



Jack Pine Trees Ltd

ARBORICULTURAL IMPACT ASSESSMENT

Development: Installation of new anaerobic digester, power and water treatment plants.

Client:

Mr Jonathan Gagg, Easton Properties Ltd.

Site:

Easton Stores,
Burton Lane,
Easton,
Lincolnshire,
NG33 5AU.

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Summary

Jack Pine Trees Ltd were engaged by Mr Jonathan Gagg to carry out a preliminary arboricultural assessment for the proposed construction of a new anaerobic digester, power plant and water treatment plant at the Easton Stores site, Burton Lane, Easton, Lincolnshire, NG22 5AU, and provide a report to British Standard BS 5837:2012: Trees in relation to design, demolition and construction – Recommendations.

The report is to support the planning application Ref: PL/0022/24 submitted to Lincolnshire County Council and address the arboricultural issues raised in the Forestry Commission's consultation response.

The proposal continues the ongoing re-development of the Magnavale/Easton Stores food processing and distribution plant and adds to the approved planning applications S20/2048 and S24/0057. The proposed development is to install an anaerobic digester, power plant and redevelop the water treatment works in the north section of the site, which includes the spoil heap that was created when the old iron ore mine that was located on this site was decommissioned.

The iron ore mine and associated railway sidings fell into disuse in 1967, and became a food processing and distribution plant in the 1970's. The trees associated with this proposal are situated on the old railway line embankment, which runs along the west boundary, and the area between the disused railway and the base of the spoil heap which forms the woodland area identified on the Priority Habitat Inventory (PHI). There is mixed species regeneration on the slopes of the spoil heap, with an area of mature Hawthorn around the stream and water treatment works outflow in the northeast corner of the site. The remaining trees are mostly hedgerow or self-sown regeneration specimens situated internally on the site.

The linear canopy of ash regeneration along the old railway embankment are situated on the neighbouring property. The root protection area (RPA) for these trees extends onto the proposed development site, however, the construction of the access road for freight vehicles means it is unlikely that any damage will occur to the roots and the site boundary fence prevents impact with the stems of the trees. However, the trees are infected with Ash Dieback Disease (ADB) and pose a safety threat to the users of the access road and footpath. Remedial work will be required to prune the trees back to the boundary, and the owner should be informed of the risk that his trees pose to the users of the site.

The wet woodland, identified in the PHI, straddles the boundary between the development site and the neighbouring property, and comprises of a mature stand of hybrid Black poplars with White willow, Norway maple and Lime included in the woodland mix. This does not reflect the United Kingdom Biodiversity Action Plan (UK BAP) priority habitat description for a wet woodland, and it is more likely that these trees were planted to screen the spoil heap when the site was developed in the 1970's.

The Forestry Commission's (FC) consultation response also estimates that up to 0.15ha of the woodland will be lost to the proposed development. However, the Arboricultural Impact Assessment (AIA) drawing



appears to show that the development will only require the loss of approximately 2-4No. sycamore and remedial pruning to approximately 4No. hybrid Black poplars that are part of the woodland area.

The remaining woodland, the regenerating areas on the slopes of the spoil heap, the area of mature Hawthorn, with two mature/veteran Goat willows and a mix of self-sown ash and sycamore along the banks of the two streams, along with the veteran willow on the neighbouring property at the north boundary of the site, are situated beyond the extent of the proposed development.

The remaining hedgerow and self-sown groups of ash, sycamore, Goat willow and Elder within the site will be lost to the development. There is an over-mature ash with ADB on the boundary to the east of the water treatment plant that will require remedial pruning to reduce back limbs extending over the boundary, to retain it for its habitat value.

The above ground constraints relate mainly to creating a suitable clearance above the adjacent footpath, car park, access road and the construction zone, which are addressed by the crown lifting and lateral reduction of trees T8, T11, T12, T16, G18, part of G22 and T38.

The below ground constraints relate mainly to the demolition of the settling tanks and the creation of the new levels required construct the proposed anaerobic digester and power plant. This requires construction activity in the RPA of retained trees. However, the ground levels around T8 – 12 have already been altered to the required level through previous site activity, and the levelling work adjacent to G18 and G22 takes place above the level at which the trees are growing. It is possible that some roots could grow up the slope into the construction zone, but it is anticipated that this will be kept to a minimum by the buffer zone incorporated into the design.

All drainage and utility runs will be installed internally to the site and beyond any RPAs. Where required the foundations for the power plant and the supports for the pipe work will be constructed using pile and beam foundations.

It is recommended that the Tree Protection Fence (TPF) is constructed using Heras® fencing to create a Construction Exclusion Zone (CEZ) as shown in Appendix 4. This is to prevent any compaction of tree roots through footfall or storage of materials during the construction phase.

It is recommended that arboricultural supervision is required to inspect the installation prior to commencement, assess the integrity of the fence during the construction phase and inspect the tree condition prior to the removal of the fence at the completion of the project.

The site is not in a Conservation Area and does not have a Tree Preservation Order (TPO) associated with it. However, there is a PHI woodland identified on and adjacent to the northwest corner of the site.

Biodiversity gain for this project will be provided through the planting of native and pollinator friendly species in the area around the old settlement pools, and tree loss will be mitigated for through planting replacement trees on and off site. On site opportunities will be explored and agreed in greater detail in advance of construction which will determine the offsite contribution.

1.0 Introduction.

1.1 Background Information.

I was instructed by Mr Jonathan Gagg, verbally and in writing, to undertake a pre-development arboricultural impact assessment to BS5837:2012 for the trees at the Magnavale Easton Stores site, Burton Lane, Easton, Lincolnshire, NG33 5AU.

1.2 Scope of Survey.

- 1.2.1 Examine the principal trees associated with the site as highlighted on the supplied drawing.
- 1.2.2 Undertake a visual assessment of the condition of the trees.
- 1.2.3 Make recommendations for remedial work to enhance tree longevity and address any safety issues.
- 1.2.4 Estimate the potential future contribution that the trees may have to the site.
- 1.2.5 Provide nominal retention categories for trees regarding possible future development of the site.
- 1.2.6 Provide an assessment of the impact on the trees and an arboricultural method statement for the successful retention of the trees during the construction process.

1.3 Limitations.

- 1.3.1 No documented information has been provided at the time of inspection regarding the following:

Historical circumstances and background relating to past planting and management of trees on the site.

Historic details of past land use, including mining.

The location and condition of drains and service runs.

The nature of soils and load bearing strata.

- 1.3.2 On consultation with the Lincolnshire County Council and South Kesteven website, it was confirmed that the site is not in a Conservation Area and does not have a Tree Preservation Order associated with it.

- 1.3.3 There is an area of deciduous woodland shown on the PHI that extends along the northwest boundary and into the northwest corner of the site.
- 1.3.4 Condition notes and recommendations are restricted to arboricultural considerations associated with tree condition and safety.

1.4 Inspection Notes.

- 1.4.1 The site was inspected by Stephen Clark BSc. (Hons) Env. Sci., MICFor, MArborA on May 20th and 21st, 2024. Weather conditions were overcast with rain.
- 1.4.2 The survey was carried out commencing with the mixed group G1 and proceeded in a clockwise direction around the site, concluding with the group of Elder G47.
- 1.4.3 When assessing the trees, the following factors have been taken into consideration – species, maturity, structural condition, risk posed to people, roads and buildings in the event of failure, and likely response to remedial works.
- 1.4.4 The trees were inspected from ground level only and all measurements are approximate.
- 1.4.5 Age of trees has been divided into juvenile, semi-mature, early mature, fully mature and over mature.
- 1.4.6 A nominal retention value has also been given to the trees based on landscape contribution, health, maturity and life expectancy:-

A -	High:-	Prominent landscape trees of good form and health with good long-term life expectancy. Rare, historically and/or ecologically important specimens. Contribution of at least 40 years. (Shaded green on plan).
B -	Moderate:-	Mature trees of reasonable health and form but requiring remedial work. Tree groups with high collective value. Contribution of at least 20 years. (Shaded blue on plan).
C -	Low:-	Trees that may be safely retained (with or without remedial work), but of no particular merit. Trees with low life expectancy. Young trees that may be replaced. Contribution of at least 10 years. (Shaded grey on plan).
U -	Remove:-	Dead, decayed, dying or dangerous trees. Contribution less than 10 years. (Shaded red on plan).

2.0 The Site.

- 2.1 The site is situated at the Magnavale, Easton Stores site, Burton Lane, Easton, Lincolnshire, NG 33 5AU. It consists of an existing food processing and cold store industrial site with associated power production and water treatment works.
- 2.2 The project is to continue the redevelopment of the site by installing anaerobic digesters and associated power plant, along with the relocation and development of the wastewater treatment works.
- 2.3 The site was formerly the Easton Ironstone Mine between 1958 – 1967, which closed when the UK ironstone industry contracted. There are disused shafts that extend eastward under the adjacent fields, and the adjacent disused railway was part of the United Steel Sidings that connected to the Colsterworth Mines and the GN/LNER High Dyke branch of the rail network.
- 2.4 In the 1970's a local farming cooperative set up a factory on the site, which was taken over by McCains in 1982. The cold store burnt down in 2013 and Magnavale/Easton Properties bought the site in 2022.
- 2.5 The site is now being developed as an integrated cold chain facility through the approved planning applications S20/2048, S24/0057 and the current application.

3.0 The Trees.

- 3.1 The trees associated with the proposed development site comprise roughly of four main groups:
1. a linear canopy of ash *Fraxinus excelsior* regeneration along the old railway embankment with Hawthorn *Crataegus monogyna* and Goat willow *Salix caprea* understorey (these are predominantly on the neighbouring property).
 2. the wet woodland identified as a Priority Habitat Woodland, which comprises of a mature stand of hybrid Black poplars *Populus x canadensis* with White willow *Salix alba*, Norway maple *Acer platanoides* and Lime *Tilia sp.* included in the woodland mix (this woodland straddles the boundary between the development site and the neighbouring property).
 3. an area of mature Hawthorn *Crataegus monogyna*, with two mature/veteran Goat willows *Salix caprea* and a mix of self-sown ash *Fraxinus excelsior* and Sycamore *Acer pseudoplatanus* along the banks of the two streams, and,
 4. hedgerows and self-sown groups of ash *Fraxinus excelsior*, sycamore *Acer pseudoplatanus*, Goat willow *Salix caprea* and Elder *Sambucus nigra* at various points around the site.

There is also a veteran Willow *Salix alba* on the neighbouring property to the north boundary of the site and an over-mature ash *Fraxinus excelsior* with ADB on the boundary to the east of the water treatment plant.

- 3.2 The survey commences with the mixed group G1 (now felled) and proceeds in a clockwise direction around the property, concluding with the group of Elder *Sambucus nigra* G47. The survey also includes trees on neighbouring properties whose RPA extends onto the proposed development site.
- 3.3 Due to the established nature, linear, woodland and group canopies, many of the trees and groups have achieved the retention categories of 'A', 'B' due to their amenity value and condition. The remaining trees predominantly achieve the retention category of C1, with some trees categorised as 'U', as they are dead or dying.
- 3.4 The trees are not in a Conservation Area or protected by a Tree Preservation Order, but the area of wet woodland is shown in the Priority Habitat Inventory.

4.0 Discussion.

4.1 Context

- 4.1.1 This report is a revision of the preliminary arboricultural condition assessment and is written to British Standard 5837:2012 - Trees in relation to design, demolition and construction – Recommendations. At this stage it is intended to inform the construction process and identify the impact on the existing trees.

4.2 Above ground considerations

Effects of the development on or near the site

- 4.2.1 The proposed development requires the loss of G1 (approved in S20/2048), G13, G17, part of G18, part of G30, G31, G32, G33, G34, G35, T36, G37, G46, G47 & G48.
- 4.2.2 The proposal also impacts the trees T8, T11, T12 and part of G18 on and adjacent to the proposed development site.
- 4.2.3 Remedial pruning works will be required to G2, G3, T4, T5, G6, G7, T8, T10, T11, T12, G18, part of G22 and T38 to provide clearance above the access road and development site.

Pruning works to accommodate the development process.

- 4.2.4 The trees that require pre-commencement pruning are as follows:

- G13, G17, part of G30, G31, G32, G33, G34, G35, T36, G37, G46, G47 & G48 – Fell.
- G2, G3, T4, T5, G6, G7 – Crown lift and reduce lateral growth to provide 5m clearance above access road, footpath, car park and plant.
- T8, T10, T11, T12, G18, part of G22 – Crown lift and reduce lateral growth to provide approximately 7m above proposed development.
- T38 - Crown lift and reduce lateral limbs to approx. 3m above ground level to provide clearance above the TPF and the construction area.

4.2.5 The remaining trees on and adjacent to the site does not require additional remedial work to accommodate the development.

4.3 Below ground considerations.

4.3.1 The primary concern for the proposed development is the potential impact on the roots of the trees on and adjacent to the development site and the excavation required to facilitate the development.

4.3.2 At this stage, the final levels have not been agreed due to the complex nature of the site, the demolition of existing infrastructure and the excavation of the historic spoil heap.

4.3.3 The soil levels around the base of T8 – T12 have already been altered during historic alterations to the site, leaving a raised area of Limestone aggregate hard standing at roughly the same level of the concrete access road. It is assumed that this will be the working height during the demolition phase and ground protection will be installed to prevent any further root compaction. Once the demolition of the tanks has been completed, it is possible that some excavation of the Limestone aggregate may be required to achieve the final surface level for the proposed development, but this will be confirmed in due course.

4.3.4 From approximately G13 to the end of G18 and across the width of most of the site in the northern extension, excavation will be required for the demolition of the storage tanks and the water treatment works and then a regrading and levelling of this part of the site to achieve the working levels for the proposed development. The design has left a 10m buffer from the site boundaries, but this appears to impact the RPA of T16 and G18 slightly. However, there is a degree of uncertainty to the extent of the RPAs and the potential impact on them due to the steep nature of the spoil heap slope at this point. The RPAs have not been modified along this part of the boundary because it is not possible to state accurately how far up the slope and how far into the spoil heap the roots are likely to extend. At this point in the design process, it appears that the likely impact may be minimal, as the trees are either at the bottom of the slope, or towards the lower extent of the heap. The design shows that it is not intended to excavate all the way to the edge of the slope, but until the demolition details for the tanks have been confirmed, it is not possible to accurately determine whether the works will impact the RPA of these trees. It is the intention of the applicant to retain as many

trees as possible during this development, and for this reason two versions of the TPP have been submitted; one with the trees retained and a potentially minor impact on the RPA and one with the trees removed. Arboricultural supervision for this aspect of the development will be determined on the extent of the excavation required for the demolition process and whether it is possible to retain G18 for the construction phase of the development.

- 4.3.5 Details of any utility runs, and drainage schemes are not available, at this stage in the design process, but it is anticipated that they will be run internally and under the access roads to ensure that there is no further possibility of damaging the RPAs of the retained trees on this development.

4.4 Assessment of the Forestry Commission Consultation Response

- 4.4.1 The FC consultation response states that there are ‘concerns that the woodland adjacent to the site, along the railway embankment, that also extends into the northern part of the site, is a deciduous woodland on the Priority Habitat Inventory (PHI).’

- 4.4.2 “The deciduous woodland PHI is:

- A spatial dataset that describes the geographic extent of the Natural Environment and Rural Communities Act (2006) Section 41 habitats of importance.
- The PHI project began in 2012 and combines the existing Biodiversity Action Plan (BAP) habitat inventories into one national polygon layer.
- The standalone Deciduous Woodland Inventory has been extracted from Natural England’s Priority Habitats Inventory v2.1.
- The inventory replaces Natural England’s previous separate BAP habitat inventories.” (Natural England)

- 4.4.3 The UK BAP priority habitat descriptions for the priority habitats associated with the ‘Broadleaf, Mixed and Yew Woodland’ include:

- Traditional orchards
- Wood-Pasture and Parkland (updated 2011)
- Upland oakwood
- Lowland Beech and Yew Woodland
- Upland Mixed Ash woods
- Wet Woodland
- Lowland Mixed Deciduous Woodland
- Upland Birch woods

- 4.4.4 Of these habitats, the Easton site could only fit either the Wet Woodland or the Lowland Mixed Deciduous Woodland. However, the species mix, and management regime does not match the requirements for a Lowland Mixed Deciduous Woodland and as the majority of

the woodland area is waterlogged, it is concluded that the classification should be considered as a Wet Woodland.

4.4.5 “The definition of this (Wet Woodland) habitat remains unchanged from the pre-existing Habitat Action Plan - <https://webarchive.nationalarchives.gov.uk/ukgwa/20110303150131/http://www.ukbap.org.uk/UKPlans.aspx?ID=4> “ (JNCC) In this definition, the species make-up of the woodland is predominantly Willow, Birch or Alder, of which on the Easton site, there are only a few dead or senescent Willows present. The overall species mix is predominantly hybrid Black poplar with some Lime and Norway maple also present. Outside of the boundary shown on the map the predominant species are ash and sycamore associated with the railway embankment or the old spoil heap. It would therefore appear that while there is an area of deciduous woodland on and adjacent to the site, it is more likely that this originated from screen planting for the spoil heap and self-sown regeneration associated with railway and the unplanted areas of the spoil heap, rather than a PHI Wet Woodland.

4.4.6 The FC consultation response also estimates that approximately 0.15ha of the woodland will be lost to the proposed development. However, the AIA drawing appears to show that the development will only require the loss of approximately 3No. sycamore and remedial pruning to approximately 4No. hybrid Black poplars that are part of the woodland area.

4.5 Access

4.5.1 Access to the development site is from Burton Lane, via the existing access road.

4.6 Construction phase considerations.

4.6.1 A detailed Arboricultural Method Statement (AMS) will be required to demonstrate how the demolition, excavation, grading and construction phases of this project will be carried out while enabling the successful retention of the retained trees. The AMS should include the following considerations:

4.6.2 The felling and remedial tree work should be agreed and carried out before the commencement of the project.

4.6.3 Once the trees have been removed and pruned the demolition work and regrading of the site can take place prior to the TPF being installed. It is recommended that arboricultural supervision will be required to monitor the grading works adjacent to the west boundary and prune any tree roots that might be exposed.

4.6.4 The TPF should then be installed as a run of Heras® fencing which will provide physical protection to the retained trees from movement of the contractors and the storage of materials during the construction process and create a CEZ.

4.6.6 It is recommended that arboricultural supervision will be required to check that the TPF is installed accurately and to monitor the integrity of the TPF, supervise the pre-commencement tree work, monitor the grading works adjacent to the west

boundary and prune any tree roots that might be exposed, and monitor the removal of the TPF on completion of the project. It is recommended that the following programme of arboricultural supervision is implemented:

- Agreement and monitoring of pre-commencement tree works.
- Agreement and monitoring of the grading works and tree root pruning if required.
- Agreement and monitoring of the installation of the TPF.
- Monitoring of TPF – during the construction phase.
- Removal of TPF after the construction phase is completed.

The arboricultural supervision will be documented by providing the LPA with a certificate of compliance and any necessary photographic evidence within 72 hours of each visit.

- 4.6.7 The location of any storage, burning or mixing areas should be indicated on the site plan. It should be noted that these activities are potentially hazardous to trees. It is essential that all activities are carried out in such a manner as to prevent damage or spillage within the RPA.

4.7 Landscape design and biodiversity gain

- 4.7.1 The mitigation for the loss of G13, G17, part of G30, G31, G32, G33, G34, G35, T36, G37, G46, G47 & G48 and the provision of biodiversity gain in relation to this development should be provided for by planting trees and nectar rich species both on and off site. On site opportunities will be explored and agreed in greater detail in advance of construction which will then determine the extent of the offsite provision.

5.0 Conclusions

- 5.1 The trees associated with this property mainly achieve the retention values of ‘A2’, ‘B2’ and ‘C2’, as shown on drawing 240704-ESL-TCP-SD. The proposed development at Easton Stores, Burton Lane, Easton NG33 5AU is to construct an anaerobic digester, power plant and new water treatment works as part of the continued redevelopment of the site.
- 5.2 The development of the site should be guided by a detailed AMS that is created when the commencement date and the phasing of the construction has been agreed with the LPA.
- 5.3 Prior to the commencement of the project the trees G2, G3, T4, T5, G6, G7 will require crown lifting and reduce lateral growth to provide 5m clearance above access road. T8, T10, T11, T12, G18 and part of G22 will require crown lifting and the reduction of lateral growth to provide approximately 7m above proposed development. T38 will also need to be crown lifted and lateral limbs reduced to provide clearance above the TPF and the construction area.

The recommended remedial work will address the above ground constraints for this project. Trees G13, G17, part of G30, G31, G32, G33, G34, G35, T36, G37, G46, G47 & G48 will be lost to the development.

- 5.4 The TPF should be installed as run of Heras® fencing supported on suitably robust framework, to create a CEZ, and ground protection mats should also be installed to protect the RPA as shown on drawing 240704-ESL-TPP-SD. The tree protection measures will address the below ground constraints on this project.
- 5.5 A programme of arboricultural supervision will be implemented to provide the LPA with details of the successful completion of pre-commencement tree works, TPF integrity during the construction phase and prior to the removal of the TPF at the conclusion of the project.
- 5.6 Mitigation for tree loss and biodiversity gain associated with the proposed development will be achieved by planting trees and pollinator supporting species both on and offsite. On site opportunities will be explored in greater detail prior to construction, which will in turn determine the extent of the offsite requirement. It is recommended that this is achieved by conditioning a suitably robust landscape scheme.
- 5.7 The principle causes of damage to trees during development works are from root severance, compaction and changes in soil levels. It is therefore essential that all works on this site seek to keep the impact on the retained trees to a minimum.
- 5.8 The majority of a tree's roots occur in the top 600mm of soil and can extend considerably further than the edge of the canopy. Guidance should be taken from BS5837:2012 'Trees in relation to design, demolition and construction - Recommendations'.
- 5.9 All tree work should be undertaken prior to the development, conform to BS3998:2010 'Recommendations for Tree Work', and be carried out by a recognised contractor.



References

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Mattheck, C. & Breloer, H. (1994) *The Body Language of Trees: A Handbook for Failure Analysis: No. 4 (Research for Amenity Trees)*. HMSO.

British Standards Institute, (2012) *BS 5837:2012 Trees in Relation to Design, Demolition and Construction - Recommendations*. London.

British Standards Institute, (2010). *BS 3998: 2010 Tree Work - Recommendations*. London.



Appendix 1

Tree Survey Results

Easton Stores,

Burton Lane,

Easton,

Lincolnshire,

NG33 5AU.

No.	Species	Height (m)	Stem Ø (mm)	RPA Radius (m)	RPA (m ²)	W E S N	CC	MA	Structure	Vitality	Structural Condition/Site Notes	Recommendations	ULE (Years)	Category
G1	Mixed group	-	-				-	-	-	-	This group references T1 - T81 in report for application S20/2048. Trees felled.	No action	-	-
G2	Ash <i>Fraxinus excelsior</i>	13	350	4.2	-	5 8 6 8	4.5 S	EM	P	P	This group references G2 shown in application S20/2048. Linear canopy of Ash on embankment above defunct railway bed. RPA does not extend onto proposed development site. Ash Dieback present. Major dead wood - some trees a threat to site users.	Prune back to boundary (Fell)	<10	C3-U
G3	Goat Willow/Ash/ Hawthorn	15	350	6.0	-	0 0 8 3	1.6 E	EM	P	P	This group is the same as G3 shown in application S20/2048. Average DBH 350 (Goat Willow - 138, 120, 90, 80. Ash - 384 (2m from fence) 409). Hawthorn understorey. Some trees very poor condition - risk to users of path and road.	Fell dead and dying Ash	<10	U
T4	Ash <i>Fraxinus excelsior</i>	16	225 295 303 159 243	6.74	142.64	10 8 8 8	1.6 E	EM	P	P	Multi-stem coppice from base. Asymmetry northeast over smokers shed. Crossing and rubbing limbs. Ash Dieback. Major dead wood.	Fell	<10	U

No.	Species	Height (m)	Stem Ø (mm)	RPA Radius (m)	RPA (m ²)	N S E W	CC	MA	Vitality	Structure	Structural Condition/Site Notes	Recommendations	ULE (Years)	Category
T5	Ash <i>Fraxinus excelsior</i>	13	307 153 292	5.33	89.2	10 9 7 8	1.8 E	EM	P	P	Immediately adjacent to boundary fence. Overhangs car park. Advanced Ash Dieback.	Fell	<10	U
G6	Ash/Hawthorn	12	Av 271	4.67	-	0 0 8 8	0.2 E	EM	P	P	Most Ash coppice regrowth on opposite of railway embankment 3-4m from boundary fence. Hawthorn under storey. Advanced Ash Dieback in some trees. Ash - 320,222. Most trees below ground level of site. Dead tree over car park, BT wire and light.	Fell - urgent		C3- U
G7	Ash/Hawthorn	16	Av 345	5.86	-	0 0 7 9	1.8 E	EM	P	P	Multi-stem coppice regeneration. Most trees below site level. Advanced Ash Dieback. Rookery. Dead wood.	Fell - urgent	<10	U
T8	Poplar <i>Populus x canadensis</i>	20	564 680	10.6	352.81	7 10 9 5	1 E	MA	F-P	F-P	Soil levels increased on east aspect with path and kerb and fence installed adjacent to base. Twin stem from base. Broad spreading canopy with asymmetry to east. Evidence of shed limbs on south stem and past pruning wounds. Major dead wood.	Crown lift 2m above site	>20	B1

No.	Species	Height (m)	Stem Ø (mm)	RPA Radius (m)	RPA (m ²)	SEW	CC	MA	Vitality	Structure	Structural Condition/Site Notes	Recommendations	ULE (Years)	Category
T9	Hawthorn <i>Crataegus monogyna</i>	5	160 140	2.55	20.42	0 4 5 1	0.4 N	MA	F-P	F-P	Suppressed with lean and asymmetry to southeast.	No action	>20	C1
T10	Ash <i>Fraxinus excelsior</i>	14	301 254	4.66	68.19	4 12 8 3	2.5 S	MA	P	P	Lean and asymmetry southeast. Tight fork on south stem 3.5-5m. Ash Dieback.	Fell	<10	C1
T11	Sycamore <i>Acer pseudoplatanus</i>	14	289 294 245	5.72	102.74	4 8 8 6	1 E	EM	F-P	F-P	Suppressed with lean and asymmetry to southeast.	Crown lift 5m	>20	C1

No.	Species	Height (m)	Stem Ø (mm)	RPA Radius (m)	RPA (m ²)	W E S N	CC	MA	Vitality	Structure	Structural Condition/Site Notes	Recommendations	ULE (Years)	Category
T12	Poplar <i>Populus x canadensis</i>	20	1137	13.64	584.2	11 11 14 8	0.2 E	MA	F	F	Soil levels increased by approx.1m at base of east aspect. Forks at approx.2m to give full crown with asymmetry to east. Epicormic growth at base. Reduced vitality. Shed limb. Dead wood. Ash to north. Ash Dieback.	Crown lift over site Clear debris at base Fell Ash to west	>20	B1
G13	Elder <i>Sambucus nigra</i>	6	Av 200	5.88	108.56	0 0 0 0	0 E	MA	F	F	Multi-stem group - as shown. Suppressed with asymmetry to east. Soil levels built up around base. Dead stems. Woodland group to west.	No action	>10	C2
G14	Ash/Elder/ Hawthorn/Sycamore	18	300	3.6	-	0 0 0 0	0.5 E	MA	F	F	Woodland group as shown. Semi-mature Ash. Over mature Hawthorn. Below site - no impact on RPA. Crowns overhang site - Ash Dieback - advanced.	Fell Ash	<10	C3
T15	Sycamore <i>Acer pseudoplatanus</i>	18	368 232	5.22	85.56	6 8 10 5	1.2 E	EM	F	F	Fork at approx.1m - twin stem. Lean and asymmetry southeast. Overhangs site.	Crown lift 5m for clearance	>20	C1

No.	Species	Height (m)	Stem Ø (mm)	RPA Radius (m)	RPA (m ²)	W E S N	CC	MA	Vitality	Structure	Structural Condition/Site Notes	Recommendations	ULE (Years)	Category
T16	Poplar <i>Populus x canadensis</i>	22	950	11.4	408.07	12 12 20 5	0.5 S	MA	F	F	Fork at approx.1-1.2m. Secondary stem extends east over site. Elevated soil levels east aspect open crown. Dead wood. Reduced vitality.	Crown lift 7m over site	>20	B1
G17	Elder/Blackthorn	19	150	3.82	-	0 0 0 0	0.5 E	EM	P	P	On boundary as shown.	No action	>10	C3
G18	Sycamore <i>Acer pseudoplatanus</i>	18	AV 558	6.43	129.82	0 0 0 0	1 S	MA	F	F	Group straddles boundary at base of slope. Lean and asymmetry to east. Low crowns touching slope.	Crown lift/prune from site as required	>40	B3
	Poplar <i>Populus x canadensis</i>	25	# 859	10.31	333.77	15 8 16 5	1 S	MA	F	F	Part of group canopy. Asymmetry. Dead wood.	No action	>40	B1
G19	Ash <i>Fraxinus excelsior</i>	19	# 300	8.82	244.27	0 0 0 0	0.5 E	EM	P	P	Group as shown. Ash Dieback present. Group at base of slope below ponds.	Fell	<10	U

No.	Species	Height (m)	Stem Ø (mm)	RPA Radius (m)	RPA (m ²)	SEW	CC	MA	Vitality	Structure	Structural Condition/Site Notes	Recommendations	ULE (Years)	Category
G20	Ash/Hawthorn	15	# 400	11.76	-	0 0 0 0	1 W	SM	F-P	F-P	Multi-stem from base - tight fork. Low congested crown. Squirrel damage.	No action	>10	C1
T21	Sycamore <i>Acer pseudoplatanus</i>	13	184 191 213	4.08	52.27	3 5 4 5	1 W	MA	F	F	Woodland group - as shown. Priority Habitat Woodland. Most trees below level of fence and 6-16m below level of mound. (Final soil levels need to be agreed and tree positions plotted accurately but majority of woodland not impacted - estimate loss of 2 x Sycamore and 4 x Poplar require pruning.)	Crown lift over site after final levels and extent of excavation agreed	>40	A3- B3
G22	Poplar/Sycamore/Ash	25	# 850	15.00	-	0 0 0 0	0.5 N	FM	F-P	F-P	Multi-stem - asymmetry north. Past shed limbs. Major dead wood. Reduction in vitality.	No action	>20	A3
T23	Willow <i>Salix alba</i>	23	2450	15.00	706.5	15 3 16 15	1 W	SM	F-P	F-P	Multi-stem from base - tight fork. Low congested crown. Squirrel damage.	No action	>10	C1

No.	Species	Height (m)	Stem Ø (mm)	RPA Radius (m)	RPA (m ²)	SEZ W	CC	MA	Vitality	Structure	Structural Condition/Site Notes	Recommendations	ULE (Years)	Category
T24	Poplar <i>Populus x canadensis</i>	28	859	10.31	333.77	10 6 13 5	1.5 E	MA	F	F	Part of group canopy. Asymmetry east.	No action	>20	B3
G25	Sycamore/Ash/ Hawthorn	14	# 250	5.88	-	0 0 0 0	0.3 N	MA	F-P	F-P	Mature Sycamore and self-sown scrub form group around on northeast slope of mound. Squirrel damage. Ash Dieback. Dead wood.	No action	>20	C3
G26	Hawthorn/Ash/Elder	6	up to 250	7.35	-	0 0 0 0	0.5 N	MA	F-P	F-P	Hawthorn thicket that extends up either side of water courses and includes hedge on northeast boundary. Combines with G25 and extends up to group of trees to north of water treatment works.	No action Check for Ash Dieback July 2025	>20	C3
G27	Sycamore/Elder/Hawthorn	6	up to 200	5.88	-	0 0 0 0	0.5 N	JU- MA	F-P	F-P	Area of sparse scrub as shown. Squirrel damage.	No action	>10	C3- U

No.	Species	Height (m)	Stem Ø (mm)	RPA Radius (m)	RPA (m ²)	SEW	CC	MA	Vitality	Structure	Structural Condition/Site Notes	Recommendations	ULE (Years)	Category
T28	Goat Willow <i>Salix caprea</i>	8	400 400 300 250 200	8.4	221.56	10 12 10 3	0 E	OM	P	P	Growing in bank of stream. Multiple stems collapsed over stream. <i>Ganoderma sp.</i> fruiting bodies at base of most stems. Split stem northeast. Hazard beam southeast.	No action Clear stream bed	<10	U
T29	Goat Willow <i>Salix caprea</i>	12	500 350 300 200 250	9.41	278.04	8 10 12 10	8 W	OM	F-P	F-P	Possible veteran tree. Growing in west bank with stems collapsed and touching floor/bank on east and west sides - layering. Reduced vitality. Dead wood.	No action	>20	C3-A3
G30	Ash/Hawthorn/Sycamore	9	# 250	7.35	-	0 0 0 0	1 E	EM	F-P	F-P	Advanced Ash Dieback in some of Ash.	Fell Ash Fell squirrel damaged Sycamore	>20	C3-U
G31	Hawthorn/Ash/ Sycamore	6	# 200	5.88	-	0 0 0 0	0 W	MA	F-P	F-P	Established Hawthorn with self sown scrub. Scrub lost to development. Ash Dieback.	Fell Ash	>20	C3
T32	Sycamore <i>Acer pseudoplatanus</i>	13	# 250	3.0	28.26	5 6 5 5	0.5 S	EM	F	F	Multi-stem species. On bank above stream.	No action	>40	C1

No.	Species	Height (m)	Stem Ø (mm)	RPA Radius (m)	RPA (m ²)	SEW	CC	MA	Vitality	Structure	Structural Condition/Site Notes	Recommendations	ULE (Years)	Category
G33	Ash <i>Fraxinus excelsior</i>	8	# 300	8.82	-	0 0 0 0	0 W	SM	P	P	Group as shown. Ash Dieback.	Fell	<10	U
G34	Hawthorn <i>Crataegus monogyna</i>	5	# 200	5.88	-	0 0 0 0	0.5 E	SM	F-P	F-P	Group as shown on bank above water treatment area.	No action	>10	C2
G35	Ash <i>Fraxinus excelsior</i>	6	# 158	4.64	-	0 0 0 0	1 E	SM	P	P	Group as shown.	Fell	<10	U
T36	Sycamore <i>Acer pseudoplatanus</i>	5	# 150	1.8	10.17	3 2 2 3	0 W	SM	F	G	Growing in bank of stream.	No action	>40	C1
G37	Goat Willow <i>Salix caprea</i>	6	AV 80	2.35	-	3 4 4 4	1 E	SM	F-P	F	Multi-stem. No access due to bramble.	No action	>20	C2

No.	Species	Height (m)	Stem Ø (mm)	RPA Radius (m)	RPA (m ²)	W E S N	CC	MA	Vitality	Structure	Structural Condition/Site Notes	Recommendations	ULE (Years)	Category
T38	Ash <i>Fraxinus excelsior</i>	13	# 510	7.08	157.4	4 9 10 8	1.8 S	MA	P	P	On neighbouring land. Ash Dieback Disease present. Shed major crown stem. Cavities - bats. Poor vitality/leaf size. Dead wood.	Prune for retention	<10	U
G39	Ash <i>Fraxinus excelsior</i>	5	AV 120	3.53	-	0 0 0 0	1 S	SM	P	P	Multiple self sown Ash form group on either side of boundary as shown. Ash Dieback present.	No action	<10	U
G40	Ash <i>Fraxinus excelsior</i>	5	AV 110	3.23	-	0 0 0 0	1 W	SM	P	P	Multiple self sown Ash as shown. Ash Dieback present.	No action	<10	U
G41	Ash/Blackthorn	6	# 140	4.12	-	0 0 0 0	1 W	SM	F-P	P	Hedge remnant as shown. Ash Dieback present.	No action	>10	C1
G42	Elder/Ash	3.5	AV 80	2.35	-	0 0 0 0	0.5 E	SM	F-P	F-P	Group of bank - no access due to bramble.	No action	>10	C2

No.	Species	Height (m)	Stem Ø (mm)	RPA Radius (m)	RPA (m ²)	W E S Z	CC	MA	Vitality	Structure	Structural Condition/Site Notes	Recommendations	ULE (Years)	Category
G43	Elder <i>Sambucus nigra</i>	3.5	AV 100	2.94	-	0 0 0 0	0.5 N	SM	F-P	F-P	Group of bank - no access due to bramble.	No action	>10	C1
G44	Elder/Goat Willow	4.5	AV 80	2.35	-	0 0 0 0	1 S	SM	F-P	F-P	Group as shown. Goat Willow showing reduced vitality.	No action	>10	C2
G45	Goat Willow <i>Salix caprea</i>	3.5	AV 80	2.35	-	0 0 0 0	1 S	SM	F	F	As shown.	No action	>10	C1
G46	Elder <i>Sambucus nigra</i>	3	AV 100	2.94	-	0 0 0 0	1 N	SM	F	F	As shown. No access.	No action		C2
G47	Elder <i>Sambucus nigra</i>	3.5	AV 160	2.94	-	0 0 0 0	1 S	SM	F	F	As shown. No access.	No action		C2

No.	Species	Height (m)	Stem Ø (mm)	RPA Radius (m)	RPA (m ²)	W E S Z	CC	MA	Vitality	Structure	Structural Condition/Site Notes	Recommendations	ULE (Years)	Category
G48	Elder <i>Sambucus nigra</i>	3.5	AV 100	2.94	-	0 0 0 0	1 E	SM	F	F	As shown. No access.	No action		C2

Key:

Survey data:

HT:	Height in metres.
Stem Diameter:	Diameter in millimetres of stem at 1.5m above adjacent ground level.
#	Approximate measurement of DBH.
Av.	Average measurement of DBH for multi-stem specimen.
RPA	Root Protection Area
(RPA) radius:	Radius of root protection area from stem.
RPA (m ²)	Root protection area in metres squared.
Spread:	Crown spread measured in metres as radius from stem to North, South, East and West.
CC:	Height in metres of crown clearance above adjacent ground level and direction of lowest limb.
Life stage:	JU = Juvenile SM = Semi Mature EM = Early Mature MA = Fully Mature OM = Over Mature
P:	Physiological Condition: G = Good F = Fair P = Poor
V:	Vitality: G = Good F = Fair P = Poor
ULE	Estimated useful contribution (Years):
Category:	BS5837:2012 Retention Category - U = Remove. A = High quality and value. B = Moderate quality and value. C = Low quality and value.
Subcategories -	1 = Mainly arboricultural values. 2 = Mainly landscape values. 3 = Mainly cultural values including conservation.

Tree work recommendations:

Formative prune -	Remove major dead wood, damaged, crossing and rubbing limbs.
Crown thin -	Selective removal of a percentage of laterals evenly throughout canopy whilst maintaining overall size and shape of crown.
Crown reduction -	Overall reduction of height and spread whilst retaining natural form of tree.
Crown lift -	Remove and/or prune low branches to raise crown described height above ground level.

Table 1 Cascade chart for tree quality assessment

Category and definition	Criteria (including subcategories where appropriate)			Identification on plan
Trees unsuitable for retention (see Note)				
Category U Those 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	<ul style="list-style-type: none"> 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 category U trees (e.g. 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, or very low quality trees suppressing adjacent trees of better quality <p><i>NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve; see 4.5.7.</i></p>			See Table 2
	1 Mainly arboricultural qualities	2 Mainly landscape qualities	3 Mainly cultural values, including conservation	
Trees to be considered for retention				
Category A Trees of high quality with an estimated remaining life expectancy of at least 40 years	Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue)	Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)	See Table 2
Category B Trees of moderate quality with an estimated remaining life expectancy of at least 20 years	Trees that might be included in category A, but are downgraded because of impaired condition (e.g. presence of significant though remediable defects, including unsympathetic past management and storm damage), such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category A designation	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	Trees with material conservation or other cultural value	See Table 2
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 150 mm	Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories	Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value; and/or trees offering low or only temporary/transient landscape benefits	Trees with no material conservation or other cultural value	See Table 2



Appendix 2

Tree Constraints Plan

Easton Stores,
Burton Lane,
Easton,
Lincolnshire,
NG33 5AU.

Drawing number: 240704-ESL-TCP-SD



Appendix 3

Arboricultural Impact Assessment Drawing

Easton Stores,

Burton Lane,

Easton,

Lincolnshire,

NG33 5AU.

Drawing number: 240704-ESL-AIA-SD



Appendix 4

Tree Protection Plan

Easton Stores,

Burton Lane,

Easton,

Lincolnshire,

NG33 5AU.

Drawing number: 240704-ESL-TPP-SD

Appendix 6

Details of Tree Protection Fencing

Default specification for protective barrier.

