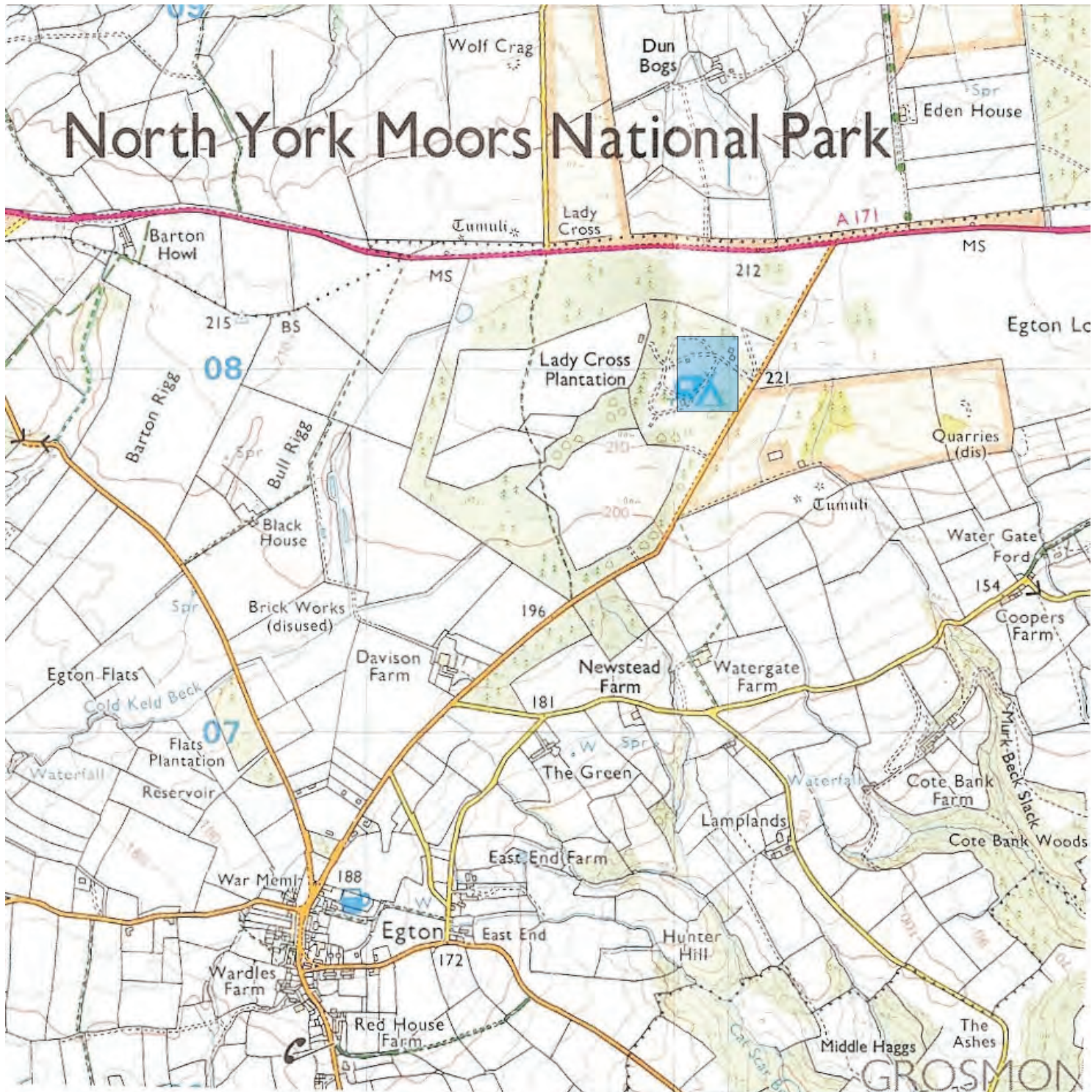
Although not encountered during the bat survey work the client is reminded that nesting birds may be present within the surveyed buildings. Nesting birds are protected under law and no active nest may be destroyed or damaged. If an active bird's nest is encountered during construction works, works within the surrounding area should be suspended until the chick has fledged. Further advice can be given.

In summary, there are not considered to be any constraints offered to the current proposals from either bats or badgers.


REFERENCES

BCT. 2007. Bat surveys-good practice guidelines. Bat Conservation Trust, London.

APPENDIX A

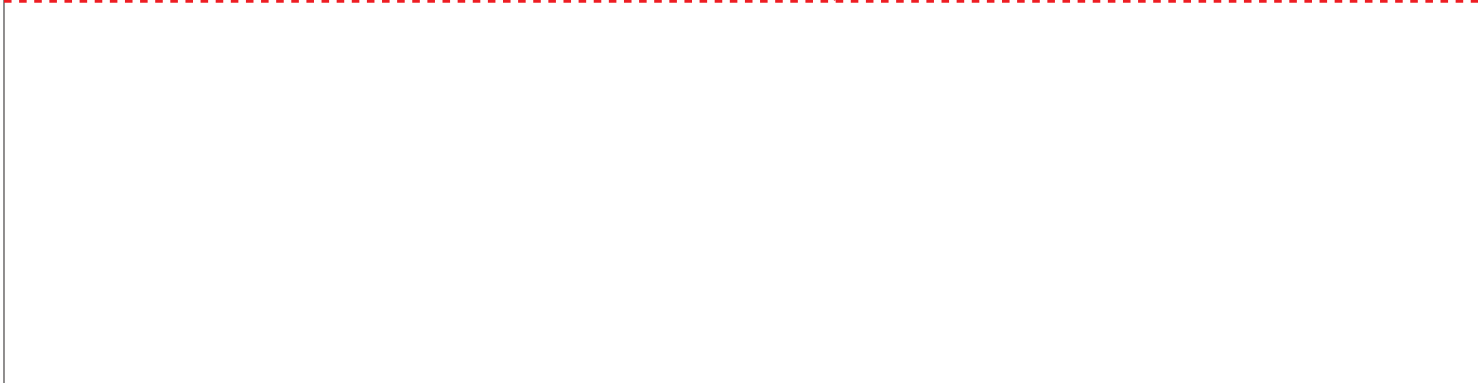






Reproduced from the original Ordnance Survey Map. With the permission of Her Majesty's Stationary Office.
 Crown Copyright
 Licence Number: W110808

 <p>access ECOLOGY survey • management • training</p> <p>R1b Riverside Block Sheaf Bank Business Park Sheffield S2 3EN</p>	Legend		Project	Ladycross Plantation, Whitby
		Site Location	Title	Location Plan
			Client	Mr Kieran Robinson
			Date	8th March 2011
	www.accessecology.co.uk		Ref	Figure 1



Within the proposed area not all trees are to be removed, many will remain *in-situ*.



 <p>access ECOLOGY survey • management • training</p> <p>R1b Riverside Block Sheaf Bank Business Park Sheffield S2 3EN</p>	Legend		Project	Ladycross Plantation, Whitby
		Site boundary	Title	Site Plan
		Proposed working area (indicative)	Client	Mr Kieran Robinson
		Building reference	Date	8th March 2011
	www.accessecology.co.uk		Ref	Figure 2

APPENDIX B

Scientific Name	Common Name	Taxonomic group	Location	Grid Reference	Custodian	Survey	Recorder	Dated	Measurement
Bufo bufo	Common Toad	amphibian	North Yorkshire	NZ80	neyedc.org.uk	Herpetofauna records from The Naturalist	Unknown	1970 - 1977	
Rana temporaria	Common Frog	amphibian	North Yorkshire	NZ80	neyedc.org.uk	Herpetofauna records from The Naturalist	Unknown	1970 - 1977	
Carduelis chloris	European Greenfinch	bird	No site name available	NZ810060	www.searchnbn.net	NBNGateway: RSPB Big Garden Birdwatch winter sightings in the UK in 2009		2009-01-24 - 2009-01-25	
Columba palumbus	Common Wood Pigeon	bird	No site name available	NZ810060	www.searchnbn.net	NBNGateway: RSPB Big Garden Birdwatch winter sightings in the UK in 2009		2009-01-24 - 2009-01-25	
Cyanistes caeruleus	Blue Tit	bird	No site name available	NZ810060	www.searchnbn.net	NBNGateway: RSPB Big Garden Birdwatch winter sightings in the UK in 2009		2009-01-24 - 2009-01-25	
Cyanistes caeruleus	Blue Tit	bird	No site name available	NZ809063	www.searchnbn.net	NBNGateway: RSPB Big Garden Birdwatch winter sightings in the UK in 2009		2009-01-24 - 2009-01-25	
Dendrocopos major	Great Spotted Woodpecker	bird	No site name available	NZ810060	www.searchnbn.net	NBNGateway: RSPB Big Garden Birdwatch winter sightings in the UK in 2009		2009-01-24 - 2009-01-25	
Erithacus rubecula	European Robin	bird	No site name available	NZ810060	www.searchnbn.net	NBNGateway: RSPB Big Garden Birdwatch winter sightings in the UK in 2009		2009-01-24 - 2009-01-25	
Erithacus rubecula	European Robin	bird	No site name available	NZ809063	www.searchnbn.net	NBNGateway: RSPB Big Garden Birdwatch winter sightings in the UK in 2009		2009-01-24 - 2009-01-25	
Parus major	Great Tit	bird	No site name available	NZ809063	www.searchnbn.net	NBNGateway: RSPB Big Garden Birdwatch winter sightings in the UK in 2009		2009-01-24 - 2009-01-25	
Parus major	Great Tit	bird	No site name available	NZ810060	www.searchnbn.net	NBNGateway: RSPB Big Garden Birdwatch winter sightings in the UK in 2009		2009-01-24 - 2009-01-25	
Passer domesticus	House Sparrow	bird	No site name available	NZ809063	www.searchnbn.net	NBNGateway: RSPB Big Garden Birdwatch winter sightings in the UK in 2009		2009-01-24 - 2009-01-25	
Periparus ater	Coal Tit	bird	No site name available	NZ810060	www.searchnbn.net	NBNGateway: RSPB Big Garden Birdwatch winter sightings in the UK in 2009		2009-01-24 - 2009-01-25	
Prunella modularis	Hedge Accentor	bird	No site name available	NZ810060	www.searchnbn.net	NBNGateway: RSPB Big Garden Birdwatch winter sightings in the UK in 2009		2009-01-24 - 2009-01-25	
Sitta europaea	Wood Nuthatch	bird	No site name available	NZ810060	www.searchnbn.net	NBNGateway: RSPB Big Garden Birdwatch winter sightings in the UK in 2009		2009-01-24 - 2009-01-25	
Sturnus vulgaris	Common Starling	bird	No site name available	NZ809063	www.searchnbn.net	NBNGateway: RSPB Big Garden Birdwatch winter sightings in the UK in 2009		2009-01-24 - 2009-01-25	
Sturnus vulgaris	Common Starling	bird	No site name available	NZ810060	www.searchnbn.net	NBNGateway: RSPB Big Garden Birdwatch winter sightings in the UK in 2009		2009-01-24 - 2009-01-25	
Turdus merula	Common Blackbird	bird	No site name available	NZ810060	www.searchnbn.net	NBNGateway: RSPB Big Garden Birdwatch winter sightings in the UK in 2009		2009-01-24 - 2009-01-25	

Scientific Name	Common Name	Taxonomic group	Location	Grid Reference	Custodian	Survey	Recorder	Dated	Measurement
Turdus merula	Common Blackbird	bird	No site name available	NZ809063	www.searchnbn.net	NBNGateway: RSPB Big Garden Birdwatch winter sightings in the UK in 2009		2009-01-24 - 2009-01-25	
Turdus merula	Common Blackbird	bird	No site name available	NZ810060	www.searchnbn.net	NBNGateway: RSPB Big Garden Birdwatch winter sightings in the UK in 2009		2009-01-24 - 2009-01-25	
Pinus sylvestris	Scots Pine	conifer	North York Moors	NZ8006	neyedc.org.uk	North York Moors Plant Atlas	Sykes, Nan	1993	
Pinus sylvestris	Scots Pine	conifer	North York Moors	NZ8008	neyedc.org.uk	North York Moors Plant Atlas	Sykes, Nan	1993	
Pinus sylvestris	Scots Pine	conifer	North York Moors	NZ8406	neyedc.org.uk	North York Moors Plant Atlas	Sykes, Nan	1993	
Pinus sylvestris	Scots Pine	conifer	North York Moors	NZ8206	neyedc.org.uk	North York Moors Plant Atlas	Sykes, Nan	1993	
Pinus sylvestris	Scots Pine	conifer	North York Moors	NZ8208	neyedc.org.uk	North York Moors Plant Atlas	Sykes, Nan	1993	
Aconitum napellus	Monk's-Hood	flowering plant	North York Moors	NZ8406	neyedc.org.uk	North York Moors Plant Atlas	Sykes, Nan	1993	
Dactylorhiza fuchsii	Common Spotted-Orchid	flowering plant	North York Moors	NZ8208	neyedc.org.uk	North York Moors Plant Atlas	Sykes, Nan	1993	
Dactylorhiza fuchsii	Common Spotted-Orchid	flowering plant	North York Moors	NZ8206	neyedc.org.uk	North York Moors Plant Atlas	Sykes, Nan	1993	
Dactylorhiza fuchsii	Common Spotted-Orchid	flowering plant	North York Moors	NZ8406	neyedc.org.uk	North York Moors Plant Atlas	Sykes, Nan	1993	
Dactylorhiza fuchsii	Common Spotted-Orchid	flowering plant	North York Moors	NZ8008	neyedc.org.uk	North York Moors Plant Atlas	Sykes, Nan	1993	
Dactylorhiza fuchsii	Common Spotted-Orchid	flowering plant	North York Moors	NZ8006	neyedc.org.uk	North York Moors Plant Atlas	Sykes, Nan	1993	
Dactylorhiza maculata	Heath Spotted-Orchid	flowering plant	North York Moors	NZ8208	neyedc.org.uk	North York Moors Plant Atlas	Sykes, Nan	1993	
Galanthus nivalis	Snowdrop	flowering plant	North York Moors	NZ8406	neyedc.org.uk	North York Moors Plant Atlas	Sykes, Nan	1993	
Hordelymus europaeus	Wood Barley	flowering plant	North York Moors	NZ8206	neyedc.org.uk	North York Moors Plant Atlas	Sykes, Nan	1993	
Hordelymus europaeus	Wood Barley	flowering plant	North York Moors	NZ832068	neyedc.org.uk	North York Moors Plant Atlas	Sykes, Nan	1993	
Hyacinthoides non-scripta	Bluebell	flowering plant	North York Moors	NZ8208	neyedc.org.uk	North York Moors Plant Atlas	Sykes, Nan	1993	
Hyacinthoides non-scripta	Bluebell	flowering plant	North York Moors	NZ8008	neyedc.org.uk	North York Moors Plant Atlas	Sykes, Nan	1993	
Hyacinthoides non-scripta	Bluebell	flowering plant	North York Moors	NZ8406	neyedc.org.uk	North York Moors Plant Atlas	Sykes, Nan	1993	
Hyacinthoides non-scripta	Bluebell	flowering plant	North York Moors	NZ8206	neyedc.org.uk	North York Moors Plant Atlas	Sykes, Nan	1993	
Hyacinthoides non-scripta	Bluebell	flowering plant	North York Moors	NZ8006	neyedc.org.uk	North York Moors Plant Atlas	Sykes, Nan	1993	
Listera ovata	Common Twayblade	flowering plant	North York Moors	NZ8008	neyedc.org.uk	North York Moors Plant Atlas	Sykes, Nan	1993	
Listera ovata	Common Twayblade	flowering plant	North York Moors	NZ8006	neyedc.org.uk	North York Moors Plant Atlas	Sykes, Nan	1993	
Listera ovata	Common Twayblade	flowering plant	North York Moors	NZ8208	neyedc.org.uk	North York Moors Plant Atlas	Sykes, Nan	1993	
Meconopsis cambrica	Welsh Poppy	flowering plant	North York Moors	NZ8406	neyedc.org.uk	North York Moors Plant Atlas	Sykes, Nan	1993	
Molinia caerulea	Purple Moor-Grass	flowering plant	North York Moors	NZ8008	neyedc.org.uk	North York Moors Plant Atlas	Sykes, Nan	1993	
Molinia caerulea	Purple Moor-Grass	flowering plant	North York Moors	NZ8206	neyedc.org.uk	North York Moors Plant Atlas	Sykes, Nan	1993	

Scientific Name	Common Name	Taxonomic group	Location	Grid Reference	Custodian	Survey	Recorder	Dated	Measurement
Molinia caerulea	Purple Moor-Grass	flowering plant	North York Moors	NZ8006	neyedc.org.uk	North York Moors Plant Atlas	Sykes, Nan	1993	
Molinia caerulea	Purple Moor-Grass	flowering plant	North York Moors	NZ8208	neyedc.org.uk	North York Moors Plant Atlas	Sykes, Nan	1993	
Orchis mascula	Early-Purple Orchid	flowering plant	North York Moors	NZ8006	neyedc.org.uk	North York Moors Plant Atlas	Sykes, Nan	1993	
Orchis mascula	Early-Purple Orchid	flowering plant	North York Moors	NZ8008	neyedc.org.uk	North York Moors Plant Atlas	Sykes, Nan	1993	
Orchis mascula	Early-Purple Orchid	flowering plant	North York Moors	NZ8406	neyedc.org.uk	North York Moors Plant Atlas	Sykes, Nan	1993	
Orchis mascula	Early-Purple Orchid	flowering plant	North York Moors	NZ8208	neyedc.org.uk	North York Moors Plant Atlas	Sykes, Nan	1993	
Orchis mascula	Early-Purple Orchid	flowering plant	North York Moors	NZ8206	neyedc.org.uk	North York Moors Plant Atlas	Sykes, Nan	1993	
Pellia epiphylla	Overleaf Pellia	liverwort	No site name available	NZ80E	www.searchnbn.net	NBNGateway: Bryophyte data for Great Britain from the British Bryological Society held by BRC		1991-01-01 - 2005-12-31	
Pellia epiphylla	Overleaf Pellia	liverwort	No site name available	NZ80C	www.searchnbn.net	NBNGateway: Bryophyte data for Great Britain from the British Bryological Society held by BRC		1991-01-01 - 2005-12-31	
Pellia epiphylla	Overleaf Pellia	liverwort	No site name available	NZ80I	www.searchnbn.net	NBNGateway: Bryophyte data for Great Britain from the British Bryological Society held by BRC		1991-01-01 - 2005-12-31	
Pellia epiphylla	Overleaf Pellia	liverwort	No site name available	NZ80H	www.searchnbn.net	NBNGateway: Bryophyte data for Great Britain from the British Bryological Society held by BRC		1991-01-01 - 2005-12-31	
Sphagnum compactum	Compact Bog-moss	moss	No site name available	NZ80J	www.searchnbn.net	NBNGateway: Bryophyte data for Great Britain from the British Bryological Society held by BRC		1991-01-01 - 2005-12-31	
Sphagnum denticulatum	Cow-horn Bog-moss	moss	No site name available	NZ80J	www.searchnbn.net	NBNGateway: Bryophyte data for Great Britain from the British Bryological Society held by BRC		1991-01-01 - 2005-12-31	
Sphagnum fallax	Flat-topped Bog-moss	moss	No site name available	NZ80J	www.searchnbn.net	NBNGateway: Bryophyte data for Great Britain from the British Bryological Society held by BRC		1991-01-01 - 2005-12-31	
Sphagnum fallax	Flat-topped Bog-moss	moss	No site name available	NZ80D	www.searchnbn.net	NBNGateway: Bryophyte data for Great Britain from the British Bryological Society held by BRC		1991-01-01 - 2005-12-31	
Sphagnum fallax	Flat-topped Bog-moss	moss	No site name available	NZ80E	www.searchnbn.net	NBNGateway: Bryophyte data for Great Britain from the British Bryological Society held by BRC		1991-01-01 - 2005-12-31	
Sphagnum palustre	Blunt-leaved Bog-moss	moss	No site name available	NZ80E	www.searchnbn.net	NBNGateway: Bryophyte data for Great Britain from the British Bryological Society held by BRC		1991-01-01 - 2005-12-31	
Sphagnum palustre	Blunt-leaved Bog-moss	moss	No site name available	NZ80J	www.searchnbn.net	NBNGateway: Bryophyte data for Great Britain from the British Bryological Society held by BRC		1991-01-01 - 2005-12-31	
Sphagnum palustre	Blunt-leaved Bog-moss	moss	No site name available	NZ80D	www.searchnbn.net	NBNGateway: Bryophyte data for Great Britain from the British Bryological Society held by BRC		1991-01-01 - 2005-12-31	

Scientific Name	Common Name	Taxonomic group	Location	Grid Reference	Custodian	Survey	Recorder	Dated	Measurement
Tortula freibergii	Freiberg's Screw-moss	moss	No site name available	NZ80C	www.searchnbn.net	NBNGateway: Bryophyte data for Great Britain from the British Bryological Society held by BRC		1991-01-01 - 2005-12-31	
Tortula freibergii	Freiberg's Screw-moss	moss	No site name available	NZ80H	www.searchnbn.net	NBNGateway: Bryophyte data for Great Britain from the British Bryological Society held by BRC		1991-01-01 - 2005-12-31	
Arvicola terrestris	Water Vole	terrestrial mammal	Eller Beck, Goathland [Eller Beck]	NZ80	neyedc.org.uk	Yorkshire water vole records (positive)	Unknown	1973	
Arvicola terrestris	Water Vole	terrestrial mammal	Eller Beck, Goathland	NZ80	neyedc.org.uk	Environment Agency crayfish/ water voles/ mussels	Unknown	1972	
Arvicola terrestris	Water Vole	terrestrial mammal	Darnholme	NZ80	neyedc.org.uk	Yorkshire water vole records (positive)	Unknown	1972	
Arvicola terrestris	Water Vole	terrestrial mammal	Eller Beck, Goathland	NZ80	neyedc.org.uk	Yorkshire water vole records (positive)	Unknown	1972	
Lutra lutra	Otter	terrestrial mammal	River Esk, Grosmont, d/s	NZ8205	neyedc.org.uk	Water for Wildlife Project	Brooks, Tim	09/06/2004 - 09/06/2004	
Lutra lutra	Otter	terrestrial mammal	River Esk, Ruswarp / Sleights	NZ80	neyedc.org.uk	Water for Wildlife Project	Unknown	27/09/2001 - 27/09/2001	
Lutra lutra	Otter	terrestrial mammal	River Esk, Egton	NZ80C	neyedc.org.uk	Water for Wildlife Project	Bone, Pc Chris	20/02/2001 - 20/02/2001	
Lutra lutra	European Otter	terrestrial mammal	River Esk	NZ838065	neyedc.org.uk	Otter records for North Yorkshire	Woodroffe, Gordon	02/04/1999 - 02/04/1999	
Lutra lutra	Otter	terrestrial mammal	River Esk, Dorsley Bankwood (release site), Grosmont	NZ837065	neyedc.org.uk	Water for Wildlife Project	Woodroffe, Gordon	01/06/1995 - 01/06/1995	
Lutra lutra	Otter	terrestrial mammal	River Esk, Park House, Duck Bridge, Danby [River Esk]	NZ80	neyedc.org.uk	Water for Wildlife Project	Volunteer (YOAT)	01/01/1986 - 01/01/1986	

NYMNP

18/10/2019

SPECIFICATION

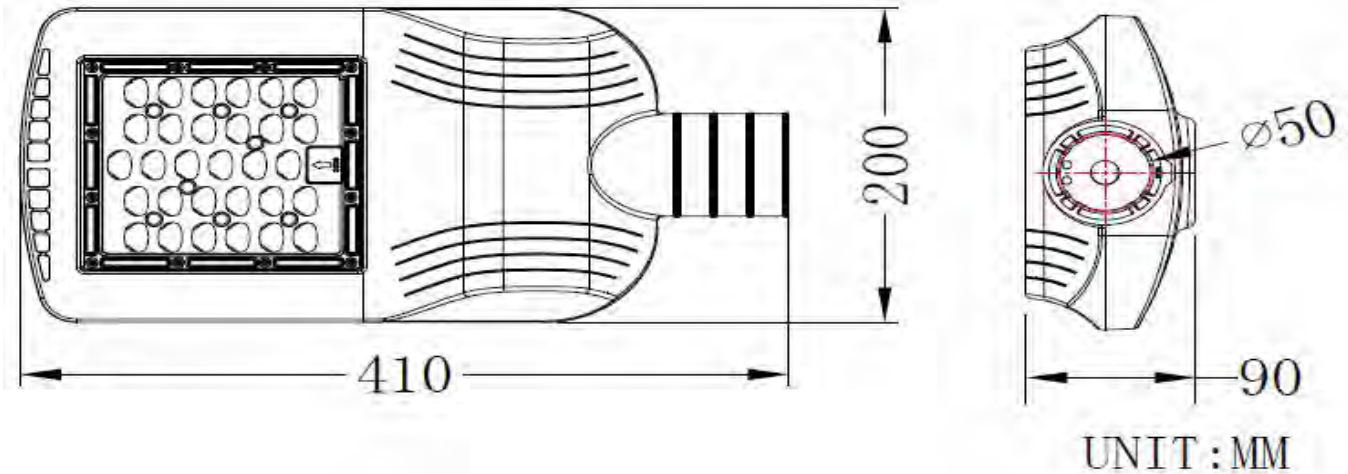


Product Name : LED Street Light

Part No: INUI-SE30W

Approval No : 20161020002

1. Outlook



2. Application

Suitable for the street lighting at highways, urban roads and secondary roads, stadiums, sidewalks, residential areas, industrial areas, squares, parks, schools, villas, gardens and other places.

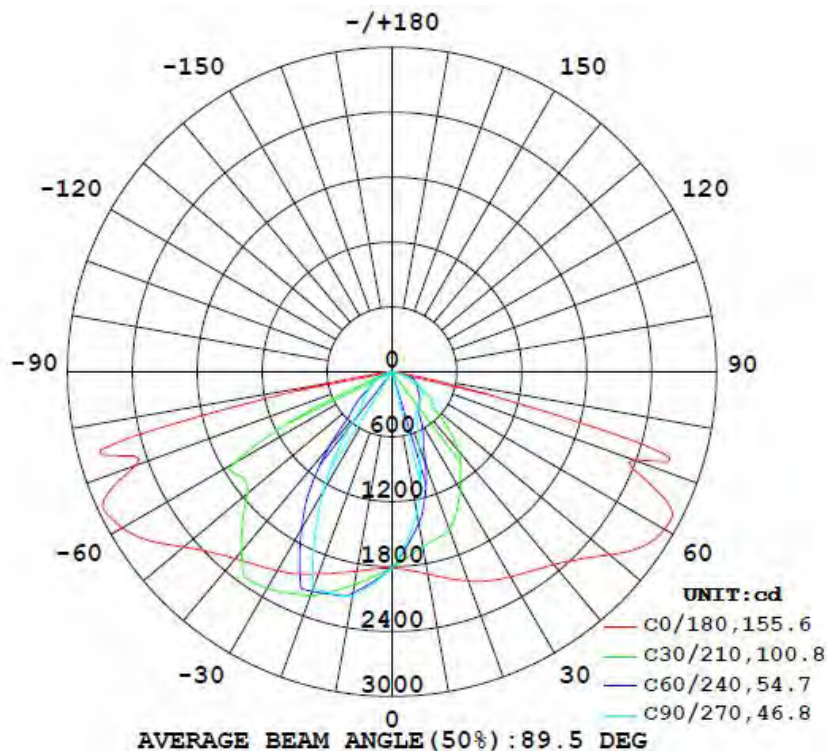
3. Features

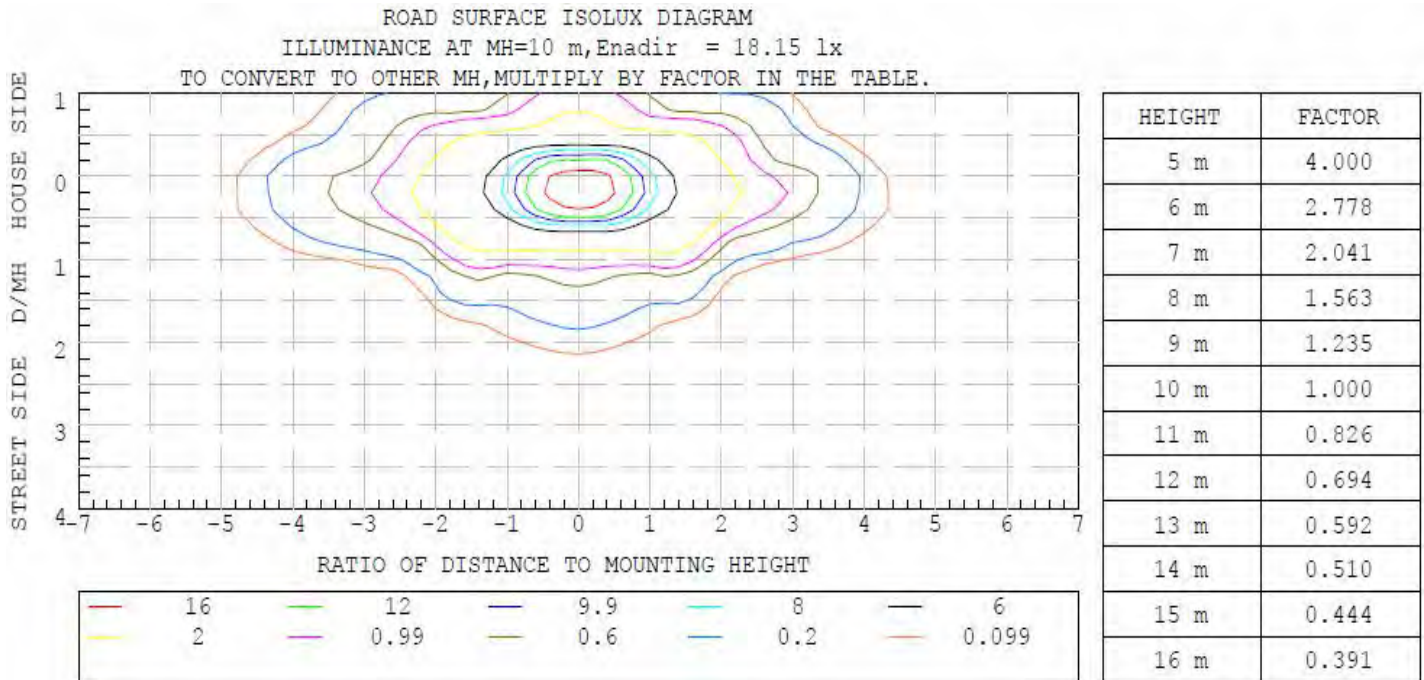
- | Absolutely unique mold, make your lighting special and fantastic.
- | Perfect Light Distribution Solution: Adoption of integrated shell optic lens, enhance the brightness and illumination uniformity.
- | Anti-glare and uniform light level to avoid any visual discomfort.
- | high quality power supply, input voltage 100-277V. The power efficiency is more than 90%, power factor greater than 0.98, UL compulsory certification.
- | Adopting LUXEON 3030 led light sources and INUI LED lens technology, 8% light efficiency higher than the same type lights in the market, with higher light transmittance up to 98%.
- | Duct type thermal design, reduce the weight of the light and ensure good heat dissipation, lower luminous decay, and also extend life span of the leds. Adopting the popular CHEM modular design, effectively reduce the following maintenance cost.
- | Low energy consumption, matching high efficiency constant-current driver, 60% energy saving; with good resistance to over-current, over-voltage, lightning, high temperature, which fully ensure long life span and high stability of the products.
- | Durable lights with long life span up to 50000 hours; No need frequent replacements of lights and regular maintenance.
- | Green environmental protection, no UV light and infrared radiation, no mercury pollution.
- | Nice appearance and non-fouling properties, Protection class IP66.
- | Work without strobe, fast transient response; A wide range of working voltage.

4. Specification

Part NO	INUI-SE20030CW	INUI-SE20030WW	INUI-SE20030NW
Parameter			
Inptut voltage	AC100V~240V 50/60HZ //		DC12-24V
System consumption(W)	30	30	30
Luminous flux(lm)	3750	3500	3600
Chip Brand	LUXEON 3030	LUXEON 3030	LUXEON 3030
Beam Angle	150*65 DEG	150*65 DEG	150*65 DEG
CRI	>80		
Colour Temperature	Warm white:2700-3200K / Neutral white:4000-4500K / Pure white:5000-6500K		
LED Driver	MEAN WELL HLG-40H		
Luminous efficiency(lm/w)	>110		
Lifespan(hrs)	>50000		
IP Rating	IP66		
Dimmable	YES&NO	YES&NO	YES&NO
Size(mm)	410x200x90	410x200x90	410x200x90
Net Weigh(kg)	2.8	2.8	2.8
Package Size(mm)	465*255*145	465*255*145	465*255*145
Package Quantity(Pcs)	1	1	1
Gross Weigh(kg)	3.3	3.3	3.3

5. Distribution Curve (30W)





6. Operation and Storage Condition

- I Operation Ambient Temperature -20 to +50°C, Relative Humidity 20~90%
- I Input Voltage 100~240V AC, 50/60Hz
- I Storage Ambient Temperature -20 to +60°C, Relative Humidity 5~95%
- I Mounting Height : Suitable for 4~8m height

7. Package

Inner box Size: 465mm×255mm×145mm

Outer box Size: 580mm×485mm×310mm (4 PCS LED Street Light)

8. Assembly and Installation

I Assembly-Electricity

1) AC100-240V

- Ø Blue : Neutral
- Ø Brown : Line
- Ø Yellow-Green : Ground



2) DC12-24V

- Ø Red : V+
- Ø Black:V-



9. Warning

- I Do Not Use Other Devices for LED Street Light ,Installation Such as Stabilizer, Regulator ...etc
- I Do Not Open the Light Engine
- I Do Not Soak the LED Street Light into Water
- I Do Not Light up the System Without Grounding