Garden Cottage,
Rhiwderin
Arboricultural Impact Assessment & Method Statement

For:

David Williams Homes Ltd

Based on an inspection carried out

8th August 2024

By

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REVISION A

Arboricultural ASSOCIATION Professional Member

Landscape Institute Registered Practice

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Landscape Architecture . Environmental Planning . Tree Surveying

Pensaerniaeth Tirwedd . Cynllunio Amgylcheddol . Arolygu Coed

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1 Summary:

1.1 The following report was prepared on the instruction of David Williams Homes Ltd and concerns the residential property and grounds at Garden Cottage, Pentrepoeth Road, Rhiwderin NP10 8RT.

1.2 The report is based upon the findings of a survey carried out on 8th August 2024 to assess the existing trees in terms of health, condition, form and overall significance within the local environment, the main objective being to assess the degree of constraint they represent with regard to the proposed development of the site. The methodology used is outlined in Appendix 1, while Appendix 2 sets out definitions of the terms used and codes used in the Tree Schedule.

1.3 Weather conditions were warm and wet with adequate visibility for the purposes of this investigation. All inspections were made from ground level only: only those features apparent at the time of the inspection could be considered and no liability can be accepted regarding trees or their parts that were inaccessible or obscured in part or in whole.

1.4 It should be noted that, although the health and safety of the trees is part of the assessment methodology used, this report is intended for planning purposes only; it should not be construed as a tree risk assessment. Faults may be identified and recorded as part of this study but unless the trees in question represent a significant hazard under the existing site conditions, management recommendations will not normally be made. It remains the tree owner's responsibility to ensure the trees are managed appropriately: the assessor can accept no liability for damage or injury sustained as a result of the failure of any tree or its parts.

1.5 This report remains valid for a period of 3 years from the date the survey was carried out.

2 Inspection and General Observations:

2.1 The survey area is as indicated on the accompanying tree constraints plan, which is based on a topographical plan provided by the Architect. Please note the tree locations are approximate only as they where not included on the topographical survey.

2.2 It is unknown at the time of writing if there are any tree preservation orders which apply to these trees; however it is recommended that no tree felling or other works affecting trees be carried out until the proposed works have been agreed with the local planning authority.

2.3 The site consists of an existing residential property and a relatively flat area of surrounding ground. The area is enclosed from the road by an existing stone wall and from the adjacent property to the north-west by estate style steel railings.

2.4 The southern boundary contains two mature pollarded limes at the entrance on the northern corner of the site together with a group of self-seeded early mature wych elm, sycamore and goat willow.

2.5 There is an existing gravel driveway serving the property leading from the main access road which extends under the canopies of these trees.

2.6 In addition to this group of trees there is another self-seeded goat willow (7) at the southern corner of the existing dwelling.

2.7 All these trees are considered to be retention category 'C' trees of low arboricultural value, however it is recognised that they provide a degree of screening and habitat value.

3 Arboricultural Impact Assessment:

3.1 The proposed development of the site is for the demolition of the existing dwelling and construction of a new house set further back from the road, utilising and extending the existing access drive and parking areas together with associated services and drainage infrastructure.

3.2 The proposed works will result in the removal of one category 'C' goat willow (7) to accommodate the proposed new retaining wall.

3.3 The proposed driveway will impact on the root protection areas of the category 'C' limes (1 & 2) together with the category 'C' early-mature sycamore (3) and wych elm (4) however the impact could be minimised by building with 'no-dig' construction techniques as outlined on the tree protection plan.

3.4 The existing access road and stone retaining wall will limit the extent of available rooting area for the two limes (1 & 2) outside of the site boundary. The 'nominal' root protection areas have been amended to illustrate the 'actual' root protection area which provides a more accurate indication of the area to be protected for both these trees.

3.5 The impact of the driveway on the existing trees will be further minimised as part of the area already exists as hard surfacing.

3.6 The trees to be retained will need to be protected by the provision of suitable temporary barriers as outlined in the tree protection plan and Appendix 2A (type 2), together with appropriate ground protection measures where required.

3.7 Service runs and drainage infrastructure are to be located where possible to avoid the root protection areas (RPA's) of the retained tree and any proposed earthworks for the development should not extend into the construction exclusion zones defined by the root protection area of the retained tree.

4 Arboricultural Method Statement:

4.1 The following Arboricultural Method Statement (AMS) is based upon the findings from the tree survey report, Tree Constraints Plan and Tree Protection Plan. The method statement outlines the general principles to be applied when working within the root protection areas of the retained trees. The AMS should be further informed by any additional detailed proposals or amendments to the proposed works as and when information becomes available.

4.2 This AMS sets out how the tree work associated with this scheme is to be carried out without causing damage to the retained trees. It includes details on how the works will be managed and how the retained trees will be protected during the works.

4.3 The AMS sets out the methodology for all proposed works that affect trees on and adjacent to the site. Copies of this document must be available for inspection on site and all personnel must be made aware of the following primary principles:

- The avoidance of damage to the aerial parts of retained trees (namely the trunk and root buttresses, branches and foliage).
- The avoidance of direct physical damage to the root-systems of retained trees as a result of severance, abrasion, crushing etc.
- The avoidance of indirect damage due to soil compaction, disturbance, contamination or other disruption in the areas around retained trees (serious compaction will result from a single passage of a vehicle, especially in wet conditions).
- Maintaining free gaseous exchange between the upper layers of soil and the atmosphere with adequate (but not excessive) water supply to the soil.

4.4 Pre-development tree work may be undertaken where recommended, with the agreement of the project arboriculturist and the local planning authority, before the installation of the tree protection measures.

4.5 Care should be taken when planning site operations to ensure that plant can operate outside the construction exclusion zones without coming into contact with any part of retained trees. Any transit of plant in close proximity to trees should be conducted under the supervision of a banksman to ensure that adequate clearance from the trees is maintained at all times. Appropriate ground protection must be put in place where works are required within a designated protection area.

4.6 All tree work operations are to be carried out in accordance with the British Standard Recommendations for Tree Work, BS3998 (2010). Operations must also conform to all current health and safety legislation as well as to the Wildlife & Countryside Act 1981 and subsequent legislation (with particular reference to the protection of nesting birds and to bats, which may commonly be found in trees).

4.7 A project arboriculturist shall be on call to advise on all matters relating to the care and protection of trees on and in the immediate vicinity of the construction area and inspect the setting out of the protective barriers once erected.

4.8 All operations shall be carried out in accordance with all additional relevant regulations and guidance, including:

- Working at height regulations 2005
- Lifting operations & Lifting Equipment Regulations 1998
- Provision & use of work equipment regulations 1998
- National Joint Utilities Group (NJUG) 4 Guidelines 2007

4.9 Detailed guidance informing the Arboricultural Method Statement is provided in sections 5.0 – 12.0 (below):

5 Pre-Commencement Tree Work Operations:

5.1 Work to fell the tree identified for removal (7) is to be carried out prior to construction works commencing and prior to the erection of tree protection barriers.

5.2 Should the need for any pruning to retained trees become evident as part of the works, this should be reviewed and agree with the arboriculturalist and local authority officer prior to commencement.

5.3 All tree surgery works are to be undertaken by suitably experienced and qualified arboricultural contractors working in accordance with current industry best practice as set out in BS3998:2010 (Tree Work: Recommendations).

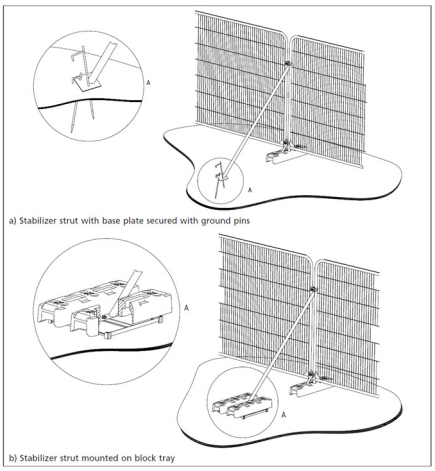
6 Tree Protection Barriers:

6.1 A **CONSTRUCTION EXCLUSION ZONE** should be established around all trees intended for retention, based upon the Root Protection Areas (RPAs) of those trees. These zones should be adequately protected by both **Protective Barriers** & **Ground Protection** throughout the all demolition & construction process. The barriers shall be erected as indicated on the Tree Protection Plan (Dwg No: 24/1053/02A) and conform to the specifications given below.

6.2 These barriers must be erected **before any materials or machinery are brought onto the site and before any demolition or development work commences**. The project arboriculturist should confirm that barriers and ground protection have been erected and set out correctly prior to the commencement of other operations, and that they are fit for purpose.

6.3 **Once erected, barriers and ground protection should be regarded as sacrosanct,** and should not be removed or altered without prior recommendation by the project arboriculturist and approval of the local planning authority. Special attention should be paid to ensure that barriers remain rigid and complete throughout the construction period.

Specification for protective barrier (Type 2)



- Where driven vertical poles are impractical due to the likelihood of causing damage to tree roots or to underground services, above-ground stabilizing systems may be specified.

6.4 Warning notices: One weather proof sign (600 x 600mm min.) to be located at the site entrance stating **"Tree Protection Measures in force on this work site – obtain further details from the site manager on arrival".** Weather proof signs (200 x 300mm min.) such as that below are to be fixed to the tree protection barriers stating clearly that there shall be no admittance into Construction Exclusion Zones.

7 Ground Protection:

7.1 Where construction working space or temporary construction access is justified within the RPA, this should be facilitated by a set-back in the alignment of the tree protection barrier. In such areas, suitable existing hard surfacing that is not proposed for re-use as part of the finished design should be retained to act as temporary ground protection during construction, rather than being removed during demolition. The suitability of such surfacing for this purpose should be evaluated by the project arboriculturist and an engineer as appropriate.

7.2 Where the set-back of the tree protection barrier would expose unmade ground to construction damage, new temporary ground protection should be installed as part of the implementation of physical tree protection measures prior to work starting on site. Such temporary ground protection should be capable of supporting any traffic entering or using the site without being distorted or causing compaction of underlying soil.

Ground protection might comprise one of the following:

a) *for pedestrian movements only, a single thickness of scaffold boards placed either on top of a driven scaffold frame, so as to form a suspended walkway, or on top of a compression-resistant layer (e.g. 100 mm depth of woodchip), laid onto a geotextile membrane;*

b) *for pedestrian-operated plant up to a gross weight of 2 t, proprietary, inter-linked ground protection boards placed on top of a compression-resistant layer (e.g. 150 mm depth of woodchip), laid onto a geotextile membrane;*

c) *for wheeled or tracked construction traffic exceeding 2 t gross weight, an alternative system (e.g. proprietary systems or pre-cast reinforced concrete slabs) to an engineering specification designed in conjunction with arboricultural advice, to accommodate the likely loading to which it will be subjected.*

7.3 In all cases, the objective should be to avoid compaction of the soil, which can arise from the single passage of a heavy vehicle, especially in wet conditions, so that tree root functions remain unimpaired.

8 Additional Protection:

8.1 Materials that are likely to have an adverse effect on tree health (such as oil, bitumen or cement) will not be stored or discharged within 10 metres of the trunk of a tree that is to be retained. Attention must be paid to the slope of the land to ensure that contaminated materials do not flow towards the trees.

8.2 Where any mechanised plant has to be used within a root protection area or within the designated 'precautionary' area as indicated on the Tree Protection Plan (Dwg.no. 24/1053/02A) it is to be the smallest practicable for the proposed works, with the lowest ground-pressure, tracked where possible (i.e. tracked barrows, tracked mini-digger).

8.3 No notice boards, telephone cables or other services shall be attached to any part of the tree; Fires will not be permitted within the site.

8.4 **N.B. The site agent shall be required to notify the project arboriculturist of any incidents or events that affect or have the potential to affect the well-being of the trees, including the identification of significant roots (over 25mm diameter) exposed in excavation works.**

8.5 An initial meeting with the appointed site agent will be held to ensure that matters relating to the care and protection are fully understood. (See section below: Arboricultural Supervision).

9 Compound area & storage of materials:

9.1 Storage of materials and access routes for deliveries are to be sited to avoid unnecessary damage to tree roots. Siting of welfare facilities, storage areas and temporary contractors vehicle parking areas are to be located in agreed areas outside the RPA's of retained trees.

9.2 Locations for operations involving phytotoxic materials (cement mixing, fuel storage, herbicide etc) are to be located to avoid damage to retained trees by run-off from accidental Spillages.

10 Installation of Cellular Confinement systems for load-bearing surfaces near trees:

10.1 'Cellweb® Tree Root Protection' three-dimensional cellular confinement system is proposed for use as detailed on the tree protection plan. The depth of the cellular material specified in accordance with the loading of the traffic anticipated and the underlying ground conditions.

Surface treatment shall incorporate Cellweb with 150mm cell-depth. The cellular material shall be laid onto a separation layer of Treetex™ (or equivalent) non-woven geotextile and the infill for the cells shall be an open graded (no-fines) 4/20 clean angular aggregate (BS EN 13242).

10.2 To avoid soil compaction, no vehicles, plant or other machinery will be permitted onto the areas in question prior to the material being installed. Materials used in its construction (such as the cellular matrix itself and the stone for infilling) must be brought in by hand or deposited using vehicles positioned off-site (outside the root protection area).

10.3 Any existing vegetation within the area should remain untreated and any hollows or other minor irregularities can be built up using clean, washed sharp sand. The non-woven geotextile membrane is to be laid onto the untreated surface over the existing grass, with dry joints overlapping by 300 mm. The membrane may be temporarily retained using weights, stakes or similar

10.4 The cellular geogrid is supplied in panels that must be spread to open out the cells. This is best achieved by installing a series of 12 mm diameter steel pins across the area to be covered by a single panel, positioned so that they hold the panel in an expanded state when laid over them. Each panel must secured to its neighbour using staples or other fixings in accordance with the manufacturer's specification.

10.5 Infill material must be a clean, angular no-fines stone, (4/20 stone to be used, the material must be both angular and sieved to exclude fines). Infilling must start from the edge furthest from the trees: no vehicle is to track over any part of the root protection area until the cellular material has been infilled with stone.

10.6 It is advisable to surcharge the cells to a depth of about 50 mm in order to protect the edges of the cellular material. Once infilled, the stone should be lightly agitated to ensure it is fully settled, overfill cells by 25mm. The in-filled cells can then provide a platform to provide access to unfilled cells.

10.7 On completion the temporary ground protection should be carefully removed back to the existing soil levels and grass areas made good.

11 Excavations for Services:

11.1 *Wherever possible all service routes are to be located outside the root protection areas (RPA's) of retained trees*. Where services runs within a tree's RPA is unavoidable they are to be installed under the supervision of the project arboriculturist. The preferred installation method would be carried out by trenchless insertion methods (eg impact moling). **Excavations for services where unavoidable within the RPA are to be carried out by hand under the supervision of the project arboriculturist**.

11.2 Excavations resulting in the exposure of tree roots shall *not* be carried out in freezing conditions; they shall be carefully dug by hand and any roots encountered over 25mm diameter (or dense clusters of smaller roots) are to be retained, avoiding damage to the protective bark covering these roots.

11.3 Exposed roots are to be wrapped in layers of clean dry hessian sufficient to prevent desiccation and protect from extremes of temperature.

11.4 Where necessary, individual roots smaller than 25mm may be pruned, preferably cutting back to a side branch. A sharp cutting tool (secateurs, pruning loppers or a small pruning saw) should be used to ensure a clean cut is made.

11.5 Service pipes/cables/ducts are to be carefully installed by inserting them between or under retained roots in order to avoid damage. If root geometry makes this difficult, roots should not be severed without prior consultation with the project arboriculturist in order that the possible implications on the health & safety of the tree can be assessed and possible alternative courses of action considered.

11.6 Trenches with exposed roots should not be left open overnight or for prolonged periods; however where this is unavoidable all exposed roots must be carefully wrapped in dry hessian.

11.7 When the pipe is installed it shall be set in a specified bedding material in the base of the trench with 150mm cover above & below the pipe. Back fill the remainder of the trench with selected excavated materials (maximum aggregate size 40mm) to the height of the retained root, carefully settling it without damaging the root. The hessian wrapping can then be removed when the root should be surrounded with sharp sand before continuing to backfill to formation or finished levels. Lightly tamp the material to remove air pockets as backfill proceeds but *do not* compact with whacker-plate or pneumatic plant. The backfill is to be left proud of finished areas to allow for settlement.

11.8 Where drainage pipes are to be bedded in concrete, it is advised that the trench base and sides be lined with polythene to minimise the possibility of phytotoxic materials affecting tree roots. Concrete should be poured carefully to avoid contact with exposed roots and on completion the polythene folded over the concrete surface. The protective wrapping around roots should be retained until the operation is complete.

12 Arboricultural Supervision:

12.1 The project arboriculturist shall be on call to advise on all matters relating to the care and protection of trees on and in the immediate vicinity of the construction area.

12.2 An initial meeting with the appointed site agent will be held to ensure that matters relating to the care and protection are fully understood. Further visits shall be paid to monitor the ongoing work at various stages, including (provisionally):

- To confirm the correct location and specification of tree protection barriers and ground protection measures.
- During the periods when excavations are opened up and when trenching for services is being carried out.
- At two week intervals during the construction period.
- As and when required during the program of construction for any special construction close to trees.

- To supervise laying of services through root protection areas.
- On completion, to sign off works.

12.3 It is anticipated that the project arboriculturist shall be available to advise on the treatment of tree roots at all stages where excavations are required within the RPA of any trees. It is also anticipated that a degree of flexibility of design must be allowed for in the construction of features in proximity to tree roots so that minor adaptations may be made if required as a result of the configuration of the tree roots exposed during the preparatory excavations.

12.4 The site agent shall be required to notify the consultant of any incidents or events that affect or have the potential to affect the well-being of the trees. This shall include the identification of significant roots exposed within the RPA's of retained trees during the proposed works.

12.5 A short written site monitoring report will be issued to the local planning authority within one week of each site inspection to confirm compliance/non-compliance and rectification with the AMS.

13 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								
1	Lime	1	600	10	4	4	4	4	2	-	M	Good	Fair	20-40	Previously pollarded at 2.5m with regrowth poles	Cii	7.2	163
2	Lime	1	600	12	4	4	4	4	2	-	M	Good	Fair	20-40	Previously pollarded at 2.5m with regrowth poles	Cii	7.2	163
3	Sycamore	1	300	12	2	2	2	2	2.5	-	EM	Good	Good	10-20	Twisted stem, suppressed by adjacent limes	Cii	3.6	41
4	Wych elm	1	200	10	2	2	2	2	2	-	EM	Fair	Fair	10-20		Cii	2.4	18
5	Goat willow	1	180	8	3	3	3	3	2	-	EM	Fair	Fair	10-20	Located in adjacent garden	Cii	2.2	15
6	Goat willow	1	180	8	2.5	2.5	2.5	2.5	2	-	EM	Fair	Fair	10-20	Located in adjacent garden	Cii	2.2	15
7	Goat willow	m/s	270	8	5	5	5	5	1.5	-	M	Fair	Fair	10-20		Ci	3.2	33

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.) strimmers, 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.

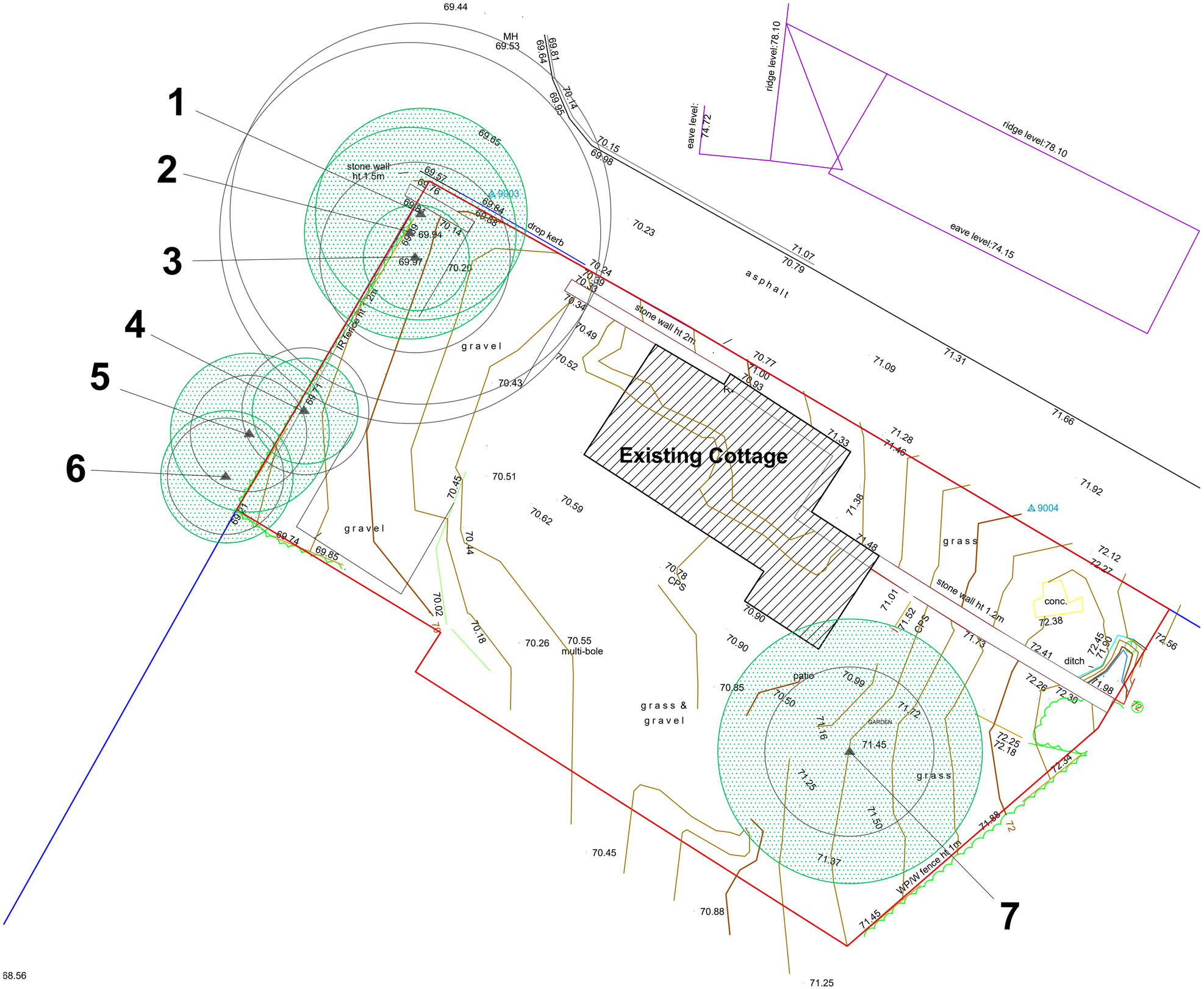
C MINOR VALUE (grey): Trees or groups of rather low quality, although potentially capable of retention for at least approx. 10 years. *Also* small trees below 15cm diam.
Potentially retainable, but not of sufficient value to be regarded as a significant planning constraint.

(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.*



KEY

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

- 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

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

N

All dimensions must be checked on site and not scaled from this drawing.

This drawing is for the purposes of PLANNING. Based on Ordnance Survey data as supplied. OS Licence 100043966

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SITE

Garden Cottage, Rhiwderin

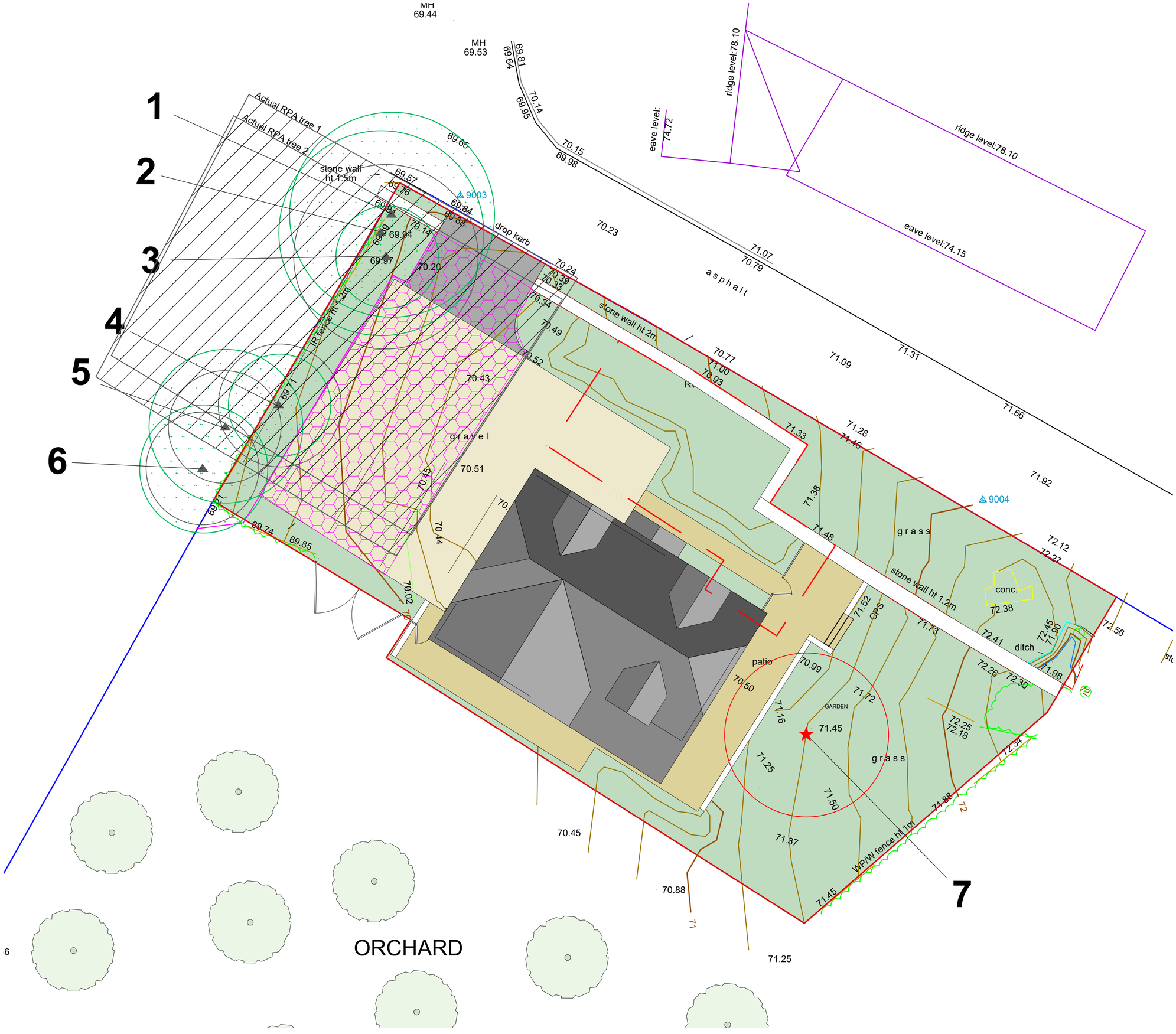
CLIENT

David Williams Homes Ltd

DRAWING TITLE

Tree Constraints Plan

SCALE	1:100 @ A2	Job No.	24/1053/02
DATE	October 2024	REVISION No.	



KEY

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

- Trees to be removed
- Category A 'Nominal root protection area (to be retained)
- Category B 'Nominal root protection area (to be retained)
- Category C 'Nominal root protection area (to be retained)
- Category C 'Actual' root protection area
- Existing canopy
- Line of protective fence (temporary barrier)
- Area of 'No-dig' construction

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

All dimensions must be checked on site and not scaled from this drawing.

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SITE

Garden Cottage, Rhiwderin

CLIENT

David Williams Homes Ltd

DRAWING TITLE

Tree Protection Plan

SCALE	1:100 @ A2	Job No.	24/1053/03
DATE	October 2024	REVISION No.	B