

Kenson River,
Fonmon, Barry
Tree Survey & Arboricultural Impact Assessment



For:
JBA Consulting

Based on an inspection carried out
26th & 29th September 2025

By

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Revision D (5/03/26)



Mackley Davies Associates Ltd

Landscape Architecture . Environmental Planning . Tree Surveying

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Fonmon, Barry

Tree Survey & Arboricultural Impact Assessment

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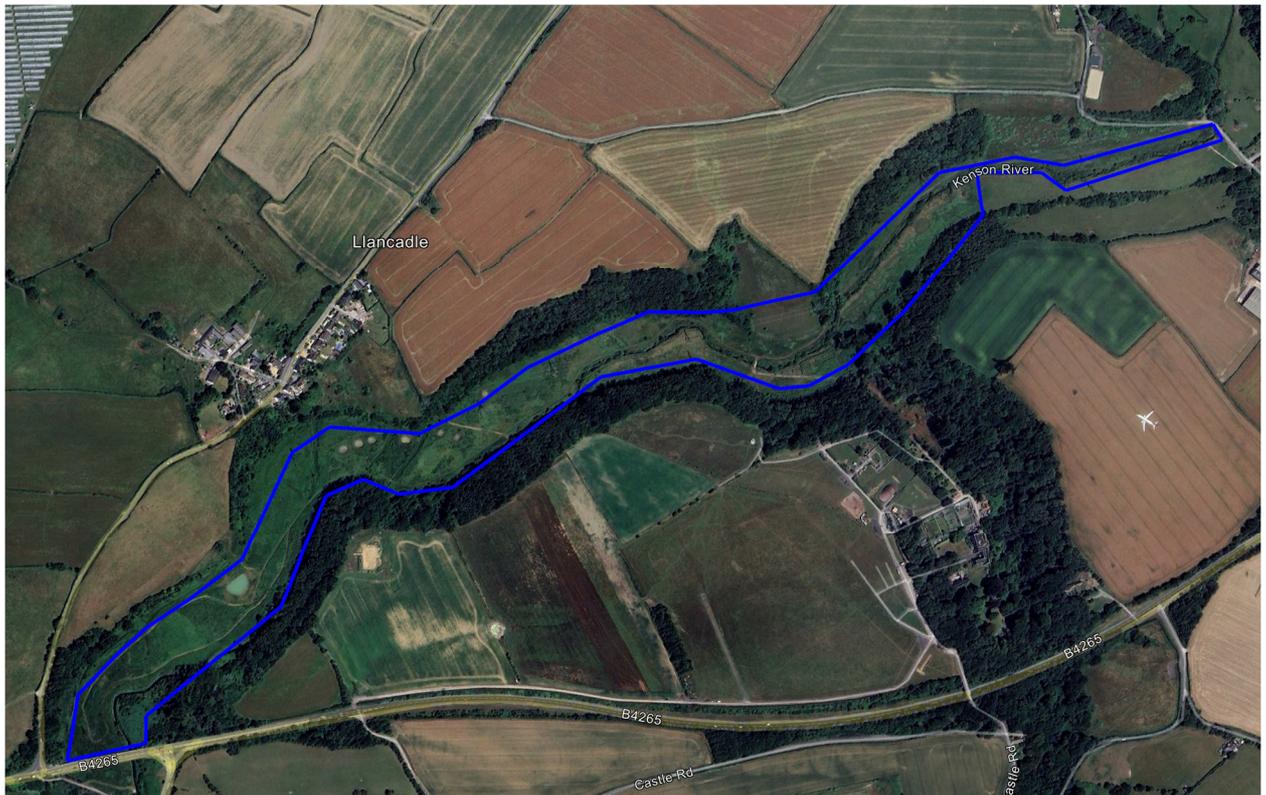
TREE SCHEDULE

Plans:

Tree constraints plans – (drwg. no. 25/1109/01C: sheets 1-4)
Tree protection plans – (drwg. no. 25/1109/02B: sheets 1-4)

1 Introduction:

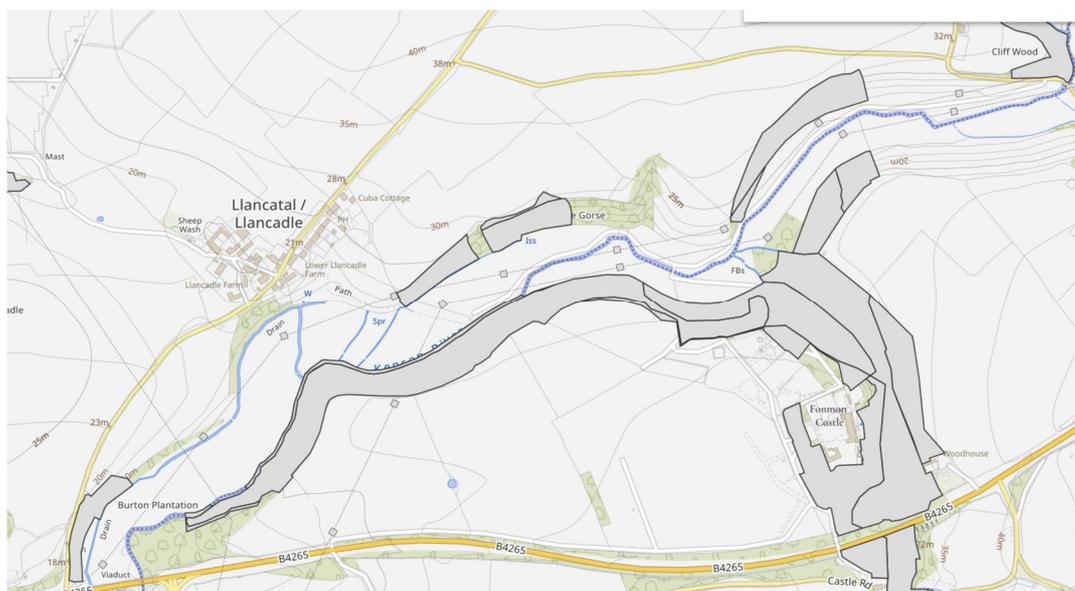
- 1.1 The following report was prepared on the instructions of JBA Consulting and concerns the proposed river restoration work on the River Kenson at the Fonmon Estate in the Vale of Glamorgan.
- 1.2 It is based upon the findings of a tree survey carried out on 26th & 29th September 2025 to assess the existing trees in terms of health, condition, form and overall significance within the local landscape, the main objective being to assess the degree of constraint they represent with regard to the proposed river restoration work.
- 1.3 The survey area is as indicated below and as shown on the Tree Constraints Plans (25/1109/01C: sheets 1-4) which is based upon GIS information provided by the Client and aerial imagery. Please note tree locations are not accurate (approximate only) as there is currently no topographical survey mapping provided.



Survey Area: (as indicated by the blue line boundary)

2 Baseline: (Refer to tree constraints plans 25/1109/01C: sheets 1-4 and tree schedule)

- 2.1 The site is situated on a stretch of the River Kenson between Kenson Hill and the B4265. The river flows southwest through grassland and riparian habitat. The study area consists of a 2.3km long reach of the river centralised on national grid reference NGR ST 04343 68371.
- 2.2 The river flows through an area of managed, semi-improved neutral grassland that is grazed by cattle. This low lying watercourse has been straightened, modified and realigned along its length. The riverbanks are dominated by scattered ash, hawthorn and willow scrub with occasional spindle.
- 2.3 The steep valley sides enclosing the site are dominated by mature woodland and scrub vegetation which includes areas of Ancient Semi-Natural Woodland together with Restored Ancient woodland and Plantation on Ancient Woodland Sites. Castle Wood to the south and Llancadle Gorse to the north are designated Local Wildlife sites.
- 2.4 This channel side vegetation consists of early-mature willow (both grey & white willow) and hawthorn with occasional mature ash. The majority of the ash is infected with ash dieback disease to varying degrees with numerous dead/moribund specimens both within the riparian zone and within the mature woodland on the valley sides.
- 2.5 This scrubby riverside vegetation provides good habitat and wildlife value but is generally considered to be of low arboricultural value which could be relatively easily replaced and have therefore been allocated as retention category 'C' trees.
- 2.6 Mature oak, sycamore and field maple within the valley side mixed woodland areas are considered to be of high/moderate value and are classified as retention category 'B' trees some of which are located within close proximity to the existing river channel.
- 2.7 Blocks of hybrid poplar, larch, spruce and western red cedar within the woodland areas are considered to be retention category 'C' trees with lower arboricultural value.



Ancient Semi-Natural Woodland (Data Map Wales)

3 Arboricultural Impact Assessment:

- 3.1 The proposed river restoration work includes for the provision of bank regrading work, channel infilling and riparian planting.
- 3.2 The precise tree locations have not yet been plotted by topographical survey, however the approximate locations have been plotted using aerial images and lidar. The indicative impacts on the existing tree population have been assessed from the available information. The Client intends to work on site with the Contractor to retain as many existing trees as possible.
- 3.3 The main impacts on existing vegetation will be located along the existing channel as a result of the proposed bank regrading works.
- 3.4 A total of 83no. category 'C' trees (including those in groups) will potentially be impacted by the works, however it is envisaged that regrading work will be adjusted on site to avoid excavations within the root protection areas of these trees ensuring their retention where possible.
- 3.5 Ash dieback is present on site and a total of 8no. ash trees have been classified as retention category 'U' trees due to their poor condition. These trees are recommended for removal prior to construction.
- 3.6 Three category 'B' field maples (36, 37 & 38) are located within the area of bank regrading however it is envisaged that the proposed work will be adjusted on site to avoid any excavation within the RPA's of these three trees in order to ensure their retention.
- 3.7 Provision of 15m wide buffer zones along the edge of the ancient woodland blocks will ensure any impacts will be minimal. Areas identified for flood plain lowering works will be amended to exclude excavation within these buffer zones for woodland compartments W8 and W9.
- 3.8 The trees within W2 consist of dead poplars which have been classified as retention category 'U' trees but are not impacted by the work proposals and could be retained as standing deadwood.
- 3.9 There are 18no. individual ash and several within two groups (G4 & G5) located within the river corridor. Eleven will be impacted by the proposed restoration works eight of which are classified as retention category 'U' and recommended for removal due to ash dieback disease. It is likely that those not yet killed by ash dieback will eventually, in probability, succumb to the disease in time.
- 3.10 Scattered groups and individual specimens of scrubby vegetation consisting of hawthorn, grey willow and white willow may require removal to accommodate the proposed work. Trees that cannot be accommodated within the proposed scheme should be considered for translocation where feasible to further minimise the impacts, however it would be relatively straightforward to mitigate these impacts with new planting proposals.

- 3.11 Due to the size and nature of the site it is considered impractical to implement tree protection measures as recommended in the British Standard 5837. Alternative protection barriers will consist of post and wire stock proof fencing (1.1m high).

Potential number of trees to be removed:

BS5837:2012 Quality Category:	Total no. <i>Individual trees to be potentially removed</i>	Total no. <i>Group trees to be potentially removed</i>
A – High	0no.	0no.
B – Moderate	0no.	0no.
C - Low	22no.	8 groups: (61no.)
U - Poor	8no.	0no.
Total nos.	30no.	61no.

Note: The Client intends to work on site with the Contractor to retain as may existing trees as possible.

Existing tree schedule:

The table following overleaf provides details of the tree surveyed; notes on the terms and abbreviations used can be found at Appendix 2 following the tree schedule.

TREE SCHEDULE

ID	Species	Stem No.	Trunk Diam (mm)	Height (m.)	Crown Spread (metres)				Clearance (metres)		Life stage	Health & Vigour	Structural Condition	Remaining useful life	Observations	Retention CATEGORY	Protection Radius (m)	RPA (m ²)
					N	E	S	W	Mean	Lowest over site + Direction								
Individual trees and shrubs: (scattered along length of riverbanks)																		
1	Ash	1	100	4	1.5	1.5	1.5	1.5	2	-	EM	Fair	Fair	10-20		Ci	1.2	5
2	Hawthorn	2	440	5	3	3	3	3	1	-	EM	Fair	Fair	10-20		Ci	5.3	88
3	Ash	3	240	6	-	-	-	-	-	-	EM	Dead	Fair	<10	Ash dieback disease (stage 4)	U	-	-
4	Ash	3	240	5	-	-	-	-	-	-	EM	Dead	Fair	<10	Ash dieback disease (stage 4)	U	-	-
5	Hawthorn	3	240	5	2	2	2	2	1	-	EM	Fair	Fair	10-20		Ci	2.9	26
6	Hawthorn	3	200	3	1.5	1.5	1.5	1.5	0.5	-	EM	Fair	Fair	10-20		Ci	2.4	18
7	Ash	3	480	14	3.5	3.5	3.5	3.5	1.5	-	M	Fair	Fair	10-20	Ash dieback disease (stage 2)	Ci	5.8	104
8	Hawthorn	1	180	4	2.5	2.5	2.5	2.5	0	-	EM	Fair	Fair	10-20		Ci	2.2	15
9	Ash	1	470	8	4.5	4.5	4.5	4.5	2	-	M	Fair	Fair	<10	Ash dieback disease (stage 4)	U	-	-
9a	Ash	m/s	360	12	3	3	3	3	2	-	M	Poor	Fair	10-20	Ash dieback disease (stage 2)	Ci	4.3	59
10	Ash	1	360	14	3	3	3	3	2.5	-	M	Fair	Fair	<10	Ash dieback disease (stage 4)	U	-	-
11	Hawthorn	1	220	4	1.5	1.5	1.5	1.5	0.5	-	EM	Fair	Fair	10-20		Ci	2.6	22
12	Hawthorn	1	230	6	2.5	2.5	2.5	2.5	0	-	EM	Fair	Fair	10-20		Ci	2.8	24
13	Ash	1	400	8	3.5	3.5	3.5	3.5	1.5	-	M	Fair	Fair	10-20		Ci	4.8	72
14	Hawthorn	1	240	5	2.5	2.5	2.5	2.5	0	-	EM	Fair	Fair	10-20		Ci	2.9	26
15	Spindle	m/s	220	4	2	2	2	2	1	-	EM	Fair	Fair	10-20		Ci	2.6	22

ID	Species	Stem No.	Trunk Diam (mm)	Height (m.)	Crown Spread (metres)				Clearance (metres)		Life stage	Health & Vigour	Structural Condition	Remaining useful life	Observations	Retention CATEGORY	Protection Radius (m)	RPA (m ²)
					N	E	S	W	Mean	Lowest over site + Direction								
16	Hawthorn	1	240	5	3	3	3	3	0.5	-	EM	Fair	Fair	10-20		Ci	2.9	26
17	Grey willow	1	120	8	1.5	1.5	1.5	1.5	1	-	EM	Fair	Fair	10-20		Ci	1.4	7
17a	Ash	1	<75	2	1	1	1	1	1	-	Y	Dead	Fair	<10		U	-	-
17b	Hawthorn	m/s	200	3	2.5	2.5	2.5	2.5	0	-	EM	Fair	Fair	10-20		Ci	2.4	18
17c	Hawthorn	m/s	180	3	2.5	2.5	2.5	2.5	0	-	EM	Fair	Fair	10-20		Ci	2.2	15
18	Hawthorn	3	460	6	3	3	3	3	0.5	-	M	Fair	Fair	10-20		Ci	5.5	96
19	Ash	1	460	10	4	4	4	4	1.5	-	M	Fair	Fair	10-20		Ci	5.5	96
19a	Grey willow	1	340	8	5	5	5	5	1.5	-	EM	Fair	Fair	10-20		Ci	4.1	52
19b	Spindle	1	120	3	2	2	2	2	1	-	EM	Fair	Fair	10-20		Ci	1.4	7
20	Ash	1	510	18	6	6	6	6	2	-	M	Fair	Fair	10-20	Hawthorn at base of tree	Ci	6.1	118
21	Elder	m/s	300	10	3.5	3.5	3.5	3.5	1	-	M	Fair	Fair	10-20		Ci	3.6	41
22	Hawthorn	1	280	8	3	3	3	3	1.5	-	EM	Fair	Fair	10-20		Ci	3.4	35
23	Hawthorn	1	340	10	3	3	3	3	1.5	-	EM	Fair	Fair	10-20		Ci	4.1	52
24	Ash	1	560	8	5	5	5	5	1.5	-	M	Good	Good	10-20	Lean over river channel	Ci	6.7	142
25	Ash	1	480	10	-	-	-	-	-	-	M	Poor	Fair	<10	Ash dieback disease (stage 4)	U	-	-
25a	Ash	1	240	6	-	-	-	-	-	-	EM	Poor	Fair	<10	Ash dieback disease (stage 4)	U	-	-
26	Hawthorn	m/s	240	4	1.5	1.5	1.5	1.5	0	-	EM	Fair	Fair	10-20		Ci	2.9	26
27	Ash	1	360	6	4	4	4	4	2	-	EM	Poor	Fair	<10	Ash dieback disease (stage 4)	U	-	-
28	Ash	3	345	6	3.5	3.5	3.5	3.5	1	-	EM	Fair	Fair	10-20	Ash dieback disease (stage 2)	Ci	4.1	54

ID	Species	Stem No.	Trunk Diam (mm)	Height (m.)	Crown Spread (metres)				Clearance (metres)		Life stage	Health & Vigour	Structural Condition	Remaining useful life	Observations	Retention CATEGORY	Protection Radius (m)	RPA (m ²)
					N	E	S	W	Mean	Lowest over site + Direction								
29	Hawthorn	m/s	140	2	1.5	1.5	1.5	1.5	0	-	EM	Fair	Fair	10-20		Ci	1.7	9
30	Hawthorn	m/s	200	4	2	2	2	2	1	-	EM	Fair	Fair	10-20		Ci	2.4	18
31	Hawthorn	m/s	180	4	2	2	2	2	1	-	EM	Fair	Fair	10-20		Ci	2.2	15
32	Ash	1	380	14	5	5	5	5	1.5	-	M	Fair	Fair	10-20		Ci	4.6	65
33	Oak	1	380	12	5	5	5	5	2	-	EM	Good	Good	20-20		Bii	4.6	65
34	Field maple	1	210	8	3.5	3.5	3.5	3.5	1.5	-	M	Good	Good	20-20		Bii	2.5	20
35	Field maple	1	320	10	3	3	3	3	2	-	M	Good	Good	20-20		Bii	3.8	46
36	Sycamore	1	620	14	5	5	5	5	2	-	M	Good	Good	20-20		Bii	7.4	174
37	Field maple	1	300	10	3	3	3	3	2	-	M	Good	Good	20-20		Bii	3.6	41
38	Field maple	1	280	6	3	3	3	3	2	-	M	Good	Good	20-20		Bii	3.4	35
39	Goat willow	m/s	300	6	3	3	3	3	2	-	EM	Fair	Fair	10-20		Ci	3.6	41
40	Ash	1	180	5	2	2	2	2	1	-	EM	Fair	Fair	10-20		Ci	2.2	15
Groups of trees and shrubs: (scattered along length of riverbanks)																		
G1	Hawthorn	m/s	<230	<5	1.5 x 1.5m				1	-	EM	Fair	Fair	10-20	Group of 10no. scattered trees	Cii	2.8	-
G2	Hawthorn	m/s	<230	<5	1.5 x 1.5m				1	-	EM	Fair	Fair	10-20	Group of 5no. scattered trees	Cii	2.8	-
G2a	Hawthorn	m/s	<230	<5	1.5 x 1.5m				1	-	EM	Fair	Fair	10-20	Group of 4no. scattered trees	Cii	2.8	-
G3	Hawthorn, elder, spindle	m/s	<180	4	1.5 x 1.5m				0.5	-	EM	Fair	Fair	10-20	Group of 11no. scattered trees	Cii	2.2	-
G4	Hawthorn, ash	m/s	<460	6	2 x 2m				1	-	EM	Fair	Fair	10-20	Two groups of 12no. & 13no. scattered trees	Cii	5.5	-

ID	Species	Stem No.	Trunk Diam (mm)	Height (m.)	Crown Spread (metres)				Clearance (metres)		Life stage	Health & Vigour	Structural Condition	Remaining useful life	Observations	Retention CATEGORY	Protection Radius (m)	RPA (m ²)
					N	E	S	W	Mean	Lowest over site + Direction								
G5	Willow, hawthorn, ash	m/s	<120	<4	3 x 3m				0.5	-	EM	Fair	Fair	10-20	Group of 11no. scattered trees. Bank side scrub.	Cii	1.4	-
G6	Grey willow, white willow	m/s	<200	<4	4 x 4m				1	-	EM	Fair	Fair	10-20	Group of 10no. scattered trees. Mainly on SE bank	Cii	2.4	-
G7	Grey willow	m/s	<180	2	4 x 4m				0.5	-	EM	Fair	Fair	10-20	Group of 5no. scattered trees.	Cii	2.2	-
G8	Grey willow, white willow	m/s	<400	<8	5 x 5m				0.5	-	EM	Fair	Fair	10-20	Two groups of 9 & 5no. scattered trees.	Cii	4.8	-
G9	Grey willow	m/s	<200	<4	4 x 4m				1	-	EM	Fair	Fair	10-20	Group of 9no. scattered trees. Mainly on South bank	Cii	2.4	-
Woodlands and areas of scrub: (Located on valley sides)																		
W1	Ash, sycamore, beech	m/s	<360	12-14	4 x 4m				2	-	M	Good	Good	40+	Ancient Semi-Natural Woodland, trees at 2-4m centres, hawthorn, hazel, sycamore understorey. Dense ivy ground flora	Biii	15.0	-
W2	Hybrid poplar	1	<600	<25	6 x 6m				2	-	M	Dead	Fair	<10	Dead/moribund, hawthorn scrub edge mix along river corridor. Standing deadwood habitat	U	-	-
W3	Hybrid poplar	1	<800	25+	6 x 6m				2	-	M	Good	Good	20-40	Hybrid poplar plantation	Cii	9.6	-
W3a	Western red cedar	1	<480	<25	4 x 4m				2	-	M	Good	Good	20-40	Western red cedar plantation	Cii	5.8	-
W4	Oak, larch	1	<600	<20	3 x 3m				2	-	M	Good	Good	20-40	Ancient Semi-Natural Woodland, hazel, hawthorn, spindle edge (6m height). Ivy, harts tongue, ferns, dog rose ground flora	Biii	15.0	-
W5	Ash, oak, beech, larch, sycamore	1	<500	<24	4 x 4m				2	-	M	Good	Good	20-40	Ancient Semi-Natural Woodland, hazel, sycamore, dogwood edge mix (4-6m height) occasional cherry laurel	Biii	15.0	-

ID	Species	Stem No.	Trunk Diam (mm)	Height (m.)	Crown Spread (metres)				Clearance (metres)		Life stage	Health & Vigour	Structural Condition	Remaining useful life	Observations	Retention CATEGORY	Protection Radius (m)	RPA (m ²)
					N	E	S	W	Mean	Lowest over site + Direction								
W6	Larch, spruce	1	<480	25+	3 x 3m				2	-	M	Good	Good	20-40	Plantation on Ancient Woodland Site, wych elm edge mix (10m height), dense ground flora inc. ivy, harts tongue & ferns	Ciii	15.0	-
W7	Ash, oak, field maple, larch, pine	1	<640	20	4 x 4m				2	-	M	Good	Good	20-40	Ancient Semi-Natural Woodland, hazel, holly, wych elm understorey, dense ground flora ivy	Biii	15.0	-
W7a	Ash, oak, field maple, larch, pine	1	<640	<20	4 x 4m				2	-	M	Good	Good	20-40	Plantation on Ancient Woodland Site, hazel, holly, wych elm understorey, dense ground flora ivy	Biii	15.0	-
W8	Ash, Sweet chestnut, cherry, pine, western red cedar, larch (4-6m centres)	1	<440	<24	4 x 4m				2	-	M	Good	Good	20-40	Plantation on Ancient Woodland Site, hazel, hawthorn, field maple understorey (occasional dogwood), sparse ground flora ivy, harts tounge, ferns dogs mercury, Ash dieback	Biii	15.0	-
W9	Ash, oak, larch, western red cedar	1	<480	25+	4 x 4m				2	-	M	Good	Good	20-40	Ancient Semi-Natural Woodland, hawthorn, field maple, blackthorn, elm edge mix (8-12m height)	Biii	15.0	-
W9a	Ash, oak, larch, western red cedar	1	<480	25+	4 x 4m				2	-	M	Good	Good	20-40	Hawthorn, field maple, blackthorn, elm edge mix (8-12m height)	Cii	5.8	-
S1	Hawthorn, hazel, alder	m/s	<240	12	2.5 x 2.5m				0	-	M	Good	Good	20-40	Scrub vegetation (occasional ash & alder to 16m)	Cii	2.9	-
S2	Hawthorn, blackthorn	m/s	<180	4	2 x 2m				0	-	M	Good	Good	20-40	Scrub vegetation	Cii	2.2	-

Estimated tree diameter

Details of the Terms & Abbreviations used are provided in Appendices

APPENDIX 1: Methodology

- The report has been framed as an 'Arboricultural Constraints Report', as defined in BS5837:2012 - *Trees in relation to design, demolition & construction-Recommendations*. Its purpose is to set out and to quantify the degree of constraint offered by existing tree cover with regard to any development or alteration in land-use that may be proposed and is intended to be used to inform feasibility studies and design options. As such it reflects the conditions *as they existed at the time of our inspections*: no account has been taken of any specific development proposals, although it has been assumed that certain unspecified alterations in site usage patterns are likely to occur, which are likely to result in an increase in site occupancy levels. Additional arboricultural input may be required at subsequent stages of design, planning and implementation in relation to the assessment & management of possible arboricultural impacts.
- The survey parameters are as set out in BS5837:2012 and based on the findings each tree or group is allocated to one of four 'Retention Categories' (see Appendix 2, p2). The factors taken into account in categorising the trees include their overall arboricultural quality, their general health and structural stability, their likely useful life-expectancy, their significance to the local landscape and general public amenity value, the degree to which they provide wildlife habitat and enhance local biodiversity and any other social or cultural values that they may embody.
- Also integral to the methodology of BS5837 is the calculation of **Root Protection Areas (RPAs)** for each of the trees in question. The RPA is defined as a "*layout design tool indicating the minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the tree's viability, and where the protection of the roots and soil structure is treated as a priority.*"
- It should be noted that in most cases the plan accompanying this report will show the *nominal* RPAs of the trees, indicated as circles centred upon the tree of a radius such that they enclose an area equal to the relevant RPA. In practice the distribution of roots around a tree will frequently prove to be uneven due to the presence of a variety of constraining influences. These may be physical barriers such as existing foundations etc, or the existence of localised soil conditions inhospitable to root growth, such as waterlogging or soil compaction. Conversely, soil conditions may be particularly *conducive* to root development in one quarter and this might also lead to an asymmetric distribution of roots around the tree. However in most cases the nominal circular areas as indicated will provide a reasonable guide as to where special measures will be required to protect tree roots and preserve good soil condition.
- The RPAs of the trees will provide the basis for defining **Construction Exclusion Zones (CEZs)**, these being areas around all of those trees intended to be retained where access should be prevented throughout the entire process of site preparation and construction. In certain cases the CEZ will exceed the size of the RPA in order to accommodate the aerial parts of wide-spreading trees.
- Access within the CEZ should be prevented through the erection of barriers, constructed in accordance with BS5837:2012. Where access within an RPA is unavoidable, appropriate ground protection should be installed. Outline details of the design of suitable barriers and ground protection are given in Appendices A & B. These protection measures should be put in place prior to any site clearance or construction work commencing on the site and they should remain *in situ* until all works have been completed. Some activities within the CEZs may be acceptable but should not be put in hand until appropriate arboricultural advice has been sought.

The **DIMENSIONS** Taken are:

- **STEM-No.** indicates the number of main stems (i.e. whether the trunk divides at or below 1.5m; (Used in the calculation of RPA.) “m-s” = Multi-stemmed.
- **DIAMETER** (in centimetres), obtained from the girth measured at approx.1.5m. For trees with 2 to 5 sub-stems, a notional figure is derived from the sum of their cross-sectional areas. For multi-stemmed trees the notional diameter may be estimated on the basis of the average stem size x the number of stems. (A notional diameter may be estimated where measurement is not possible.)
- **HEIGHT**, estimated and expressed in metres.
- The **CROWN SPREAD** is expressed in terms of the crown radii estimated at the four cardinal points (or as otherwise specified) and given in metres.
- **CLEARANCES** are indicated as an estimate of the *mean, overall* height of the canopy above ground level with an additional figure for the height above ground of the *lowest significant branch* within the site, together with the direction of its growth.

LIFE STAGE is defined as follows:

- P** recently Planted; sapling: A tree that is still establishing and which would be relatively easy to replace or even transplant. Likely to be vulnerable to damage from (e.g.) trimmers, mowing equipment, drought, vandals, etc. (Easily replaced thus a negligible constraint).
- Y** Young, establishing trees. Should be growing fast, usually primarily increasing in height more than spread, but as yet making limited impact upon the landscape.
- EM** Early-mature. Established young trees, normally of good vigour and still increasing in height, but beginning to spread laterally. Beginning to make an impact upon the local landscape & environment.
- M** Mature: Well-established trees, still growing with some vigour, but tending to fill out and increase spread. Bark may be beginning to crack & fissure. In the middle half of their safe, useful life-expectancies.
- LM** Late-Mature: In full maturity. Still retaining some vigour but growth slowing.
- O** Old: Fully mature with vigour declining. Likely to possess features that could be regarded as potential faults, such as large, ponderous branches, old wounds etc. etc., but also likely to be of high amenity value.
- A** Ancient: Old trees can survive for very many years with healthy growth continuing although the tree may be of low vigour. Crown size usually becomes reduced, either through natural branch-loss or through management (e.g. pollarding). Decay is usually present. Such trees may embody certain hazards but they are also likely to be of considerable conservation value (i.e. “Veteran” trees).

HEALTH & VIGOUR: Essentially a snapshot of the general health of the tree based upon its general appearance, its apparent vigour and the presence or absence of symptoms associated with poor health, physiological stress etc. (Fungal infections may be recorded here but *decay giving rise to structural weakness* would be recorded under ‘Structural Condition’ – see next parameter):

- Good** no significant health issues.
- Fair** indications of slight stress or minor disease (e.g. the presence of minor dieback/deadwood or of epicormic shoot growth)
- Poor** Significant stress or disease noted; larger areas of dieback than above
- Bad** Severe decline; widespread dieback and/or severe stress; life-threatening disease.
- Dead** (or Moribund)

STRUCTURAL CONDITION: Defects affecting the structural stability of the tree, including decay, significant dead wood, root-plate instability or significant damage to structural roots, weak forks (e.g. those where bark is included between the members) etc. etc. Classified as:

- Good** No obvious structural defects: basically sound
- Fair** Minor, potential or incipient defects
- Poor** Significant defect(s) likely to lead to actual failure in the medium to long-term
- Bad** Defects liable to cause significant failure in the short term, or to lead to a major or total collapse in the foreseeable future
- Severe** Tree that has already suffered or is at imminent risk of a major collapse.

REMAINING USEFUL LIFE EXPECTANCY: An estimate of the length of time in years that a tree might be expected to continue to make a useful contribution to the locality at an acceptable level of risk (based on an assumption of continued routine maintenance)

V - less than 10 years	S - 10+ years
M - 20+ years	L - 40+ years

RETENTION CATEGORY: Trees are classed as category **U**, **A**, **B** or **C**, based on criteria given in BS5837:2012; summary definitions as follow (see BS5837 for further details). Categories A, B and C are further characterised by the use of sub-categories, which attempt to identify what aspect of the tree is the main source of its perceived value:

(i) **arboricultural** qualities (ii) **landscape** qualities and (iii) **cultural, historic or ecological/conservation** qualities. Examples of these qualities for each of the three categories are given below, although these are indicative only.

Note: *This is NOT a health and safety classification; the classification does not take into account any requirement for remedial tree care or ongoing maintenance apart from that which may affect the trees' general suitability for retention.*

U UNSUITABLE: (red) Trees likely to prove to be unsuitable for retention for longer than 10 years should any significant increase in site usage arise as a result of development.

Dead or moribund trees; those at risk of collapse or in terminal decline;; trees that will be left unstable by other essential works such as the removal of nearby category U trees; trees infected by pathogens that could materially affect other trees; low quality trees that are suppressing better specimens

(Category U trees may have conservation values which it might be desirable to preserve. It may also include trees that should be removed irrespective of any development proposals.)

A HIGH QUALITY (green) Trees or groups whose retention should be given a particularly high priority within the design process. Normally with an expected useful life-expectancy of at least 40 years.

- (i) *Notably fine specimens; rare or unusual specimens; essential component trees within groups, semi-formal or formal plantings (e.g. dominant trees within an avenue etc.)*
- (ii) *Trees, groups or woodlands of particular visual importance as landscape features.*
- (iii) *Trees, groups or woodlands of particular significance by virtue of their conservation, historical, commemorative or other value (e.g. veteran trees or wood pasture.)*

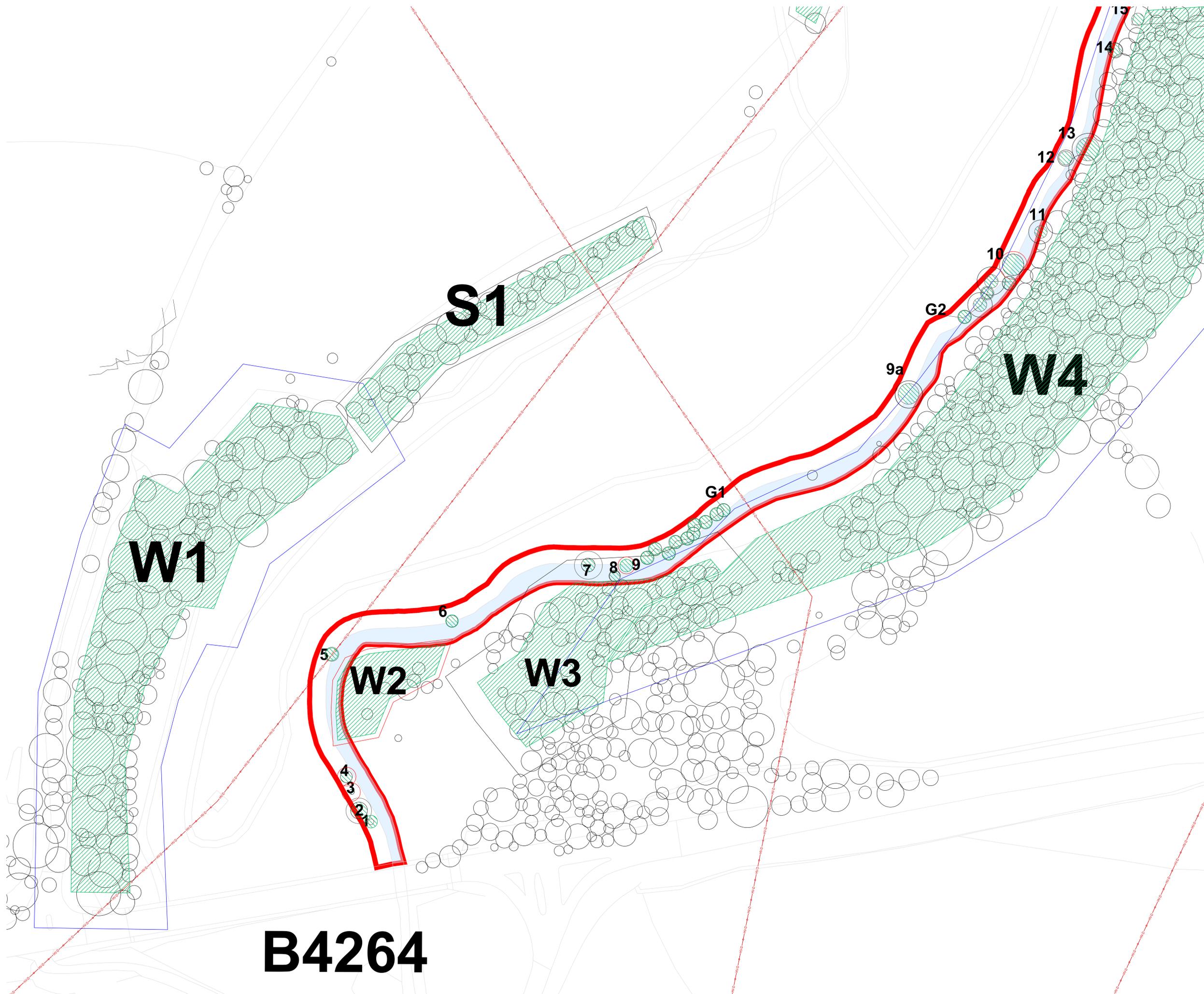
B MODERATE QUALITY (blue): Trees or groups of some importance with a likely useful life-expectancy in excess of 20 years. Their retention would be highly desirable; selective removal of certain individuals may be acceptable, but only after full consideration of all alternative courses of action.

- (i) *Fair quality but not exceptional; good specimens showing some impairment (e.g. remediable defects, minor storm damage or poor past management.)*
- (ii) *Acceptable trees situated such as to have little visual impact within the wider locality. Also numbers of trees, perhaps in groups or woodlands, whose value as landscape features is greater collectively than would warrant as individuals (such that the selective removal of an individual would not impact greatly upon the trees' overall, collective value).*
- (iii) *Trees, groups or woodlands with clearly identifiable conservation or other cultural benefits.*

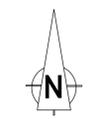
C MINOR VALUE (grey): Trees or groups of rather low quality, although potentially capable of retention for at least approx. 10 years. Also small trees below 15cm diam. Potentially retainable, but not of sufficient value to be regarded as a significant planning constraint.

- (i) *Unremarkable trees of very limited merit or of significantly impaired condition.*
- (ii) *Trees offering only low or short-term landscape benefits; also secondary specimens within groups or woodlands whose loss would not significantly diminish their landscape value.*
- (iii) *Trees with extremely limited conservation or other cultural benefit.*

ROOT PROTECTION AREA (RPA): *This is the area in square metres formed by a circle of radius (the Protection Radius) twelve times the actual or notional stem diameter of the tree (see 'Diameter', above). The RPA represents the minimum area deemed to contain sufficient roots & soil to maintain the tree's viability. It is the basis whereby the layout of the Construction Exclusion Zone (CEZ) is determined, which should encompass an area equal to the RPA, although its form may be adapted in the light of arboricultural considerations and pre-existing physical constraints. The CEZ should be protected by sturdy temporary fencing (see BS5837:2012) throughout the entire process of site preparation and construction.*



- LEGEND**
- HD Overhead
 - Scheme boundary
 - Trees are indicated by symbols below, colour coded to indicate their 'Retention Category':
 - Category U (defective, negligible or redundant trees)
 - Category A (high retention value)
 - Category B (moderate retention value)
 - Category C (low retention value)
 - APPROXIMATE crown spread of individual trees
 - APPROXIMATE area of woodland
- The nominal ROOT PROTECTION AREA (RPA) of each tree is indicated by a solid line using the colour coding above



B4264

Please Note: All tree locations are approximate only
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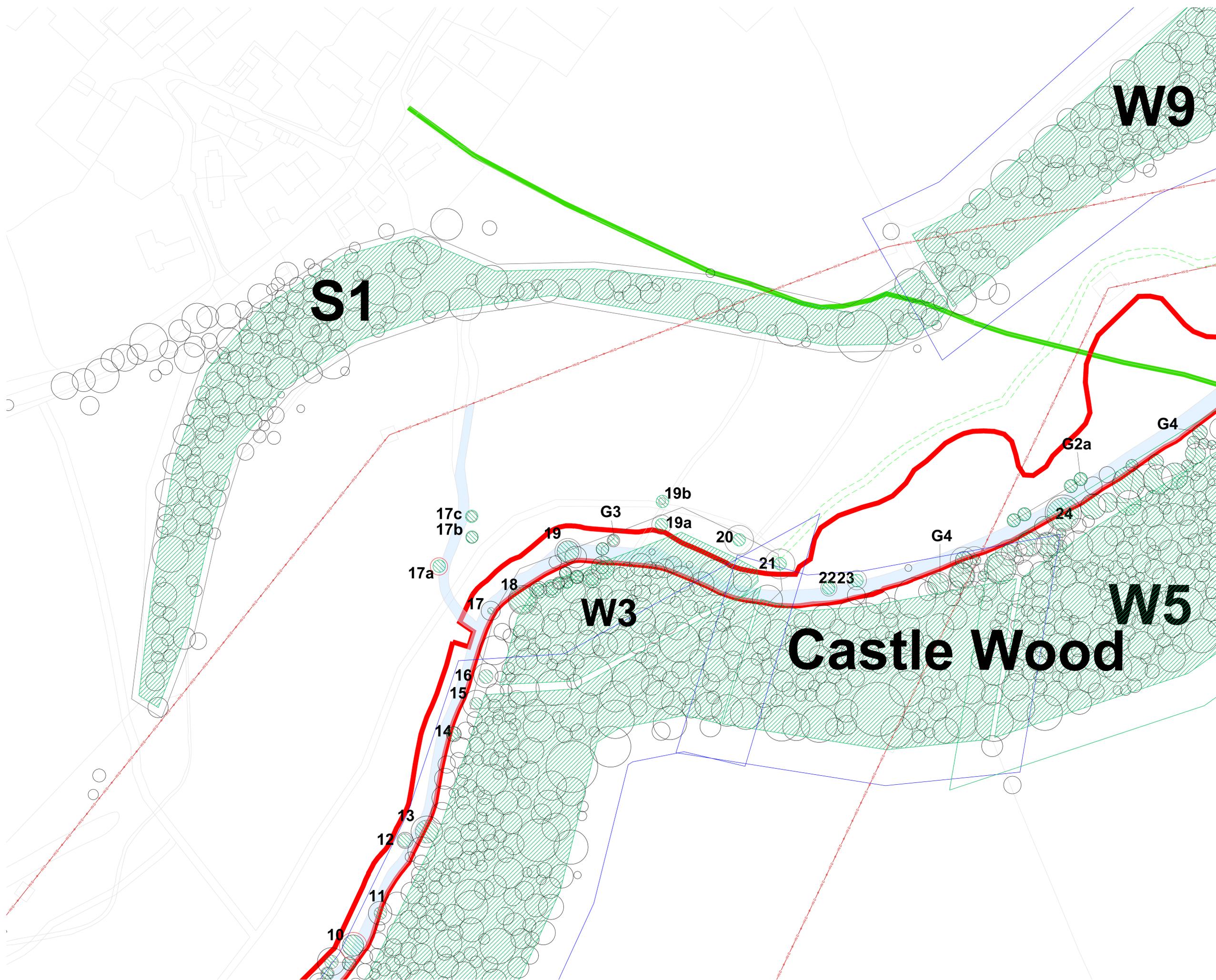
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 www@mackleydaves.co.uk

SITE
 Kenson River Restoration, Fonmon, Barry

CLIENT
 JBA Consulting

DRAWING TITLE
 Tree Constraints Plan (Sheet 1 of 4)

SCALE: 1:500 @ A0	JOB No: 25/1109/01
DATE: October 2025	REVISION No: C



- LEGEND**
- HD Overhead
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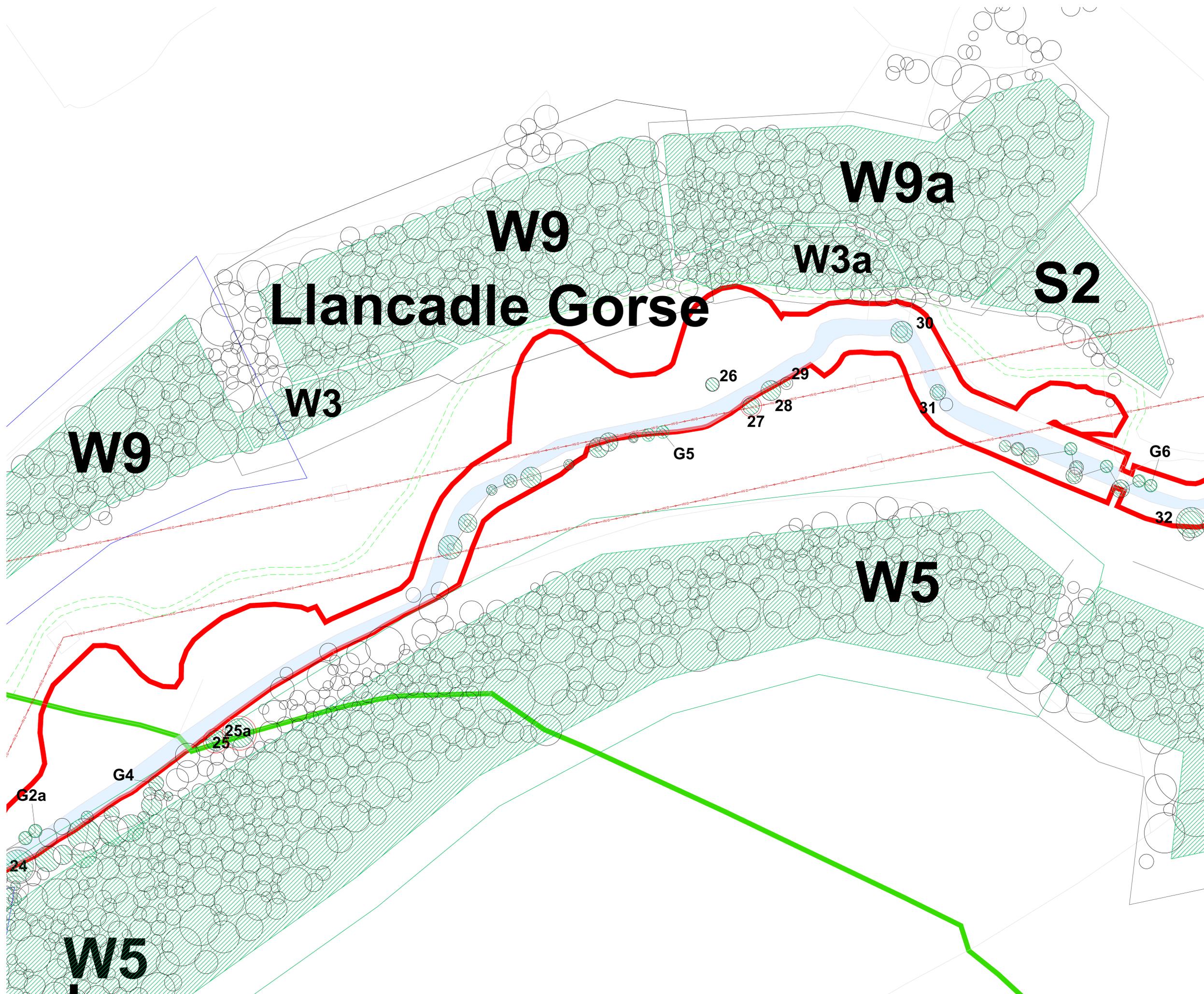
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DRAWING TITLE
 Tree Constraints Plan (Sheet 2 of 4)

SCALE 1:500 @ A0 **JOB No.** 25/1109/01
DATE October 2025 **REVISION No.** C



LEGEND

HD Overhead

Scheme boundary

Trees are indicated by symbols below, colour coded to indicate their Retention Categories:

- Category U (defective, negligible or redundant trees)
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- Category B (moderate retention value)
- Category C (low retention value)

APPROXIMATE crown spread of individual trees

APPROXIMATE area of woodland

The nominal ROOT PROTECTION AREA (RPA) of each tree is indicated by a solid line using the colour coding above



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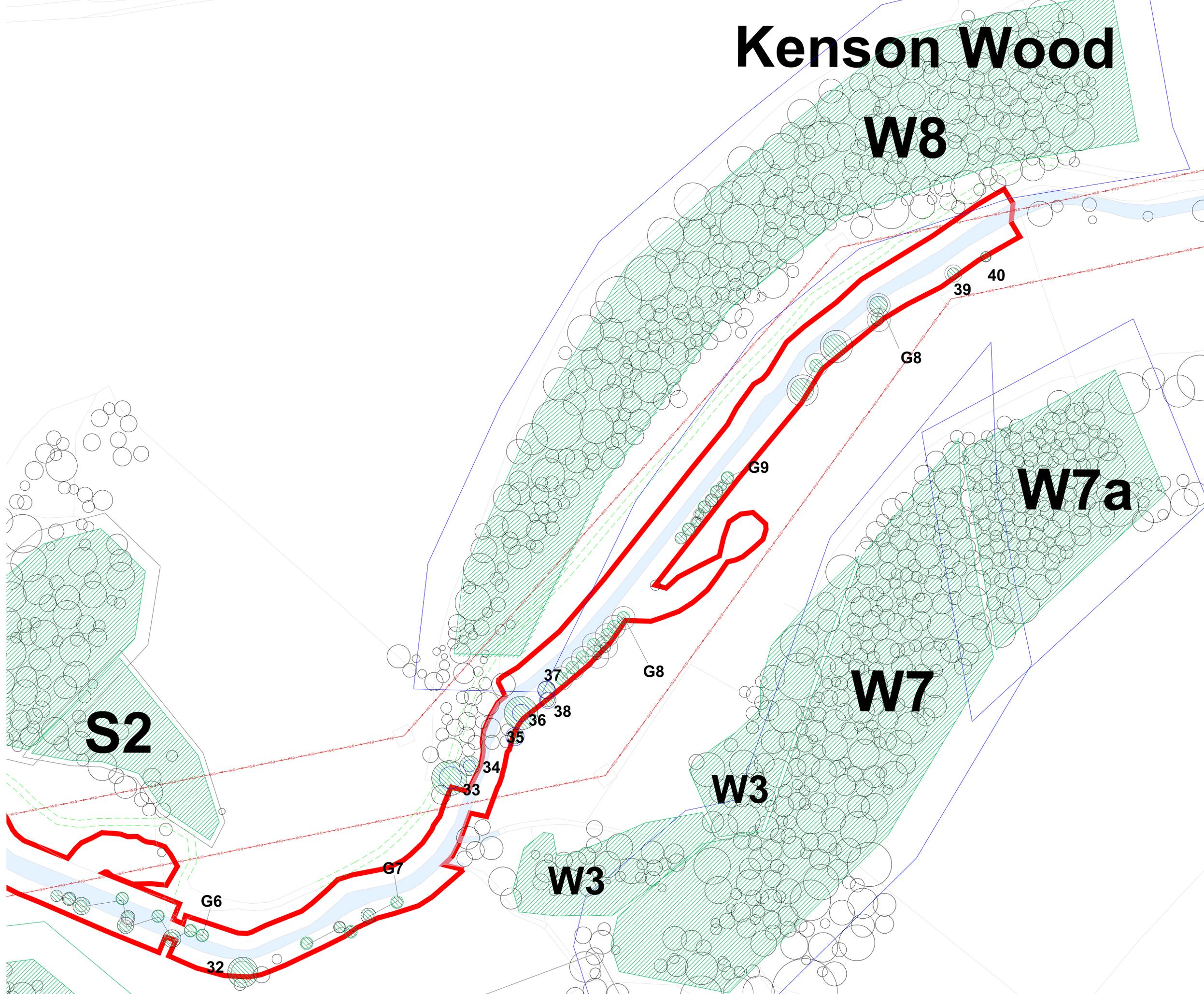
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DRAWING TITLE
 Tree Constraints Plan (Sheet 3 of 4)

SCALE: 1:500 @ A0	JOB No: 25/1109/01
DATE: October 2025	REVISION No: C

Kenson Wood



- LEGEND**
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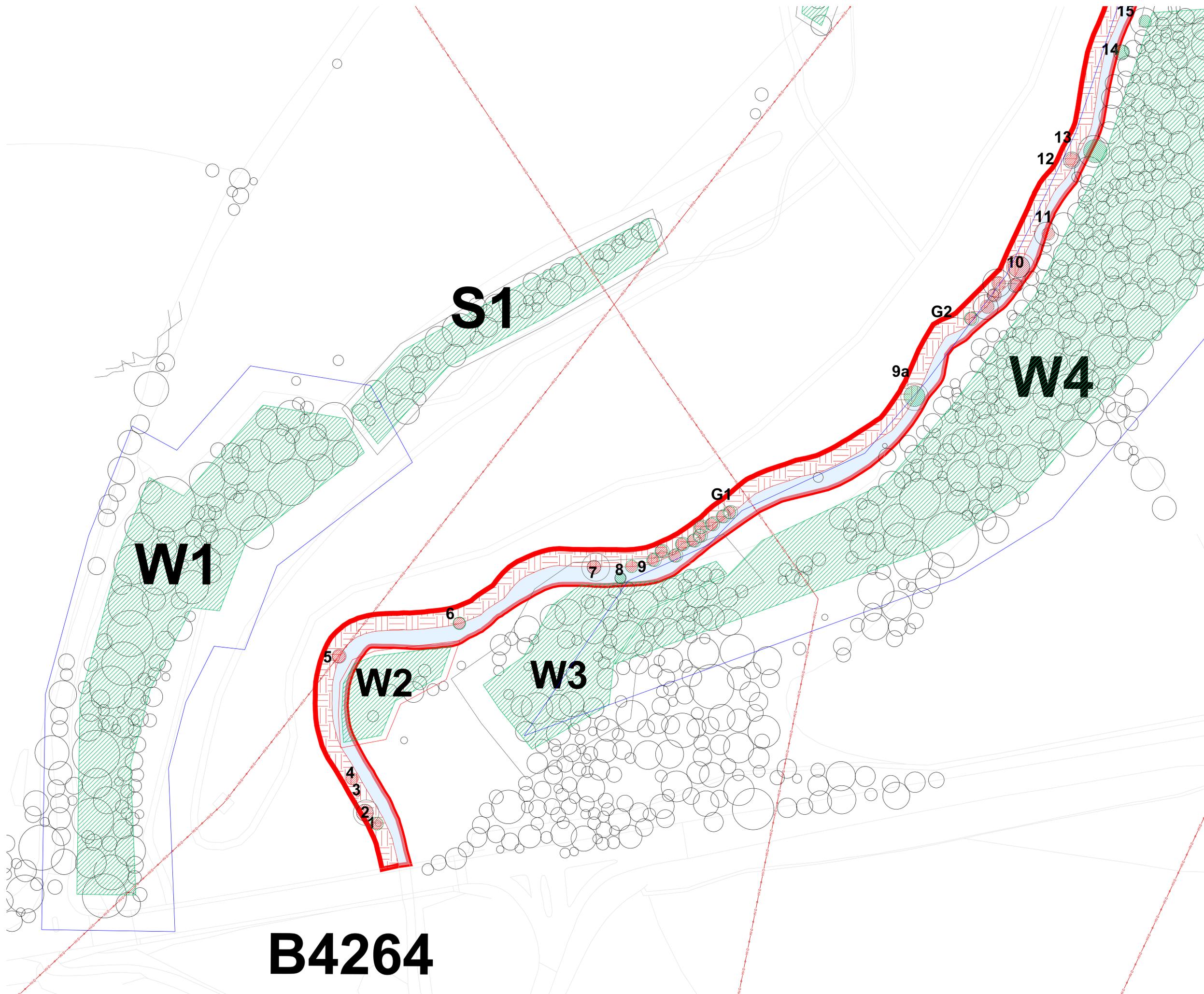
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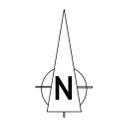
DRAWING TITLE
Tree Constraints Plan (Sheet 4 of 4)

SCALE 1:500 @ A0 JOB NO. 25/1109/01
DATE October 2025 REVISION No. C



- LEGEND**
- IN-CHANNEL BERM
 - RIPARIAN PLANTING
 - BANK REGRADING AND RIPARIAN PLANTING
 - RIFFLE CREATION
 - LARGE WOODY MATERIAL
 - BACKWATER
 - SITE ACCESS ROUTE
 - RELOCATED SITE ACCESS TRACK
 - PROPOSED SITE COMPOUND
 - EXISTING TREES
 - HV OVERHEAD

- Scheme boundary
- Trees are indicated by symbols below, colour coded to indicate their 'Retention Categories'.
- Trees to be potentially removed
 - Category A (to be retained)
 - Category B (to be retained)
 - Category C (to be retained)
 - APPROXIMATE crown spread of individual trees
 - APPROXIMATE area of woodland
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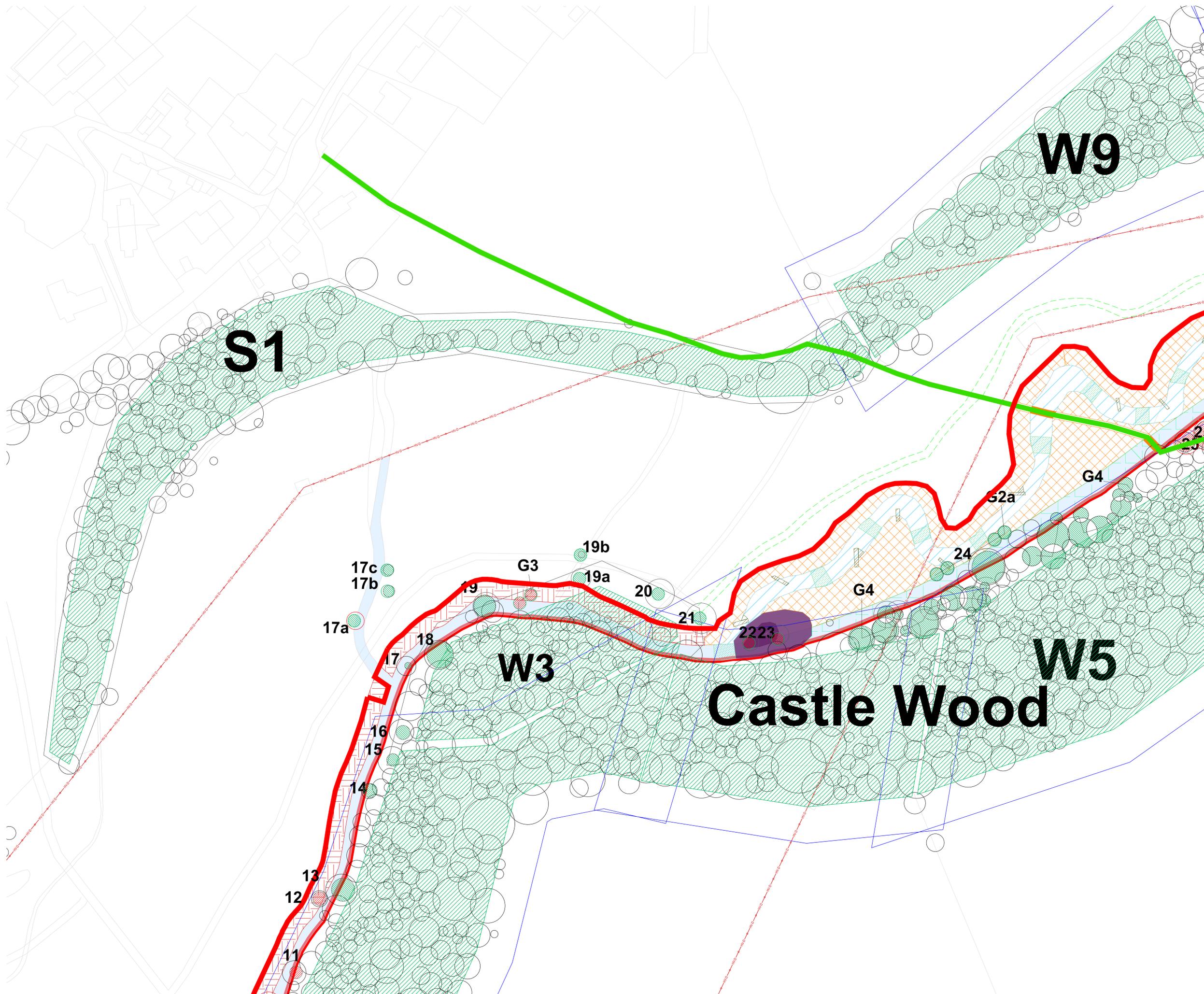
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DRAWING TITLE
 Tree Protection Plan (Sheet 1 of 4)

SCALE 1:500 @ A0 JOB No. 25/1109/02
 DATE February 2026 REVISION No. B



- LEGEND**
- IN-CHANNEL BERM
 - RIPARIAN PLANTING
 - BANK REGRAVING AND RIPARIAN PLANTING
 - RIFFLE CREATION
 - LARGE WOODY MATERIAL
 - BACKWATER
 - SITE ACCESS ROUTE
 - RELOCATED SITE ACCESS TRACK
 - PROPOSED SITE COMPOUND
 - EXISTING TREES
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Castle Wood

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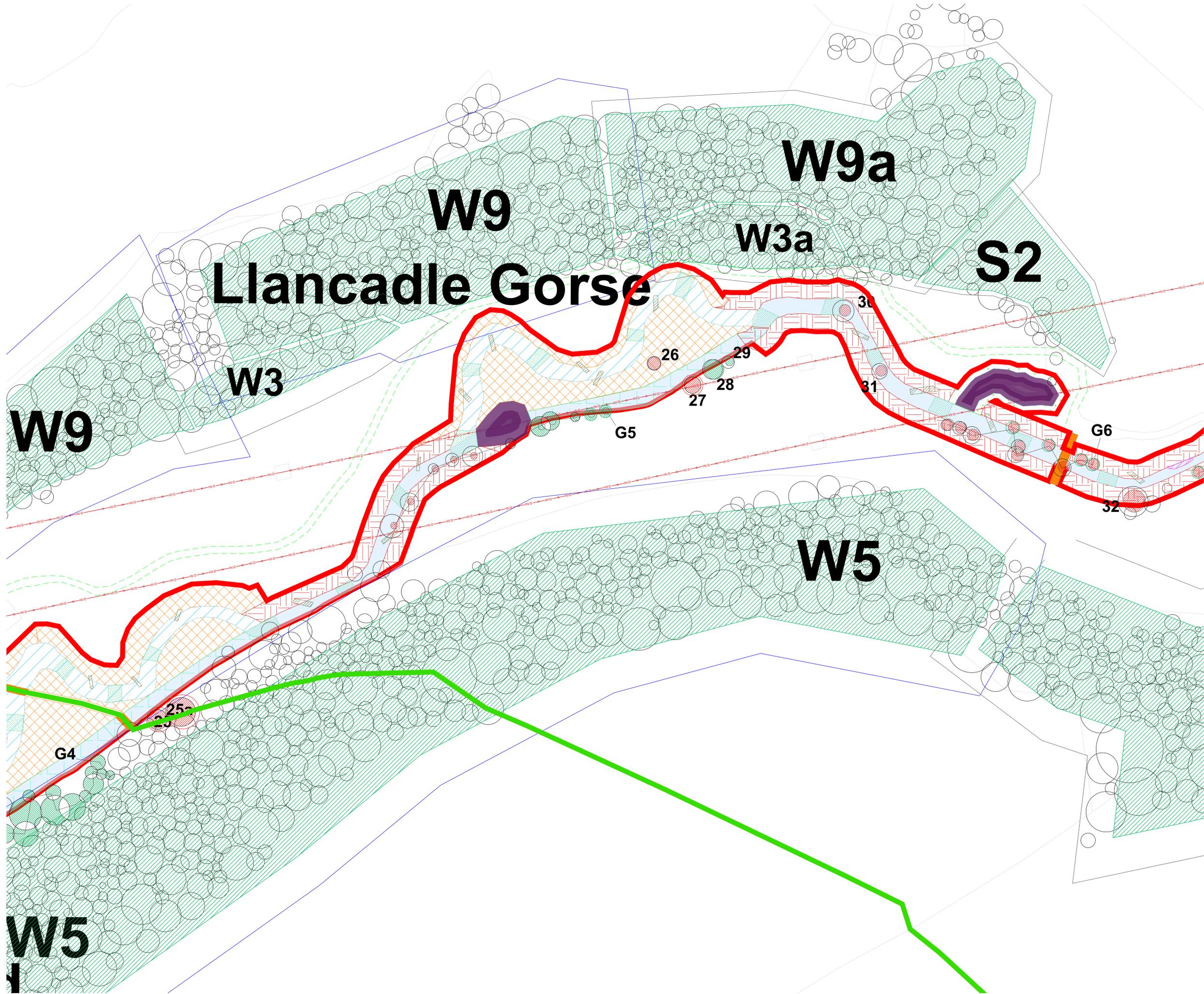
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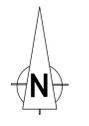
DRAWING TITLE
 Tree Protection Plan (Sheet 2 of 4)

SCALE 1:500 @ A0
 DATE February 2026
 REVISION No. B



- LEGEND**
- IN-CHANNEL BERM
 - RIPARIAN PLANTING
 - BANK REGRADING AND RIPARIAN PLANTING
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 Tree Protection Plan (Sheet 3 of 4)

SCALE 1:500 @ A0 **JOB No.** 25/1109/02
DATE February 2026 **REVISION No.** B

Kenson Wood

W8

W7a

W7

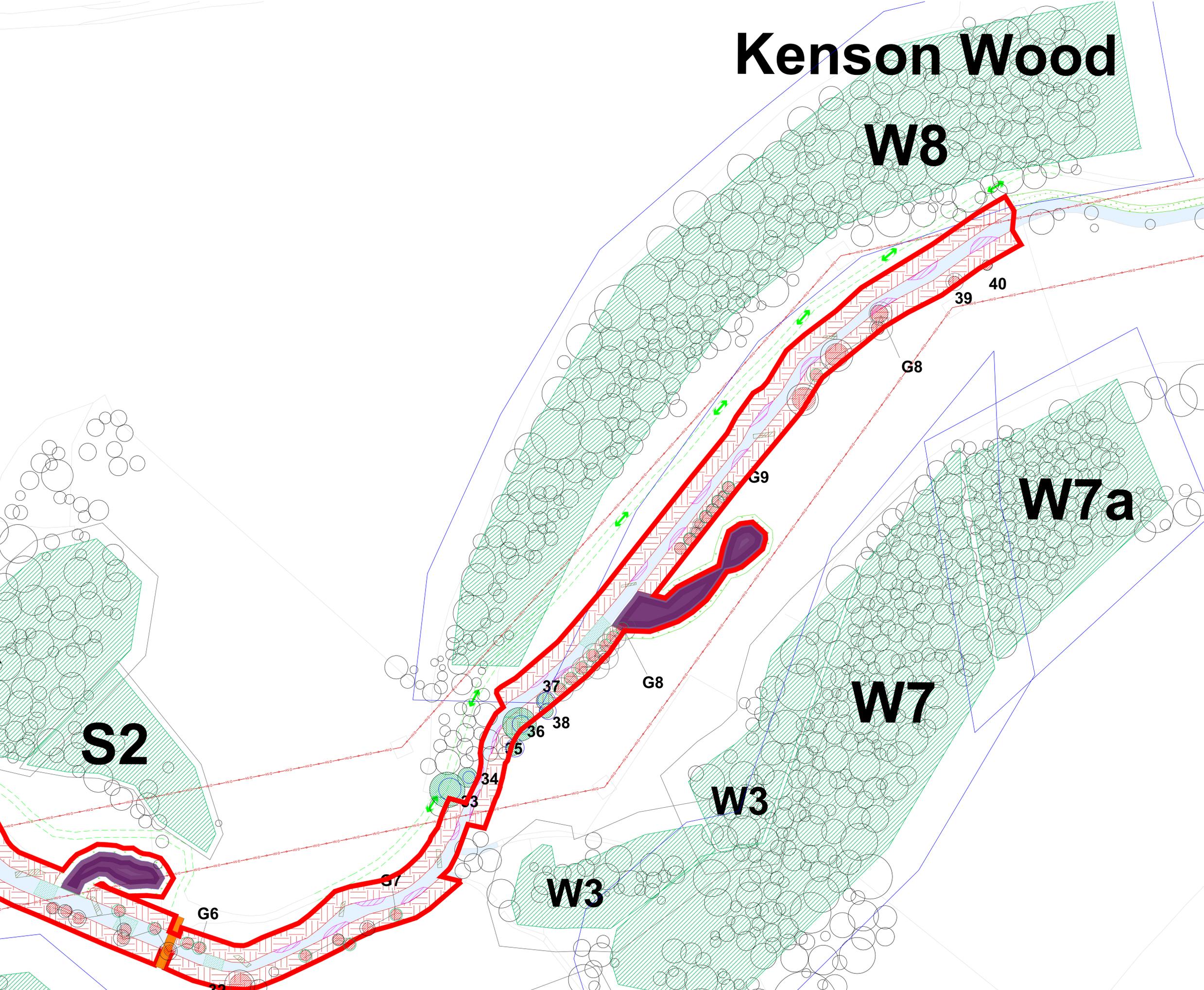
W3

W3

S2

- LEGEND**
-  IN-CHANNEL BERM
 -  RIPARIAN PLANTING
 -  BANK REGRADING AND RIPARIAN PLANTING
 -  RIFFLE CREATION
 -  LARGE WOODY MATERIAL
 -  BACKWATER
 -  SITE ACCESS ROUTE
 -  RELOCATED SITE ACCESS TRACK
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