Ryland Consultant Arborists

25th January 2024.

Your Ref: Our Ref: **QO/10699.T. Rpt.**

Mr P.Roberts
Currie & Brown
Sixth Floor
Minerva House
29 East Parade
Leeds
LS1 5PS
0113 244 2069
07887 655 183
peter.roberts@curriebrown.com

Please find below tree report undertaken at the YMCA Barnsley, Car Park, 1 Blucher Street, Barnsley, S70 1AP as requested……

Clients Brief: Inspect the trees on the above site and provide an arboricultural report to comment on the general condition in accordance with BS 5837:2012. Recommend remedial actions.

Client: Currie & Brown.

The tree locations are show on the attached site plan.

Any tree works undertaken should be to a high standard, the minimum of which is the current B.S. 3998:2010 for Tree Works. All works are to be in accordance with 1 & 99 of the Wildlife & Countryside Act 1981, where it is an offence to intentionally damage or destroy any birds nest whilst it is being built or to deliberately damage or destroy a bat roost.

The Local Authority should be contacted before any works are undertaken on the trees to confirm that the proposed works are acceptable if subject to Tree Preservation Orders or within a Conservation Area.

Arboricultural Report and Condition Risk Assessment.

Versions:
Current Version: No.1. 10699.T. 25/01/2024

Ryland Consultant Arborists
Rylands
159 Longridge Lane
Upper Poppleton
York.
Y026 6HA.

Tel: 01904 799032.

E-Mail: rylands@rylandhorticulture.co.uk

The Arboricultural Association Approved Contractor scheme is ISO approved.

Contents **Page Number**

Appendices

1. Introduction

1.1 Ryland Consultant Arborists have been instructed by Peter Roberts of Currie & Brown, to undertake an arboricultural survey of the specific tree stock situated at the Barnsley YMCA and provide a written report in line with BS 5837:2012.

- The report is based on the current guidelines for dealing with Risk Assessment for Trees near Buildings and Tree Hazard Recognition and Management as recognised by the Arboricultural Association, the Royal Forestry Society and the International Society of Arboriculture (Fay *et al,* 2009; Lonsdale, 1999; Matheny and Clark, 1994).

- The report includes:

  i. Assessment of the health, condition and safety of the trees indicated.

  ii. Recommendations on the immediate and future management of the trees, based on our assessment and these guidelines (Harris *et al,* 2003). Site inspections undertaken by a person qualified and experienced in Arboriculture and trained in the application and interpretation tree risk assessment (Appendix 1) (Mattheck, 2007; Mattheck, 2004; Mattheck and Breloer, 1994).

  iii. In accordance with the clients request, the tree survey has been undertaken in accordance with BS 5837: 2012, *Trees in relation to design, demolition and construction- Recommendations*.

- Trees & shrubs are living organisms whose health and condition can change rapidly. The health, condition and safety of trees should be checked on a regular basis, preferably at least once a year (ideally twice a year once in leaf and once out of leaf) The conclusions and recommendations within this report are valid for a period of 2 years (25/01/24 to 25/01/26). These periods of validity may be reduced in the case of any change in conditions in the proximity to the trees or buildings.

2. Location & Overview.

2.1 Located within the centre of the town of Barnsley, the site takes the form of existing buildings with an area of grass and trees to the west adjacent to the A628 Westway. (Levelling Up and Regeneration, 2022; Ministry of Housing, Communities & Local Government , 2021; RIBA Sustainable Outcomes Guide ,2019)**.**

2.2 The three Sycamores and single Ash tree form a small group within the corner of the site. There is some understory scrub consisting of Elder and the like. (Natural England, 2023). The trees in question add a block of green to an otherwise hard urban landscape (Environment Improvement Plan, 2023).

3. Information of Others.

3.1 Site location plans and initial re-development proposals have been supplied to us by Currie & Brown.

4. Status of the Trees.

4.1 It is not known if the trees are under any legal protection. The Local Authority should be contacted before any works are undertaken on the trees, to obtain any necessary permission.

5. Method of Inspection.

5.1 The inspection was carried out at ground level using a visual tree assessment of the trees canopy, stem and rooting area.

6. Weather Conditions.

6.1 The weather was mild at the time of the inspection during January, 2024.

7. Additional Information.

7.1 None.
For an explanation of the terminology used within the report reference should be made to section No. 14 Special Definitions.

7.2 No soil samples taken and no trial pits required.

8. Tree survey notes and codes used within the report.

The attached survey has been undertaken within the guidelines set out by current good arboricultural practice and as detailed within the National Tree Safety Group publication *Common Sense Risk Management of Trees* , 2011).

The trees have been plotted on the attached site plan to show their locations.
The trees have been tagged on site with a black plastic tree tag, bearing the name **RYLAND** plus a tag number and are easily visible.
Height dimensions have been estimated and given in metres.
Trunk diameters have been estimated at breast height (1.5m above ground level) and given in millimetres.
Crown spreads have been estimated at cardinal points and given in metres.

The assessment of a trees age classification is made in terms of its specific maturity in the landscape, taking into account its overall shape and form within that setting (Helliwell, 2004).

Age groups are indicated as:
- NP = Newly planted.
- Y = Young.
- SM = Semi-mature.
- EM = Early mature.
- M = Mature.
- OM = Over mature.

Tree Assessment and Category Classifications:
The species and condition of the trees included in the survey, has been assessed by a person qualified and experienced in arboriculture. In making the assessment particular consideration has been given to:

- The height, circumference/diameter and crown spread of the tree.
- The health, age, vigour and condition of the tree.
- Structural defects in the tree; if any, and its life expectancy.
- The location of the tree relative to existing site conditions and surrounding features.
- The landscape or environmental value of individual trees and groups of trees.

On the basis of assessment, the tree is classified into one of the following categories in the survey list.

GOOD– A tree in prime condition, whose retention is most desirable and reasonable.

FAIR– A tree in moderate condition whose retention is desirable and reasonable. Some surgery works may be required.

POOR–A tree which is below average condition and whose removal is desirable. To include a dead, dying, diseased and dangerous tree. To include a tree which is a poor shape and beyond corrective tree surgery or pruning.

Clients are reminded that the above assessment is not intended as a schedule or specification of work to be undertaken. It is however a qualified report on the condition of the tree inspected and a guide to works that may be undertaken by a prudent owner or developer (Pirone, 2000; Read, 1999).

9. Tree details. General assessments.

BS5837:2012 Tree Survey

Client: Mr Peter Roberts
Project: YMCA Barnsley 10699.Rpt
Survey Date: 25/01/2024
Surveyor: David Gregory

Ryland Horticulture Ltd
159 Long Ridge Lane
Upper Poppleton
York
North Yorkshire
YO26 6HA
Phone: 01904 799032

Tree and Tag No / Species	Hght (m)	Stems No	Stems Ø (mm)	Crown Spread (m)	Crown Clear (m)	Age	RP A (m²) R (m)	Phys Condition	Structural Condition	Preliminary Recommendations / Survey Comment	Cat ERC
1										Estimated Measurements	
Sycamore *Acer pseudoplatanus*	12	1	400	N 5 E 5 S 5 W 5	3 4 3 3	SM	A: 72.4 R: 4.8	Fair	C: Good S: Fair B: Fair	No action :: Unspecified	B.2 >40 yrs
2										Estimated Measurements	
Common Ash *Fraxinus excelsior*	16	1	400	N 5 E 5 S 5 W 5	4 4 4 4	SM	A: 72.4 R: 4.8	Fair	C: Good S: Fair B: Good	No action :: Unspecified Trunk wound at 1meter to the west.	B.2 >40 yrs
3										Estimated Measurements	
Sycamore *Acer pseudoplatanus*	12	1	300	N 3 E 3 S 3 W 3	3 3 3 3	SM	A: 40.7 R: 3.59	Fair	C: Fair S: Fair B: Fair		B.2 >40 yrs
4										Estimated Measurements	
Sycamore *Acer pseudoplatanus*	12	1	350	N 4 E 4 S 4 W 4	3 3 3 3	SM	A: 55.4 R: 4.19	Fair	C: Good S: Fair B: Fair	No action :: Unspecified	B.2 >40 yrs

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

Condition: C Crown; S Stem; B Basal area

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

9.1 Grading classifications

The trees have been categorized following recommendations in British Standard 5837: 2012 *Trees in relation to design, demolition and construction – Recommendations*. Tree categorization is in accordance with the cascade chart provided in BS 5837. The presence of any serious disease, structural defects or tree-related hazards when assigning trees into each of the categories, have been taken into account. The purpose of tree categorization is to identify the quality and value of the existing tree stock, allowing informed decisions to be made concerning which trees should be removed or retained should development occur.

For a tree to qualify under any given category, it should fall within the scope of that category's definition (U, A, B, C) and, for trees in categories A to C, it should qualify under one or more of the three subcategories (1, 2, 3). Subcategories 1, 2 and 3 are intended to reflect arboricultural, landscape qualities, and cultural values, respectively.

Category 'A' trees are of a high quality and value and have an estimated remaining life expectancy of at least 40 years. Category 'B' trees are of moderate quality with an estimated remaining life expectancy of at least 20 years. Trees of low quality with an estimated remaining life expectancy of at least ten years are categorised 'C'. Young trees with a stem diameter below 150 mm are also categorized 'C'. Category 'U' trees are considered to be 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.

9.2 Root Protection Area

In order to avoid damage to the roots or rooting environment, a minimum area, expressed in square metres (m^2), should be left undisturbed around each retained tree. The root protection area (RPA) for each tree is initially plotted as a circle centred on the base of the stem. Where pre- existing site conditions and other factors indicate that rooting has occurred asymmetrically, a polygon of the equivalent area can be produced. Modifications to the shape of the RPA should reflect a soundly based arboricultural assessment of the likely root distribution. The RPA is shown on the attached site plan for the site.

9.3 Root Protection Area Calculation

BS 5837 provides guidance on the calculation of the Root Protection Area (RPA). For single stem trees, the RPA should be calculated as an area equivalent to a circle with a radius 12 times the stem diameter. For trees with more than one stem, one of the two calculation methods below should be used.

a) For trees with two to five stems, the combined stem diameter should be calculated as follows:

$$\sqrt{(\text{stem diameter 1})^2 + (\text{stem diameter 2})^2 \ldots + (\text{stem diameter 5})^2}$$

b) For trees with more than five stems the combined stem diameter should be calculated as follows:

$$\sqrt{(\text{mean stem diameter})^2 \times \text{number of stems}}$$

Based on the above equations, Table D of BS 5837 provides RPAs for single stem trees and the equivalent resultant combined stem diameter for multi-stemmed trees. The RPA for each tree is capped at 707 m^2 (15m diameter of circle).

9.4 Cascade chart for quality assessment. BS 5837:2012.

Cascade Chart for Quality Assessment Table 1 in BS 5837

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	• 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 *NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve; see **4.5.7**.*			**Colour** Dark red RGB code 127-000-000
Trees to be considered for retention				
	1 Mainly arboricultural qualities	**2 Mainly landscape qualities**	**3 Mainly cultural values**	
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)	**Colour** Light green RGB code 000-255-000
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	**Colour** Mid blue RGB code 000-000-255
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	**Colour** Grey RGB code 091-091-091

10. Other factors.

10.1 The special factor of public safety must be taken into consideration. The site is within an urban environment and the public are likely to be actively encouraged onto the site and therefore it will be freely accessible by many. It is considered that the current risk to public and property by the trees, may be classed as low. However the comments in section 11. Discussion, on individual trees should be noted. The vegetation surveyed was considered to be of moderate value as far as amenity of the area was considered.

10.2 Protective Barriers

Protective barriers should be installed around all trees which are to be retained on site and be in place before any materials or machinery are brought onto the site, and before any demolition, development or stripping of surfaces commences. This will form the construction exclusion zone. Continuous protective fencing should be erected in accordance with Section 6.2 and Figure 2 and Figure 3 of BS 5837:2012, as detailed below.

The construction exclusion zone should be regarded as sacrosanct and, once installed, barriers and (if specified) ground protection should not be removed or altered without prior recommendation by the project arboriculturist and, where necessary, approval from the planning authority. Strictly no access should be allowed into the construction exclusion zone during the whole demolition and construction periods. The protective fence will be the last structure to be dismantled on completion of the construction.

BS 5837:2012 Section 6.2 (extract)

Barriers

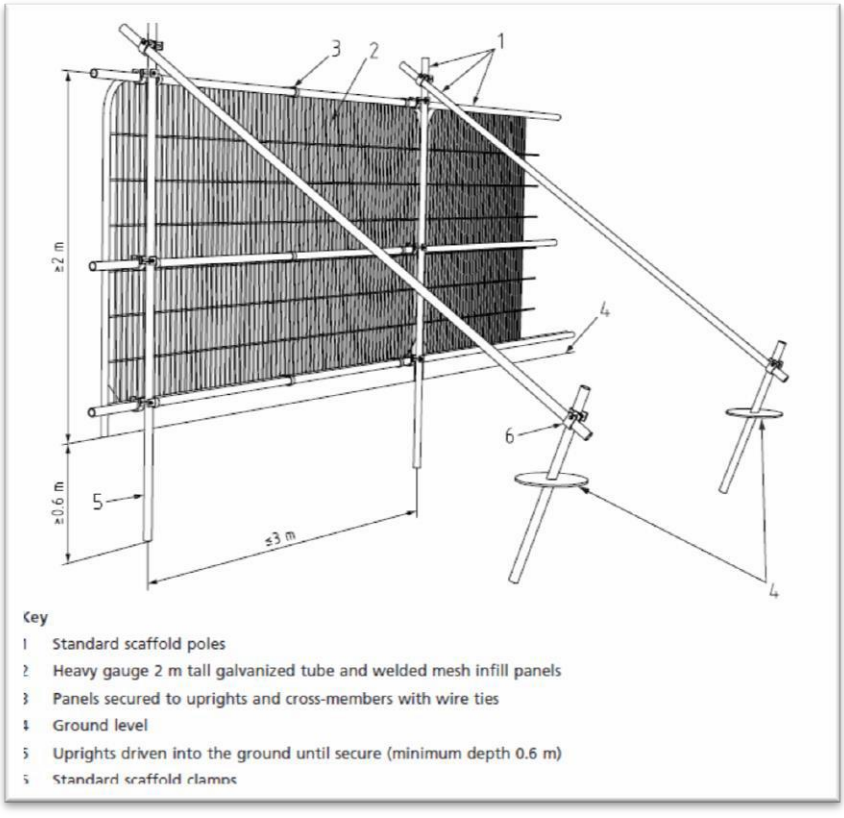
Barriers should be fit for the purpose of excluding construction activity and appropriate to the degree and proximity of work taking place around the retained tree(s). Barriers should be maintained to ensure that they remain rigid and complete.

The default specification should consist of a vertical and horizontal scaffold framework, well braced to resist impacts, as illustrated in BS 5837 Figure 2 (below). The vertical tubes should be spaced at a maximum interval of 3 m and driven securely into the ground. Onto this framework, welded mesh panels should be securely fixed. Care should be exercised when locating the vertical poles to avoid underground services and, in the case of the bracing poles, also to avoid contact with structural roots. If the presence of underground services precludes the use of driven poles, an alternative specification should be prepared in conjunction with the project arboriculturist that provides an equal level of protection. Such alternatives could include the attachment of the panels to a free-standing scaffold support framework.

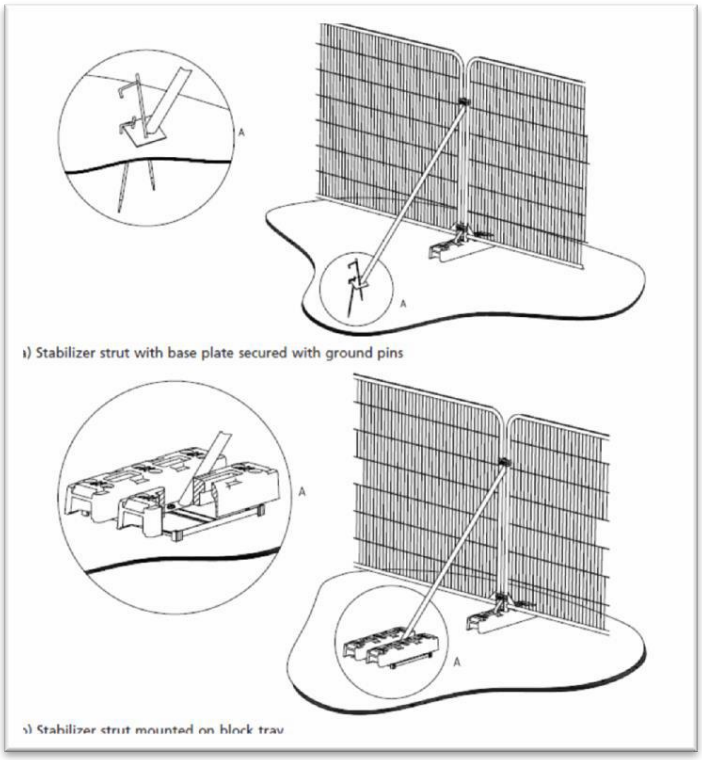
Where the site circumstances and associated risk of damaging incursion into the RPA do not necessitate the default level of protection, an alternative specification should be prepared by the project arboriculturist and, where relevant, agreed with the local planning authority. For example, 2 m tall welded mesh panels on rubber or concrete feet might provide an adequate level of protection from cars, vans, pedestrians and manually operated plant. In such cases, the fence panels should be joined together using a minimum of two anti-tamper couplers, installed so that they can only be removed from inside the fence. The distance between the fence couplers should be at least 1 m and should be uniform throughout the fence. The panels should be supported on the inner side by stabilizer struts, which should normally be attached to a base plate secured with ground pins (Figure 3a). Where the fencing is to be erected on retained hard surfacing or it is otherwise unfeasible to use ground pins, e.g. due to the presence of underground services, the stabilizer struts should be mounted on a block tray (Figure 3b).

All-weather notices should be attached to the barrier with words such as: "CONSTRUCTION EXCLUSION ZONE – NO ACCESS".

BS 5837 Extract Fig. 2
Default specification for protective barrier



BS 5837 Extract Fig. 3
Examples of above-ground stabilizing systems



10.3 Root Protection Areas

During demolition and construction, there should be no materials stored or dumped within the construction exclusion zone and no vehicle or plant movement within the root protection areas, in order to minimize the risk to trees from soil compaction.

10.4 Utilities

It is recommended that utility services connect, where feasible, to existing service routes and are routed outside RPAs. As specified in the National Joint Utilities Group (NJUG) Publication, *'Guidelines For The Planning, Installation And Maintenance Of Utility Apparatus In Proximity To Trees'*, (2007) digging within the RPA should only be carried out with hand tools, preferably by compressed air soil displacement. Great care should be taken to preserve and work around roots greater than 25mm in diameter and clusters of smaller roots to avoid damaging the bark. Where it is necessary to

sever roots greater than 25mm in diameter, arboricultural advice should be sought. Where smaller roots must be severed, they should be cut back using secateurs or a sharp pruning saw.

Where possible, services laid through protected areas should be installed at a depth greater than 600mm using a trenchless insertion method, in order to preserve the maximum number of roots and avoid conflict between the tree roots and the service.

10.5 Protected Species

Bats

All British bat species are fully protected under Schedule 5 of the Wildlife and Countryside Act 1981, as updated by the Countryside and Rights of Way Act 2000. All British bats are also included on Schedule 2 of the Conservation (Natural Habitats etc.) Regulations 1994 as European protected species.

Taken together, these pieces of legislation make it an offence to:

- Intentionally or recklessly kill, injure or capture bats
- Deliberately or recklessly disturb bats (whether in roosts or not)
- Damage, destroy or obstruct access to bat roosts

A roost is defined as any structure or place which a bat uses for shelter or protection. As bats tend to re-use the same roosts a roost is protected by legislation whether or not bats are present at the time of survey.

Maternity roosts are formed by pregnant females from the end of April to the end of August inclusively whilst hibernation roosts are formed from the end of October to mid-March depending on weather. Any proposed work should be undertaken outside of these periods..

Nesting birds

The main bird nesting season is between March and August inclusive.
Contractors have a legal responsibility to comply with current legislation relating to breeding birds. Under the Wildlife and Countryside Act 1981 and the Countryside and Rights of Way Act 2000 all birds, their nests and eggs are protected and it is an offence to:

- Take, damage or destroy the nest of any wild bird whilst it is in use or being built.
- Take or destroy the egg of any wild bird.
- To disturb any wild bird listed on Schedule 1 while it is nest building, or at a nest containing young, or disturb the dependent young of such a bird.

11. Discussion.

11.1 The tree constraints and protection plan (plan C) included within this report details the most recent canopy spreads and tree dimensions for the trees growing on the site. Root protection areas are shown.

11.2 Having surveyed the tree stock on the site, it is worth highlighting areas where due to the proposed re-development, improvements and alterations can be made for the long term sustainability of the treescape of the area (Biodiversity Net Gain, 2023; The England Trees Action Plan 2021-2024, 2021). Although the four trees surveyed act as a green area and undoubtedly have value as far as environmental improvements are concerned, they are the wrong type of trees in the wrong location (Environment Act, 2021 ;Trees and Design Action Group ,2023). The Ash may succumb to Ash die-back (*Hymenoscyphus fraxineus*) and ultimately the three Sycamore trees are too large a tree for the location. Although it is a loss of tree cover within the area, better species selection would provide a longer term and more effective tree scape for the location.

11.3 If the trees are to remain, section 10, above details basic site constraints and methodology for construction works in relation to the trees on site. More details as to foundation design, type of plant machinery, access and egress can be added to this by the architect and main contractor. Reference for more information and guidance may be made to BS 5837:2012 *Trees in relation to design, demolition and construction - Recommendations.* In the first instance the root protection areas should remain a construction exclusion zone and all development planned outside. This is to protect trees of such quality that their retention is desirable and the areas around them sacrosanct. Any potential encroachment into the root protection areas as detailed on Tree Constraints and Protection site plan may be permissible subject to consultation with an arboricultural specialist, so the retained trees remain viable.

11.4 A realistic assessment of the probable impact of the proposed development on the trees and vice versa takes into account the characteristics and condition of the tree stock on the site. To maximize successful tree retention the following factors need to be considered.

- Shading and effects on open spaces, either as a positive or negative benefit.
- Screening and greening of the Urban area, taking into account the build type and relation to existing trees.
- Direct damage above and below ground. Incremental root and stem growth can cause damage to underground services and paved/stepped/wall areas. Species choice and siting can mitigate these potential issues. Ideally a tree should be sited so that it can attain its full splendor without any unnecessary pruning or reduction or cause foreseeable nuisance.
- Future pressure for removal. This goes back to the initial landscape design, species choice and planning.
- Seasonal nuisance i.e. fruit, leaves, seeds, flowers as trees are naturally growing and shedding organisms.

11.5 Any potential damaging activities such as the removal of existing structures, hard surfaces and installation of new, proposed excavations, changes in ground levels should be noted and taken into consideration as far as effects on the existing trees are concerned. In addition to the impact of the proposed re-development, account must be taken as to the practicalities of building the scheme, especially of access and egress, working space, material storage, contractor compounds etc. All these issues can be addressed within the Arboricultural Method Statement which is produced in order to demonstrate that the operations can be undertaken with minimal impact on the retained trees.

12. Conclusions & Recommendations.

12.1 To conclude therefore, the trees on the site require the works in section number 9 above, to update any necessary work in order to maintain a low risk tree stock. Comments and recommendations have been made regarding the trees in relation to the construction in section 11.

12.2 For retained trees, appropriate future management for the trees would be pruning works to remove any hazardous dead wood, crossing branches (subject to an assessment with natural bracing in mind), branch stubs and diseased wood from the crown areas. This is normally required on a 2-3 year cycle as part of the continuing tree maintenance works. The trees show some signs of past pruning works. Monitoring any areas of concern should also be undertaken on a regular basis and appropriate actions undertaken.

12.3 It is recommended that any retained trees be regularly inspected to continually assess their condition and provide a basis for future management. It is suggested that for this site the trees be inspected in leaf (summer) during 2026.

Surveyed by: Mr D. A. Gregory. BSc (Hons) Arboriculture.
Fellow of the Arboricultural Association."FArborA".
Chartered Horticulturist. C Hort. (MICHort)
LOLER Inspector.
Lantra Instructor & C&G/ NPTC Assessor

Date: 25th January 2024.

13. Additional Notes:

SPECIAL DEFINITIONS:

Adjacent hazard: Anything which requires the contractor to exercise particular car whilst undertaking the works, for example the vicinity of power lines, hedges or trees, members of the public, private property, highway furniture, a piece of sculpture or any private/public utilities' apparatus etc.

Agreed access and working areas: The access routes through the site and the working area.

Arisings: Natural materials, both debris & produce that are produced as a result of the works.

Branch bark ridge: An external feature on main stems close to the upper side of a branch composed of a ridge of woody tissue which separates the tissue of the branch from those of the main stem.

Branch collar: An external feature on the lower side of a branch derived from a thickening of tissues which indicates the separation between branch & stem.

Branches: The secondary structures of a tree crown based upon the framework of limbs.

Cable brace: Flexible steel cable connected to 2-3 limbs by eye bolts or adjustable strops to support one weaker limb by one or two stronger limbs.

Cambium: The layer of actively dividing cells between inner bark & wood.

Cavity: A hole in a tree resulting from decay or damage from whatever cause.

Climber: An operator who is trained & skilled in the safe use of a saw at height in the crown of a tree & the safe removal of cut material from the tree crown. The minimum number in any climbing team must be two persons.

Climbing rope system: The assembly of climbers harness, rope, karabiners & rope strops or slings & the means by which they are connected to each other & to the climber & how used by the climber whilst in the tree.

Crown: That part of the tree which is composed of limbs, branches & foliage.

Crown lifting: The removal of lower limbs or branches that in effect raises the base of the crown.

Crown reduction: The selective removal of outside branches to reduce the height or shape.

Crown thinning: The selective removal of branches from within the crown normally expressed as a percentage of the original volume.

Danger zone: The area beneath & around the trees crown in which arisings may fall or be flung by the climber & where the slinging rope system mat be found. The danger zone will normally be circular & of a radius at least equal to the trees height.

Dead wooding: The removal of large medium &/or small dead branches.

Debris: Those things which appear as a result of the works & are of no value.

Epicormic shoots: A shoot derived from a dormant or adventitious bud on a main stem or branch.

Felling: The cutting down, to as close to ground level as can reasonably & practically be achieved (unless otherwise specified), of a tree to leave a stump.

Final pruning cut: The action which completes limb, branch or twig removal using either a chainsaw, handsaw or secateurs.

Formative pruning: The selective removal of branches or forked stems to encourage the development of a sound crown structure in a young tree or shrub.

Grinding/chipping: The mechanical reduction of stumps & roots (into chips) to a specified depth below ground level.
Groundman: The operator responsible for the work both on & from the ground.
Limbs: The primary structure of the framework forming the outline of the trees crown.
Pollarding: The pruning of a tree back to the main limbs or stem.
Produce: Arisings which the client has identified in the tender documents as being of value, for example sound dressed butts of timber, sound cordwood, pulpwood, firewood or woodchips.
Propping: The support of a low branch by steel or timber uprights.
Pruning: The selective removal of living or dead parts of a plant. Such parts may be soft growth, twigs, branches limbs or parts of the tree trunk.
Pruning tool: Any machine or tool used for pruning.
Sectional felling or dismantling: The complex taking down of a tree in sections or the removal of cut material using a slinging rope system.
Services: Underground or overhead lines carrying electricity, telephone, gas, water or sewage.
Site: The location within which lies the working are for the contract made available to the contractor as shown on the plan or as identified to the contractor.
Slinging rope system: The ropes used & the way in which they are used to regulate the speed at which cut material is lowered to the ground.
Soft growth: Tissues before they undergo secondary thickening & become woody, for example buds & epicormic shoots, basal suckers & root suckers during their first year of development.
Staking: The temporary support of a newly planted tree by a short stake & tree tie.
Statutory requirements: Any statute, any statutory instrument, rule, order or regulation made by Parliament or any bye-law made by the local authority or any regulation, directive or decision of the European Community. In this specification / report, references to statutory requirements include any statutory modifications or re-enactment thereof for the time being in force.
Stool or stump: The trees root & that part of the trees trunk remaining which is near to ground level following felling & from which new growth has either developed or may be allowed to re-grow.
Stub: A short section of a branch which may have been left after incorrect pruning.
Sucker: A shoot arising from a root system below or just at ground level or unwanted growth from the root stock of a grafted or budded tree.
Timber: Wood which has had value added by being cut to size or worked in some way by the contractor.
Trunk: The main stem of the tree which supports the crown.
Winching: A force exerted from a hand or machine winch, through a steel cable, to produce a lifting or pulling motion. For example the removal of a tree without severance of the stem.
Wood: The tissues of a tree within the cambium which have become secondary thickened or lignified.
Works: the tasks required by the client to be carried out in accordance with the requirements of the specifications.

Working areas: The part of the site for the contract made available to the contractor to work within as shown on the plan or as otherwise identified to the contractor.
Wound: An injury exposing live or dead tissue caused to any part of the tree either above or below ground level.

APPENDIX 1: AUTHORS QUALIFICATIONS:

Principal Arboricultural Consultant

Mr D. A. Gregory. BSc (Hons) Arboriculture. O.N.D Amenity Horticulture/Arboriculture. Fellow of the Arboricultural Association "FArborA". Chartered Horticulturist C Hort. MCIHort. FdSc Arbor. L&DIII. A1 Assessor Award. Lantra Instructor. C&G/NPTC Assessor.

Houghall College Tree Inspections Award. Lantra Professional Tree Inspection Award. Lantra Basic Tree Inspection Instructor. Subsidence Tree Risk Assessment Award (Arboricultural Association.)

David has been working within the industry since 1978, having studied and completed an OND in Amenity Horticulture and Arboriculture at Askham Bryan College, York. He continued higher education for the RHS Master in Horticulture up to Intermediate level and a BSc (Hons) in Arboriculture. Having work throughout the industry for organisations such as the Forestry Commission at Bedgebury Pinetum, Comtec (UK) Ltd Hydraseeders and Willougby Landscapes (Bali award winners), he started business trading as Ryland Horticulture in 1983. Ryland Horticulture became a Limited Company in 2003 and continues to move into the future as a solid, reliable and profitable enterprise.

Ryland Horticulture gained Arboricultural Association Approved Contractor status in 1989 and have been successfully re-assessed on an annual basis . Ryland Horticulture Ltd. were also approved contractors of the British Association of Landscape Industries (BALI) from 1987 until 2020 after which time they became members of the Chartered Institute of Horticulture (MCIHort). David is constantly updating his professional development through short courses and webinars. Training has been undertaken especially on the visual tree risk Assessment. He was awarded Chartered Horticulturist in April, 2015 (CIHort.).

Having a broad base of experience throughout the UK and having supervised contracts in Kenya, Tanzania and Gabon, David has now over 40 years of experience and knowledge on the industry. David has undertaken tutoring in practical arboriculture at Askham Bryan College, been involved in training and committee membership of the Arboricultural Association Northern Branch and sat on Askham Bryan College Technical Committee.

Ryland Consultant Arborists was formed to accommodate the growing tree consultancy side of the organisation. The growing portfolio includes such high profile developments as McCarthy Glen Designer Outlet as clients Arborist which included television and media work, Bishops Palace, English Heritage and National Trust works etc.

David is an approved National Proficiency Test Council (NPTC) Assessor working mainly from Askham Bryan College, York and Lantra Instructor, working throughout the UK. As an Approved Lantra Instructor for Arboriculture and Chainsaws David has added Rylands Training as another part of the company and is a Registered Training Provider through Lantra.

David was awarded Fellowship of the Arboricultural Association during January, 2006 and continues to enjoy working with trees. He is passionate about his continuing professional development and works to the highest standard of professional integrity.

Consulting Arboriculturalists

REFERENCES:

Biodiversity Net Gain. (2023) Gov.UK. Available at : www.gov.uk/guidance/understanding-biodiversity-net-gain (Accessed on 25th January, 2024).

BS 3998:2010. *Tree Work-Recommendations.* BSI Publications.

BS 5837:2012. *Trees in relation to design, demolition and construction - Recommendations.* BSI Publications.

Countryside Rights of Way Act (2000) Available at: www.legislation.gov.uk (Accessed on 25th January, 2024).

Environment Improvement Plan (2023) Gov.UK Available at : www.gov.uk.government.publications (Accessed on 25th January, 2024)

Environment Act (2021) Gov.UK. Available at : www.legislation.gov.uk (Accessed on 25th January, 2024)

Fay, N. Dowson, D. and Helliwell, R. (2009) *Tree Surveys: A Guide to Good Practice, Arboricultural Association Guidance Notes No. 7*. Gloucestershire. Arboricultural Association.

Forestry Commission. (2011) Common sense risk management of trees. *National Tree Safety Group. Edinburgh.* Forestry Commission Publications. Available at: publications@forestry.gsi.gov.uk (Accessed on 25th January, 2024).

Harris, R. W., Clark, J. R. and Matheny, N. P. (2003) *Arboriculture, Integrated Management of Trees, Shrubs and Vines.* 4th Edition. Prentice Hall.

Helliwell, R. (2004) Short Paper – A Discussion of the Failure of Weak Forks.
Arboricultural Journal. 27, 245-249.

International Society of Arboriculture (1995) *Guide to report writing for consulting arborists.* Illinois. ISA.

Levelling Up and Regeneration. (2022) Government Publications. Available at : www.gov.uk/government/publications/levelling-up-and-regeneration-further-information (Accessed on 25th January, 2024)

Lonsdale, D. (1999) *Principles of Tree Hazard Assessment and Management.* London. HMSO Books.

Matheny, N. P. and Clark, J. R. (1994) *A Photographic Guide to the Evaluation of Hazard Trees in Urban Areas.* USA.ISA Books.

Mattheck, C. (2007) *Field Guide for Visual Tree Assessment.* Germany. Forschungszentrum Karlsruhe.

Mattheck, C. (2004) *The face of failure in nature & engineering.* Germany. Forschungszentrum Karlsruhe. GMBH.

Mattheck, C. and Breloer, H. (1994) *The Body Language of Trees - A Handbook for Failure Analysis.* London. HMSO Books.

Ministry of Housing, Communities & Local Government (2021) National Planning Policy Framework. Available at www.gov.uk.government.publications (Accessed on 25th January 2024).

National Joint Utilities Group (2007). *NJUG Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees.* Available at: www.**njug**.org.uk (Accessed on 25th January, 2024).

Natural England (2023). Green Infrastructure. Available at: www.**designatedsites.naturalengland.org.uk** (Accessed on 25th January, 2024).

Pirone, P. (2000) *Tree Maintenance.* London. Oxford University Press.

Read, H. (1999) *Vetran Trees: A guide to good management.* Peterborough. English Nature.

RIBA Sustainable Outcomes Guide (2019). Available at: www.**architecture.com** (Accessed on 25th January, 2024).

The Conservation (Natural Habitats, & c.) Regulations 1994. Available at : www.legislation.gov.uk (Accessed on 25th January, 2024).

The England Trees Action Plan 2021-2024 (2021) Available at www.assets.publishing.service.gov.uk (Accessed on 25th January, 2024).

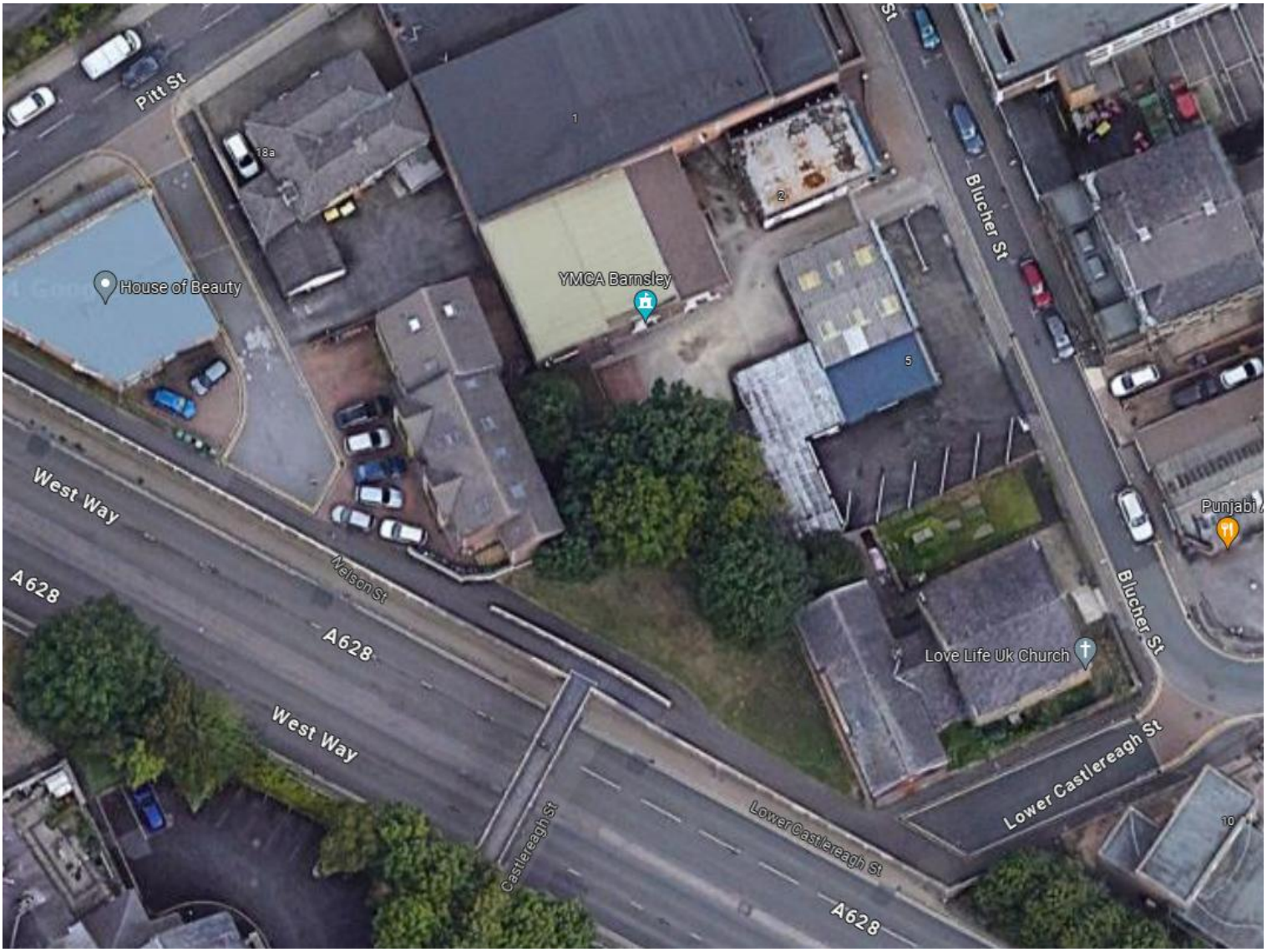
Tree Planting (2022) UK Parliament. Parliament Publications. Available at www.publications.paliament.uk (Accessed on 25th January, 2024).

Trees and Design Action Group (2023) Trees, Planning and Development: A Guide for Delivery-Sections One and Two. Available at : www.tdag.org.uk (Accessed on 25th January 2024).

Wildlife and Countryside Act (1981). Available at : www.legislation.gov.uk (Accessed on 25th January, 2024).

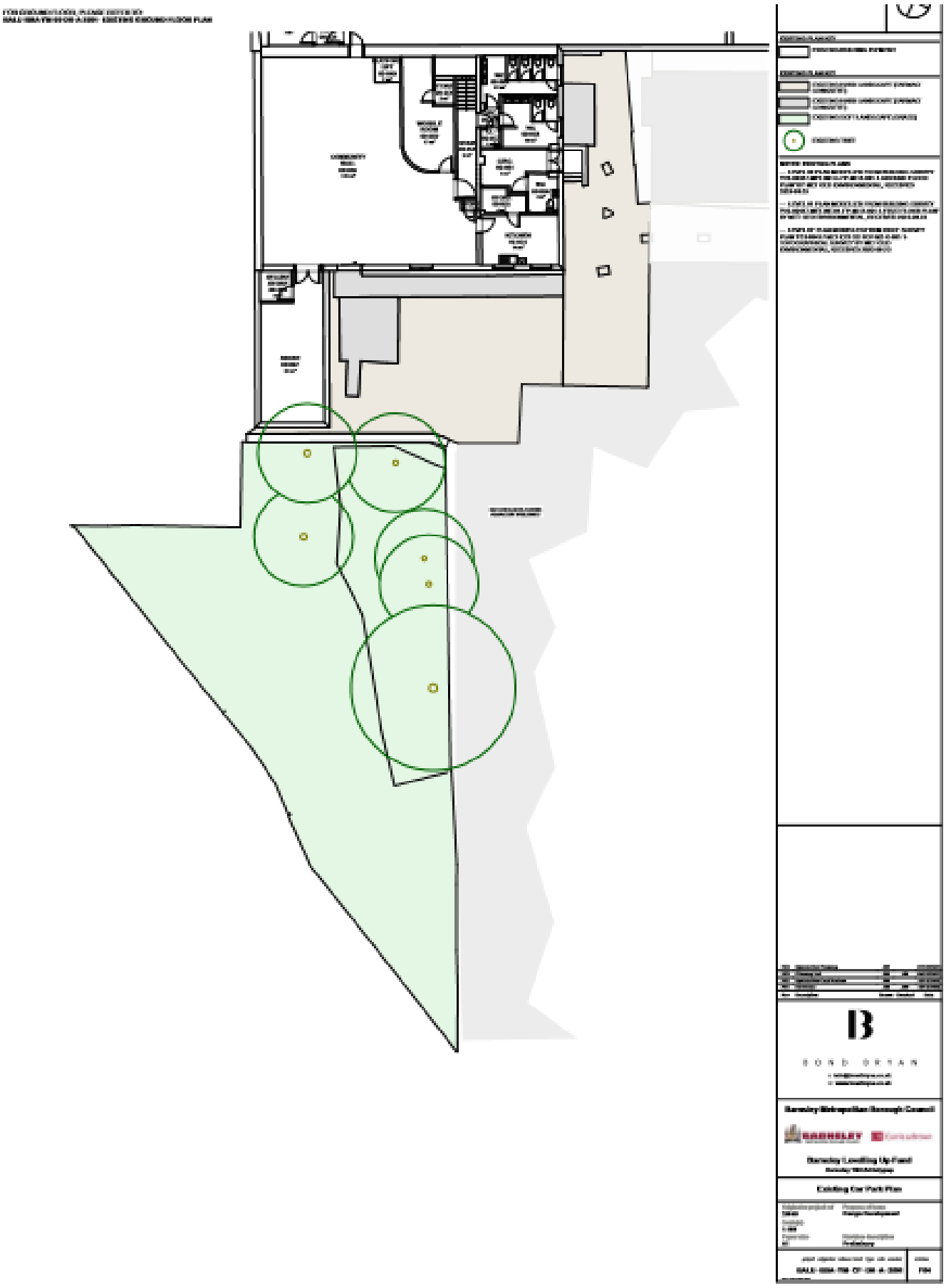
Site plan A. Site Location Plan

Site Address: YMCA Barnsley, Car Park, 1 Blucher Street, Barnsley. S70 1AP

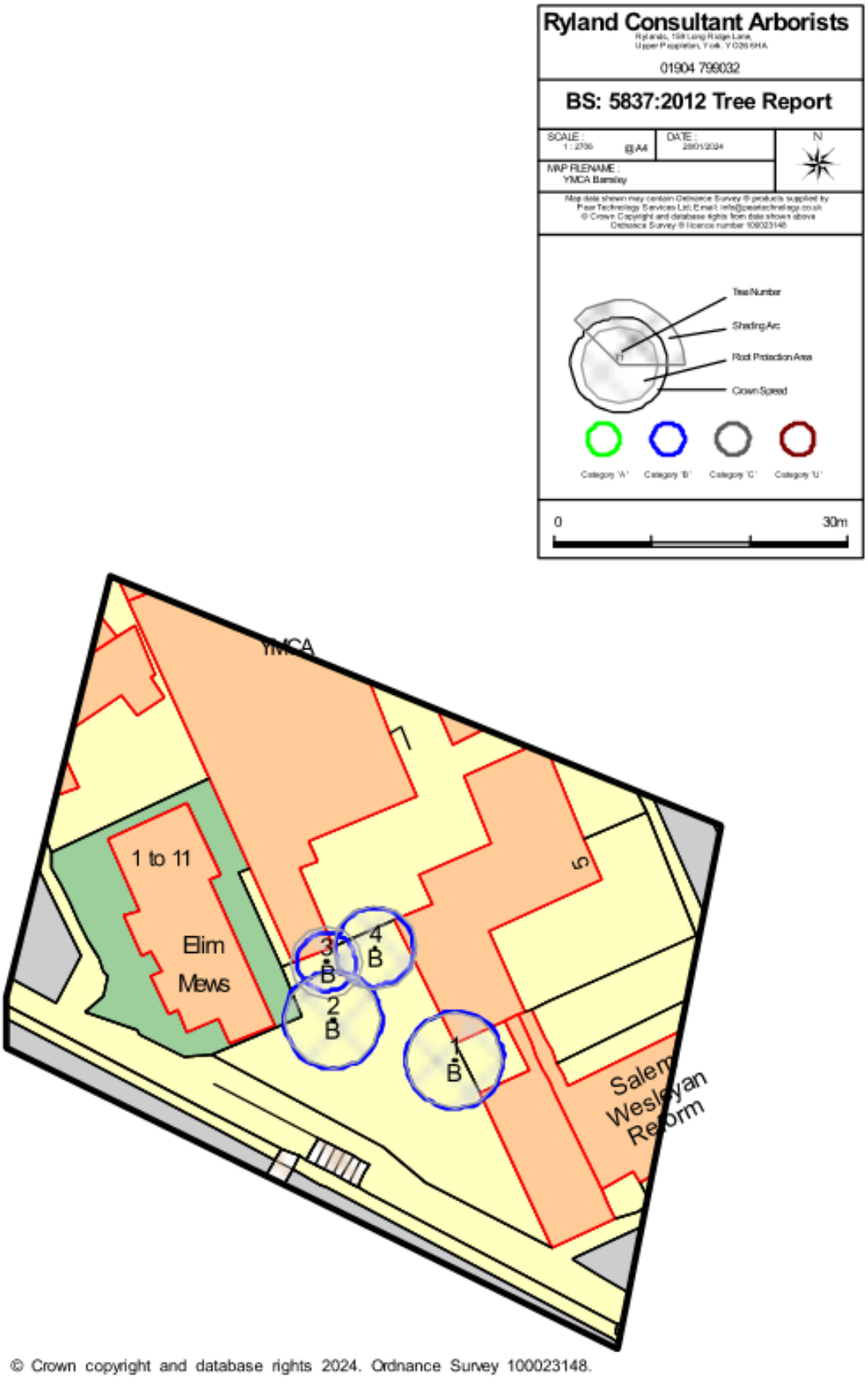


Google 2024.

Site plan B. Barnsley MBC. Car Park Demolition Plan.



Site Plan C. Tree Constraints and Protection Plans.



Notes.