

**Pre-Development Tree Survey:
Bison Concrete, Tetron Park, Swadlincote, Derbyshire, DE11 0BB**

Prepared for:
Barry Chinn Associates Ltd
Harbury Road
Deppers Bridge
Southam
Warwickshire
CV47 2SZ

Document reference: 611-21, Revision 0

1. General notes and introduction

- 1.1 This survey has been undertaken for Barry Chinn Associates Ltd, Harbury Road, Deppers Bridge, Southam, Warwickshire, CV47 2SZ. The site surveyed is located at Bison Concrete, Tetron Park, Swadlincote, Derbyshire, DE11 0BB.
- 1.2 All the trees in this survey have been surveyed from the ground. The survey is based on a purely visual assessment of the trees. A climbing survey has not been undertaken. Where relevant, specific recommendations for remedial tree surgery works have been included. Such recommendations are valid for a period of 12 months from the date of this inspection, following which it may be necessary to reassess this advice in accordance with sound arboricultural advice.
- 1.3 The protective status of the trees contained within the survey is unknown and should be confirmed with the Local Planning Authority. Should any form of legislation or statutory protection apply it will be necessary to make the requisite application/prior notification of proposed works and receive written consent before any tree work is carried out.
- 1.4 The survey is to be read in conjunction with the associated Barry Chinn Associates Ltd's Tree Constraints Plan (Contract number: 2221/21, Drawing number: 01).

2. Tree survey assessment notes

- 2.1 This tree survey has been structured to accord with the requirements of Sections 4.4 and 4.5 of British Standard 5837 of 2012: *Trees in relation to design, demolition and construction – recommendations*. The columns in the tree survey assessment refer to the following items:

Tree/Group number: Tree reference number as shown on drawing.

Common name *Botanical name*: Identifies individual species by common name. For avoidance of doubt the botanical name is shown *in italics*.

Tree height: Estimated height of the tree in metres.

Stem diameter: Diameter of the trunk(s) measured in accordance with Annex C of the Standard and expressed in millimetres.

Branch spread: Measured radial spread of the crown broken down into the four main compass points and expressed in metres.

Height above ground level of: Estimated measurement (in metres) to inform on ground clearance, crown/stem ratio and shading presented in two sub-categories:

- First significant branch (at point of attachment with parent stem) and direction of growth (eg 2.4 N).
- Canopy ie assessment of clearance above ground of lowest branch tips. Where irregular, and potentially significant towards development proposal, direction of assessed crown height has been added.

NB: For tree height, stem diameter and branch spread, the measurement conventions are as follows:

- Height and crown spread are recorded to the nearest half metre (crown spread being rounded up) for dimensions up to 10m and the nearest whole metre for dimensions over 10m.
- Stem diameter is recorded in millimetres (using a calibrated girth tape), rounded up to the nearest 10mm (0.01m).
- Estimated dimensions (eg for off-site or otherwise inaccessible trees where accurate data cannot be recovered) are identified by being suffixed with a #.

Life stage: The estimated age: young, semi mature, early mature, mature or over mature, shown as Y, SM, EM, M or OM respectively.

Physiological condition: Physiological condition being good, fair, poor or dead, shown as A, B, C or D respectively.

Structural condition: Structural condition being good, fair, poor or dangerous (eg collapsing, the presence of decay and physical defects), shown as A, B, C or D respectively.

General observations, including preliminary management recommendations: Particularly of structural and/or physiological condition, including further investigations of suspected defects that require more detailed assessment and potential for wildlife habitat.

Estimated remaining contribution in years (RC): <10, 10–20, 20–40 or >40.

Retention category (RC): Categorisation of survey trees in accordance with Section 4.5 and Table 1 of the Standard.

- **U (dark red):** 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 (eg 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 that it might be desirable to preserve.

- **A (light green):** Trees of high quality with an estimated remaining life expectancy of at least 40 years.

Mainly arboricultural qualities: Trees that are particularly good examples of their species, especially if rare or unusual, or those that are essential components of groups or of formal or semi-formal arboricultural features (eg the dominant and/or principal trees within an avenue). Indicated by 1 in brackets after the appropriate category classification.

Mainly landscape qualities: Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features. Indicated by 2 in brackets after the appropriate category classification.

Mainly cultural values, including conservation: Trees, groups or woodlands of significant conservation, historical, commemorative or other value (eg veteran trees or wood-pasture). Indicated by 3 in brackets after the appropriate category classification.

Trees with an estimated remaining life expectancy of at least 20 years.

- **B (mid blue):** Trees of moderate quality with an estimated remaining life expectancy of at least 20 years.

Mainly arboricultural qualities: Trees that might be included in category A, but are downgraded because of impaired condition (eg 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. Indicated by 1 in brackets after the appropriate category classification.

Mainly landscape qualities: 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. Indicated by 2 in brackets after the appropriate category classification.

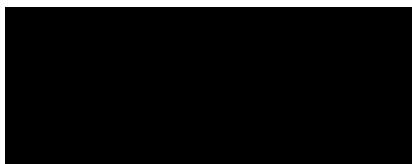
Mainly cultural values, including conservation: Trees with material conservation or other cultural value. Indicated by 3 in brackets after the appropriate category classification.

- **C (grey):** Trees of low quality with an estimated remaining life expectancy of at least 10 years or young trees with a stem diameter below 150mm.

Mainly arboricultural qualities: Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories. Indicated by 1 in brackets after the appropriate category classification.

Mainly landscape qualities: 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. Indicated by 2 in brackets after the appropriate category classification.

Mainly cultural values, including conservation: Trees with no material conservation or other cultural value. Indicated by 3 in brackets after the appropriate category classification.



Ben Bennett, BSc (Hons) For, Cert Arb (RFS), MArborA
Director, BB Trees Ltd

Trees were inspected by Ben Bennett from ground level only on Monday 27 September 2021. There had been heavy rain ahead of the survey but the conditions during the assessment were dry and bright with good visibility from ground level.

Tree/ Group number	Common name <i>Botanical name</i>	Tree height (m)	Stem diameter (mm)	Branch spread (m)	Height above ground level (m) of:		Life stage	General observations, including preliminary management recommendations			RC (years)	Category
					First branch	Canopy		Physiological condition	Structural condition			
G1	Willow <i>Salix spp</i> Common hawthorn <i>Crataegus monogyna</i> Silver birch <i>Betula pendula</i>	Up to 7 3–4 (average)	Up to 150 70–100 (average)	Up to 2	N/A	0	Y	B/C	C (average)	Self-seeded willow dominated scrub with both goat and grey willow located within. Occasional non-woody plants including buddleia. Low density sporadic growth mainly restricted to the fence line. Unretained steep sided slope to the site side of the embankment. Some slippage along the boundary. The majority of trees grow in conflict with the current security fence. Remove.	<10	(U)
G2	1no coast redwood <i>Sequoia sempervirens</i> 2no white willow <i>Salix alba</i>	Up to 7	Up to 160 150	Up to 2.5	N/A	0.5	SM	C/D	C/D	Trees growing from spoil heap. Ground levels previously reduced on the western side, exposing many structural roots, some of which have been severed. Trees dying back or showing significant stress. Remove.	<10	(U)

Tree/ Group number	Common name <i>Botanical name</i>	Tree height (m)	Stem diameter (mm)	Branch spread (m)	Height above ground level (m) of:		Life stage	General observations, including preliminary management recommendations			RC (years)	Category
					First branch	Canopy		Physiological condition	Structural condition			
G3	Coast redwood <i>Sequoia sempervirens</i> Crack willow <i>Salix fragilis</i> Rowan <i>Sorbus aucuparia</i> Common alder <i>Alnus glutinosa</i> Corsican pine <i>Pinus nigra var maritima</i> Wild cherry <i>Prunus avium</i> Fir <i>Abies spp</i> Common hawthorn <i>Crataegus monogyna</i>	3.5–8 5–6 (average)	Up to 210# 160 (average)	Up to 3 2–3 (average)	N/A	0	Y–SM	B–D	B–D	Boundary planting mainly to the rear of a bund, which has influenced the extent of the root protection area, with a significant change in levels on the assessment site side. An eclectic mix including a number of ornamental trees. The majority if the fir are severely suppressed with many moribund, preventing accurate identification. Ground ivy present, which has extended up the trunks of many of the younger trees, resulting in them being densely clad and augmented by dense self-set regeneration, mainly alder. Sever and strip ivy from principal stems. Respace dense areas of natural regeneration, preserving where possible the original species diversity of the group.	>40	(B) (2+3)

Tree/ Group number	Common name <i>Botanical name</i>	Tree height (m)	Stem diameter (mm)	Branch spread (m)	Height above ground level (m) of:		Life stage	General observations, including preliminary management recommendations			RC (years)	Category
					First branch	Canopy		Physiological condition	Structural condition			
G4	Corsican pine <i>Pinus nigra</i> var <i>maritima</i> Common alder <i>Alnus glutinosa</i> Dog rose <i>Rosa canina</i> Hazel <i>Corylus avellana</i> Field maple <i>Acer campestre</i> Rowan <i>Sorbus aucuparia</i> Swedish whitebeam <i>Sorbus intermedia</i> Common hawthorn <i>Crataegus monogyna</i> Crack willow <i>Salix fragilis</i> Common ash <i>Fraxinus excelsior</i> Wild cherry <i>Prunus avium</i>	Up to 13 7–9 (average)	Up to 280# 80–150 (average)		N/A	0	SM– EM	B–D B (average)	B–D B (average)	Boundary established yet still young tree plantation growing beyond the margins of a heavy duty concrete surfaced service yard, with which the trees are contemporary. For the majority of the footprint, the trees grow upon a sloping embankment up to around 1 in 3. Dense and impenetrable in areas, mainly where augmented by self-seeded alder stems. Ash component shows clear decline associated with ash dieback disorder. Sole Norway maple noted, which appears to be a rogue tree rather than intentionally planted. Root protection area is to be set at the rear edge of the existing service yard. In places, trees are set back from this around 4–5m, meaning that if required the root protection area boundary may be set back further subject to more detailed plotting. Dying ash elements should be removed as part of future silvicultural thinning. Rose and hazel may be recoppiced to help maintain the structural diversity of the group.	>40	(B) (3+2)

Tree/ Group number	Common name <i>Botanical name</i>	Tree height (m)	Stem diameter (mm)	Branch spread (m)	Height above ground level (m) of:		Life stage	General observations, including preliminary management recommendations			RC (years)	Category
					First branch	Canopy		Physiological condition	Structural condition			
G4 continued	Silver birch <i>Betula pendula</i> Norway maple <i>Acer platanoides</i>											
G5	Silver birch <i>Betula pendula</i> Common alder <i>Alnus glutinosa</i> Common hawthorn <i>Crataegus monogyna</i> Common ash <i>Fraxinus excelsior</i> Rowan <i>Sorbus aucuparia</i> Field maple <i>Acer campestre</i> Wild cherry <i>Prunus avium</i> Dogwood <i>Cornus sanguinea</i> Crack willow <i>Salix fragilis</i>	2.5–9	60–220	1.5–3	N/A	0	Y/SM	C	C	Presently, group extends up to edge of service yard formation. However, it appears that the original planting was offset around 7–8m with any trees present within the interlying ground having self-seeded, typically being of small, multi-stemmed form with many showing clear decline. Common ash shows decline associated with ash dieback disorder with no worthwhile remaining specimens within the group footprint. Tallest trees are crack willow, mainly growing to the rear of the group closest to the outer site boundary. Limited access to the boundary trees. However, many growing in close proximity to a paladin-type fence. If required, the swath of poorly formed trees at an offset of around 6m from the service yard could be cleared without significant detriment to the group. Within the remaining group footprint, dead or dying trees should be removed and any significant gaps replanted.	>40	(C) (2+3)

Tree/ Group number	Common name <i>Botanical name</i>	Tree height (m)	Stem diameter (mm)	Branch spread (m)	Height above ground level (m) of:		Life stage	General observations, including preliminary management recommendations			RC (years)	Category
					First branch	Canopy		Physiological condition	Structural condition			
G6	English oak <i>Quercus robur</i> Common alder <i>Alnus glutinosa</i> Common hawthorn <i>Crataegus monogyna</i> Dogwood <i>Cornus sanguinea</i> Crack willow <i>Salix fragilis</i> Hazel <i>Corylus avellana</i> Wild cherry <i>Prunus avium</i> Swedish whitebeam <i>Sorbus intermedia</i> Blackthorn <i>Prunus spinosa</i> Dog rose <i>Rosa canina</i> Rowan <i>Sorbus aucuparia</i>	2.5–8 3.5–5.5 (average)			N/A	0	Y–SM	B–D	B–D	Trees planted within narrow boundary strip beyond service yard and up to point of security fence. Ground levels within the group vary from being at or around the main service yard to around 1m above to the western end of the group. Three Corsican pine towards the western end of the group have been included as these clearly have root systems well above service yard level with associated root protection areas not extending beyond the rear of the kerb, which is a common theme for the remainder of the group. Many trees still feature their original tree planting spiral guards, albeit these are now redundant. Trees are of varying form with many growing through the security fence. The willow element is potentially larger. However, the majority have been cut back in the past and are regenerating. No works required at present. Cumulative root protection area for the group extends to the back of the service yard kerb and not beyond. There is potential for significant future conflict due to the large growth potential of certain	20–40	(C) (2+3)

Tree/ Group number	Common name <i>Botanical name</i>	Tree height (m)	Stem diameter (mm)	Branch spread (m)	Height above ground level (m) of:		Life stage	General observations, including preliminary management recommendations			RC (years)	Category
					First branch	Canopy		Physiological condition	Structural condition			
G6 continued	Corsican pine <i>Pinus nigra</i> var <i>maritima</i> Norway maple <i>Acer platanoides</i>									component trees, in particular the willow and the pine. This envisaged future conflict plus the mediocre overall condition of the component trees has been borne in mind with the Remaining Contribution and Retention Category value.		
G7	Corsican pine <i>Pinus nigra</i> var <i>maritima</i>	7–8	180–220	As per plan Up to 3.5	N/A	0–1	SM	B (average)	B (average)	Group relates to more prominent Corsican pine trees where growing at and around the existing level of the adjacent service yard and where there are indications that roots may spread beneath the boundary kerb line (such as heave or cracking of existing cast in situ concrete around the perimeter of the service yard itself). Trees feature only a narrow growth environment with either heavy duty road construction or further service yard/ storage container areas on the boundary side and with an existing security fence typically within 0.7m of the trunks. For these trees, if it is proposed to break out the existing service yard kerb line and associated concrete haunching, this ought to be considered further within an Arboricultural Method Statement. RC provisional only.	>40	(C) (2+3)

Tree/ Group number	Common name <i>Botanical name</i>	Tree height (m)	Stem diameter (mm)	Branch spread (m)	Height above ground level (m) of:		Life stage	General observations, including preliminary management recommendations			RC (years)	Category
					First branch	Canopy		Physiological condition	Structural condition			
G8	Crack willow <i>Salix fragilis</i> Field maple <i>Acer campestre</i> Common hawthorn <i>Crataegus monogyna</i> Common alder <i>Alnus glutinosa</i> Hazel <i>Corylus avellana</i> Wild cherry <i>Prunus avium</i> Rowan <i>Sorbus aucuparia</i> Corsican pine <i>Pinus nigra var maritima</i> English oak <i>Quercus robur</i>	3.5–9	Up to 290 equivalent 100–160 (average)	Up to 3.5	N/A	0	SM– EM	B (average)	B/C	Similar planting to the remaining boundaries of the service yard. However, only a single group of Corsican pine with five stems. Planting has taken place within a deeper landscape margin with a typical offset of 4.5m from the boundary fence. Some smaller self-set scrub to the rear of the service yard. However, typically the majority of intentionally planted trees were set back 2–3m, meaning that the edge of the root protection area associated with the group does not extend beyond the back of the service yard. Remove damaged/poorly formed self-set scrub within first 2m of the service yard. Root protection area to be set at boundary of service yard formation with the exception of the small concrete slab that is located within the group footprint.	>40	(B) (2+3)

Tree/ Group number	Common name <i>Botanical name</i>	Tree height (m)	Stem diameter (mm)	Branch spread (m)	Height above ground level (m) of:		Life stage	General observations, including preliminary management recommendations			RC (years)	Category
					First branch	Canopy		Physiological condition	Structural condition			
9	Whitebeam <i>Sorbus aria</i>	5.5	250#	N 3 E 3 S 2.5 W 2.5	N/A	1.5	SM	B	B	Tree emerging from dense section of shrub bed dominated by <i>Garrya elliptica</i> , preventing views of the base. Trunk is also clad in ivy. Typical congested crown. Existing roadway and car park within current root protection area with slight change in ground levels. Cut back shrubs where extending through crown. RC provisional only.	20–40	C (2+3)
10	Whitebeam <i>Sorbus aria</i>	5.5	210	N 2.5 E 2.5 S 2.5 W 2.5	1.8 E	2	EM	B	B	Helical grain pattern with slight twisted cleft at base of trunk on car park side. Redundant support stake still evident. Old bird nest in centre of crown (likely pigeon), which may be reused. Free from significant defect. No works required at present.	20–40	C (2+3)
11	Himalayan birch <i>Betula utilis</i>	6.5	140	N 2 E 1.5 S 2 W 1.5	2.7 N	2.3	SM	B/C	B	Previously crown lifted with some minor epicormic regeneration from around wound margins. Less than optimum foliage density but reasonable at time of assessment. Crown lift to give clean trunk height of around 2m.	>40	C (1+2)

Tree/ Group number	Common name <i>Botanical name</i>	Tree height (m)	Stem diameter (mm)	Branch spread (m)	Height above ground level (m) of:		Life stage	General observations, including preliminary management recommendations			RC (years)	Category
					First branch	Canopy		Physiological condition	Structural condition			
G12	Snowy mespilus <i>Amelanchier canadensis</i> Various shrubs	1–2.5	<75	As per plan	N/A	0	SM	B (average)	B (average)	Mixed shrub bed to edge of car parking area along boundary with footpath around edge of main site service yard. The only arboricultural element is that of snowy mespilus. Shrubs have previously been reduced and clipped, however require additional landscape maintenance works.	>40	N/A
G13	Rowan <i>Sorbus aucuparia</i> Common hawthorn <i>Crataegus monogyna</i> Common alder <i>Alnus glutinosa</i> Hazel <i>Corylus avellana</i>	Up to 7	Up to 140	Up to 2.5 1.5–2 (average)	N/A	0–1	SM	B	B	Trees planted on landscape margin to rear of car park area within gently sloping ground rising up to the security fence. Trees set back a minimum of 1.5m from car park kerb. Small component tree size taken into account when assigning Retention Category. No works required at present.	>40	(C) (2+3)
G14	Sno Corsican pine <i>Pinus nigra</i> var <i>maritima</i>	8–9	Up to 170	Up to 2.5 in all directions	N/A	1	SM	B	B	Closely planted group with component trees now becoming reliant upon companion shelter. Retain only as group.	>40	(B) (2+3)
G15	Sno Corsican pine <i>Pinus nigra</i> var <i>maritima</i>	Up to 9	Up to 220	Up to 2.5	N/A	0.5–1.5	SM/ EM	B	B	Very similar to previous group. Component trees slightly larger yet still reliant upon companion shelter. Closest tree set back around 1.6m from edge of kerb. No works required at present.	>40	(B) (2+3)

Tree/ Group number	Common name <i>Botanical name</i>	Tree height (m)	Stem diameter (mm)	Branch spread (m)	Height above ground level (m) of:		Life stage	General observations, including preliminary management recommendations			RC (years)	Category
					First branch	Canopy		Physiological condition	Structural condition			
G16	Hazel <i>Corylus avellana</i> Rowan <i>Sorbus aucuparia</i> Common alder <i>Alnus glutinosa</i> Common hawthorn <i>Crataegus monogyna</i>	Up to 4.5	Up to 80	Up to 1.5	N/A	0	SM	B-D	B-D	One dead rowan within. Low density grouping formed from small trees. Remove dead rowan. Root protection area requirement does not exceed kerb to rear of car park.	>40	(C) (2+3)
17	Crack willow <i>Salix fragilis</i>	11	160 210 160 190	N 2.5 E 4.5 S 4.5 W 3	0.4 N	0.5	EM	B/C	B/C	Tree impacted upon by more recent extension to current car park. Some excavation immediately to north of trunk with some evident root damage. However, little stress manifested within crown. Concrete haunching extends close up to base and a precast retaining structure runs along the eastern boundary of the site within around 1.6m from the base of the trunk. Monitor crown condition. Consider reducing and managing as a pseudopollard should any dieback occur.	10-20	C (3+2)

Tree/ Group number	Common name <i>Botanical name</i>	Tree height (m)	Stem diameter (mm)	Branch spread (m)	Height above ground level (m) of:		Life stage	General observations, including preliminary management recommendations			RC (years)	Category
					First branch	Canopy		Physiological condition	Structural condition			
H18	Laurel <i>Prunus laurocerasus</i>	1	50	0.5 from centre line	N/A	0	Y	B (average)	B (average)	Offsite ornamental hedge planted beyond security fence. Segregated from the assessment site by a precast concrete retaining wall that limits any root spread beyond the boundary. Occasional self-seeded sapling along the security fence itself. Remove rogue trees along security fence. Continue to regularly clip hedge.	>40	N/A
G19	Corsican pine <i>Pinus nigra var maritima</i> Grey willow <i>Salix cinerea</i> Swedish whitebeam <i>Sorbus intermedia</i> Common alder <i>Alnus glutinosa</i> Scots pine <i>Pinus sylvestris</i> Hazel <i>Corylus avellana</i> Wild cherry <i>Prunus avium</i>	Up to 7.5	Up to 220	Up to 4.5 2 (average)	N/A	1.5	SM	B	B	Mixed species group opposite the visitors/security office. Lamp columns and entrance barrier within group footprint. Largest tree is the cherry to the northern end of the group. Some drainage service covers are also present within the group footprint. The value of the group is strictly cumulative. Sole grey willow has significant near-to-surface roots radiating around 2m from its base. Thin out cherries to retain principal largest trunked tree at northern end of group. Root protection area does not exceed back of kerb line.	>40	(B) (2+3)