Former Holloway Prison

Arboricultural Method Statement

Peabody

ARBORICULTURAL METHOD STATEMENT

Former Holloway Prison

September 2021

Barton Hyett Associates
Arboricultural Consultants

Summary table		
Site name:	Former Holloway Prison	
Site Address:	Parkhurst Rd, London, N7 0NU	
Project reference:	R.3291	
Planning reference:	Full planning application for phased comprehensive redevelopment including demolition of existing structures; site preparation and enabling works; and the construction of 985 residential homes including 60 extra care homes (Use Class C3), a Women's Building (Use Class F.2) and flexible commercial floorspace (Use Class E) in buildings of up to 14 storeys in height; highways/access works; landscaping; pedestrian and cycle connections, publicly accessible park; car (blue badge) and cycle parking; and other associated works.	
Local Planning Authority:	London Borough of Islington	
Relevant planning condition(s):	**TBC**	
Statutory Controls:	**Tree Preservation Order**	**Conservation Area**
	None.	No.
Tree Retention and Removal Plan:	BHA_630_02A Tree Retention/Removal & Protection Plan	
Tree Protection Plans:	BHA_330_03A Tree Retention/Removal & Protection Plan (Demolition) & BHA_330_04B Tree Protection Plan (Construction)	
Contact details:	Project Arboriculturist - Ian Monger - Barton Hyett Associates - 07795 987810 - email: ianmonger@barton-hyett.co.uk	
Report author:	Ian Monger *MSc, BSc (Hons), TechCert (ArborA) MArborA,*	
Date of issue:	26.10.2021	

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REPORT CONTENTS:

REVISION	DATE	PREPARED BY	COMMENTS
First issue (DRAFT)	26.10.2021	IM, Barton Hyett Associates	First issue for planning submission

1. INSTRUCTION

1.1. Barton Hyett Associates Ltd have been instructed by Potter Raper on behalf of Peabody Construction Limited to survey trees and hedges located at Former Holloway Prison ('the site') in accordance with BS5837:2012 '*Trees in relation to design, demolition and construction - recommendations*', and to use the survey information to produce an Arboricultural Method Statement (AMS).

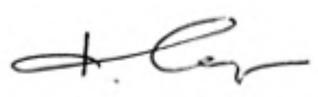
1.2. This AMS is required to accompany the full planning application to London Borough of Islington (LBI) for the phased comprehensive redevelopment including demolition of existing structures; site preparation and enabling works; and the construction of 985 residential homes including 60 extra care homes (Use Class C3), a Women's Building (Use Class F.2) and flexible commercial floorspace (Use Class E) in buildings of up to 14 storeys in height; highways/access works; landscaping; pedestrian and cycle connections, publicly accessible park; car (blue badge) and cycle parking; and other associated works.

1.3. Following site demolition, construction will be phased over an extended period. Site conditions and construction priorities can change over time and so the most important component of effective protection of retained trees will be the involvement of a Project Arboriculturist in pre-commencement and site management meetings, and in regular monitoring of site activities and protective measures. The Project Arboriculturist will also be required to supervise or oversee particular aspects of the construction and the reconfiguration of protective barriers and ground protection at key stages. As such, this AMS document and Tree Protection Plans will require refining to account for other aspects of site design and management as those details are finalised, so that conflicts can be resolved, as well as for any relevant planning conditions. However, it is not expected that the proposed protection measures at construction stage will significantly differ from those put forward in this AMS, and so will be appropriate for an updated AMS to be submitted prior to works being undertaken to trees on the site.

1.4. In addition to the above, the following schemes and documents are of relevance to or may have an influence on this AMS:

- Construction Management Plan and Construction Environmental Method Statement
- Utilities Assessment
- Flood Risk Assessment and Drainage Report
- Detailed Hard Landscaping Scheme
- Detailed Soft Landscaping Scheme

1.5. This report includes the AMS (Section 2), Tree Retention and Removal Plan (Section 3), and draft demolition and construction Tree Protection Plans (Section 4). The tree survey schedule is also included in Section 5 for reference.



Ian Monger - Senior arboriculturist

Barton Hyett
Arboricultural Consultants

1. PURPOSE

1.1. The aim of this Arboricultural Method Statement (AMS) is to prevent and/or minimise the impacts of site operations on retained trees and hedges during development demolition and construction at the former Holloway Prison ('the site'). It gives step-by-step guidance and specifications for works which have the potential to result in loss of or damage to trees.

1.2. This AMS must be read with reference to the Tree Retention and Removal Plan (Section 3) and the draft demolition and construction Tree Protection Plans (Section 4).

2. KEY PERSONNEL AND INDIVIDUAL RESPONSIBILITIES

2.3. The Client shall hold overall responsibility for the project and shall appoint professionals and delegate responsibility in relation to the Scheme of Tree Protection as follows:

2.4. Project Site Manager shall hold the responsibility to ensure that all key contractors and all other persons working on-site have a responsibility to be aware of trees and to abide by tree protection procedures set out within the AMS.

2.5. Project Arboriculturist (as appointed) shall be responsible for independently monitoring/supervising the effectiveness of tree protection at regular intervals and report all findings in writing back to the client, the project site manager and the local planning authority. He/she shall also be instructed to provide additional advice should unforeseen circumstances develop. He/she must hold a recognised qualification in arboriculture to NQF Level 4 or higher.

2.6. Other appointed individuals and their contact information shall be recorded as part of the on-site pre-commencement site meeting.

3. HOW THE AMS MUST BE USED

3.1. The AMS must be used as a reference source for site operatives in order to guide tree-related aspects of the construction process. A precautionary approach is required.

3.2. The AMS must be referred to by site managers during the construction operation itself. A copy of this document must, therefore, be kept available in the main Site Office for quick and easy reference.

4. WORK PHASES

4.1. The redevelopment of the site will be phased according to the Phased Logistics Plans. In summary, the phasing will be:

- 2022 - Site demolition
- 2023 - Phase 1 (Plots C, D and E) construction starts
- 2024 - Phase 2 (Plot A) construction starts
- 2025 - Phase 3 (Plot B) construction starts. Plot D external works
- 2025-2026 - Plots C and E external works
- 2026 - Plot A external works
- 2026 - 2027 - Plot B external works

4.2. The following overarching sequence of work will be followed:

1. Arboricultural pre-commencement site meeting for whole site
2. Tree and hedge removals and facilitation pruning for whole site
3. Erect tree protection barriers and notices for whole site in addition to site hoarding
4. Demolition (2022)
5. Phase 1 pre-commencement meeting
6. Phase 2 pre-commencement meeting
7. Phase 3 pre-commencement meeting
8. Phase 1 externals pre-commencement meeting
9. Phase 2 externals pre-commencement meeting
10. Phase 3 externals pre-commencement meeting
11. Remove remaining tree protection barriers
12. Tree establishment and health/condition monitoring

4.3. The site hoarding (which will serve as physical tree protection in some instances) will be reconfigured at stages during the whole site project and removed as Phases are completed.

5. CONSTRUCTION PLANNING

5.1. Separate approved documents are of relevance to or may have an influence on this AMS and will be discussed and agreed at the pre-commencement meetings to ensure that no conflicts will arise in implementing the approved details.

- Construction Management Plan and Construction Environmental Method Statement
- Utilities Assessment
- Flood Risk Assessment and Drainage Report
- Detailed Hard Landscaping Scheme
- Detailed Soft Landscaping Scheme

5.2. The Project Arboriculturist will remain on hand in an advisory role for the duration of the project to answer any questions relating to tree protection that may arise during construction planning or during the build phases.

5.3. If any conflict with the Construction Method Statement(s) or other approved details that may affect retained trees is identified during demolition and construction stages, the Project Site Manager will halt work in the affected area and immediately consult the Project Arboriculturist.

5.4. Any deviation from the working methods within this AMS must first be agreed in writing with London Borough of Islington (LBI).

5.5. Prior to commencing relevant works on site, all site operatives must be briefed by the Project Site Manager in relation to site procedures and rules that relate to retained trees as well as the content of the AMS.

6. ARBORICULTURAL MONITORING AND CONTINGENCY PLANS

6.1. During each construction Phase, the Project Arboriculturist will be instructed to attend site at least monthly to confirm that tree protection measures are fit for purpose and other site conditions are appropriate for tree protection.

6.2. The Project Arboriculturist will remain on hand in an advisory role for the duration of the project to answer any questions relating to tree protection that may arise.

6.3. In the event of unforeseen incidents occurring that may adversely affect or threaten the welfare or security of the trees, the resident Site Manager shall inform the Project Arboriculturist at the earliest opportunity and not more than one working day following the incident.

6.4. The Project Arboriculturist will visit the site to inspect and assess the circumstances and make appropriate recommendations. The Local Planning Authority Tree Officer will be informed by the Project Arboriculturist of such incidents, and recommendations will be submitted for approval by the Local Planning Authority; initially verbally, and then in writing. A record of any emergency incidents and works shall be maintained by the Project Arboriculturist.

6.5. Incidents which may merit such contingency plans include:

- Accidental/unauthorised damage to the branches, roots or trunk of trees
- The spillage of chemicals within or adjacent to a Root Protection Area
- The discharge of toxins/waste within or adjacent to a Root Protection Area
- The unscheduled breaching of a tree protective barrier or Construction Exclusion Zones.

6.6. The following stages of work are recommended for supervision:

Stage	AMS section	Task	Description	Compliance action
1	7	Arboricultural (whole site) pre-commencement site meeting	1. Pre-commencement meeting required between Project Site Manager (and other client representatives), Project Arboriculturist and tree surgery contractor to agree sequencing of work phases, tree protection principles and barrier locations, tree and hedgerow removals and pruning.	1. LBI Tree Officer invited to attend. 2. Project Arboriculturist to provide written report of outcomes to LBI Tree Officer. 3. Project Arboriculturist to seek approval of LBI Tree Officer for any revision to AMS.
2	8	Tree & hedge removals	1. Arboricultural contractor to remove all trees and stumps shown and specified for removal. 2. Any additional tree pruning will require either written approval of LBI. 3. Relocation of 3 cherry trees to be planned and managed by specialist contractor.	1. Photograph site operations at suitable intervals to document work practices.
3	9	Erect DEMOLITION tree protection barriers	1. Set up barriers to locations and specification shown on plan. 2. Fix A2 all-weather notices to tree protection barriers at 10m intervals. Notices must read 'CONSTRUCTION EXCLUSION ZONE - KEEP OUT'. 3. Project Arboriculturist to confirm/ record that barriers are correctly positioned and that they are to specification and fit for purpose.	1. Photograph completed tree protection. 2. Project Arboriculturist to append his/her approval of fencing to site monitoring report.
4	10	Demolition	1. Comply with methodology agreed at the pre-commencement meeting and specified below. 3. Comply with all other AMS general information shown on the AMS/TPP.	1. Project Arboriculturist instructed to attend site at least monthly to confirm that tree protection measures are fit for purpose. 2. Project Arboriculturist to append visit details to site monitoring report.
5/6/7	7	Phase 1/2/3 CONSTRUCTION pre-commencement site meetings	1. Pre-commencement meetings for each Phase required between Site Manager (and other client representatives), Project Arboriculturist to agree sequencing of work, tree protection principles and barrier locations, tree and hedgerow removals and pruning.	1. LBI Tree Officer invited to attend. 2. Project Arboriculturist to provide written report of outcomes to LBI Tree Officer. 3. Project Arboriculturist to seek approval of LBI Tree Officer for any revision to AMS.

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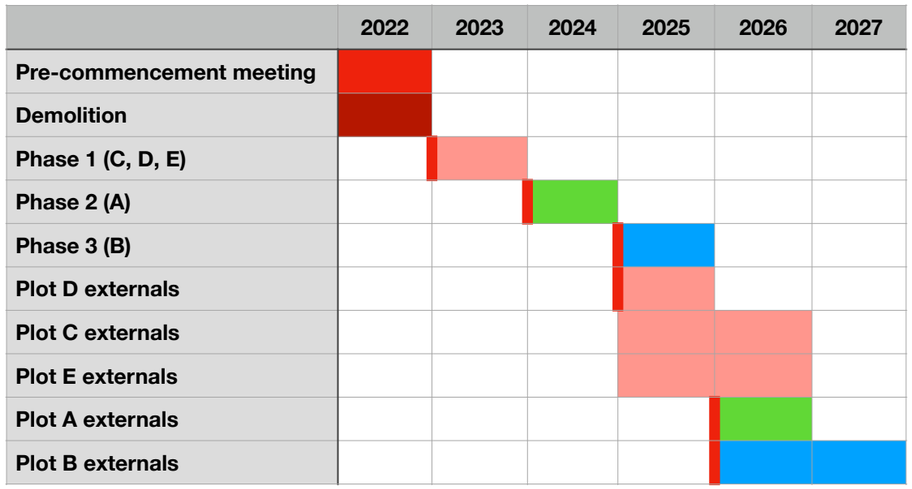
Stage	AMS section	Task	Description	Compliance action
-	11	Erect CONSTRUCTION tree protection barriers	1. Set up barriers reconfigured to locations and specification shown on TPP 2. Project Arboriculturist to confirm/ record that barriers are correctly positioned and that they are to specification and fit for purpose.	1. Photograph completed tree protection. 2. Project Arboriculturist to append his/her approval of fencing to site monitoring report.
-	12	Installation of underground services	1. All underground service installations or upgrades within the site will follow NJUG Volume 4. 2. No new services should be installed within the RPA's of retained trees.	1. If new service installation close to, or within, the RPA of any retained trees is unavoidable, then the project arboriculturist must be consulted so that the appropriate methodology can be adopted. 2. Any alternative installation method within RPA to have approval of LBI Tree Officer.
-	13	Groundworks and main construction phase	1. Tree protection barriers and any temporary ground protection must remain in situ. They will remain in situ until all construction work on site has been completed.	1. Tree protection measures checked at the beginning and end of each working day. 2. Project Arboriculturist instructed to attend site at least monthly to confirm that tree protection measures are fit for purpose. 3. Project Arboriculturist to keep site monitoring report updated, including any corrective actions.
-	14	Arboricultural supervision of foundation construction for Plots B & C within tree RPAs	1. Hand dug exploration holes to inform the detailed working methodology. 2. The Project Arboriculturist to devise separate arboricultural methodology for excavation and root pruning that may be required.	1. Project Arboriculturist in attendance on site during the foundation construction work and to oversee reinstatement of optimal tree protection measures once construction of foundations is complete. 2. Photographs taken during work to append to site monitoring report.
8/9/10	7	Phase 1/2/3 EXTERNAL WORKS pre-commencement site meetings	1. Pre-commencement meetings for each Phase required between Site Manager (and other client representatives) and Project Arboriculturist.	1. LBI Tree Officer invited to attend. 2. Project Arboriculturist to provide written report of outcomes to LBI Tree Officer. 3. Project Arboriculturist to seek approval of LBI Tree Officer for any revision to AMS.
-	15	External works - Hard landscaping	1 Final design requirements to be specified in approved landscape scheme. 2. The Project Arboriculturist to devise separate arboricultural methodologies if required for excavation and root pruning that may be required. 3. Excavations within tree RPAs will be carried out by Air Spade with the Project Arboriculturist in attendance in at least a supervisory role.	1. Project Arboriculturist instructed to be in attendance on site during specific work aspects as he deems necessary. 2. Photographs taken during work to append to site monitoring report.
11	16	Remove tree protection barriers	1. Remove tree protection barriers ensuring that there is no machinery access within the former CEZ.	1. Project Arboriculturist to visit site to confirm that site conditions are suitable for barriers to be removed. 2. Five working days written notice shall be given to LBI Tree Officer prior to the final removal of tree protection measures.
-	17	External works - Soft landscaping	1. Final design requirements to be specified in approved landscape scheme. 2. Pre-commencement meeting between soft landscape contractor and Project Arboriculturist to identify areas within the site where landscaping works have potential to impact on trees. 3. Follow all AMS general information. 4. No excavation or rotavation to be carried out within former CEZs except as approved.	1. Photographs taken during work and on completion. 2. Project Arboriculturist to append to site monitoring report.

7. PRE-COMMENCEMENT SITE MEETINGS

7.1. The purpose of the site meetings is to enable all relevant parties within the development team to meet, to be aware of the requirements of the AMS, and to agree a coordinated approach to each Phase of the project.

7.2. The table below summarises the work phasing, and shows in **RED** the stages at which pre-commencement site meetings must be held with the Project Arboriculturist.



7.3. The meetings shall be pre-arranged by the Project Site Manager, and the LBI Tree Officer shall be given five working days' written notice and invited to attend. Other attendees will be agreed at the time that each site meeting is arranged.

7.4. An initial arboricultural (whole site) pre-commencement site meeting will be held in 2022 prior to any works, including site clearance or demolition.

7.5. Required attendees:

- Project Site Manager
- Project Arboriculturist
- Tree survey contractor and other project specialists as agreed

7.6. Matters to be addressed:

- Identification of persons present and exchange of contact information
- Familiarisation with all aspects of the AMS
- Familiarisation with the site in relation to the AMS
- Requirements of construction management/method statements and identification of potential conflicts, including site hoarding
- Tree removals and pruning
- Phasing of tree protection measures and marking-out
- Demolition of structures and retention of hard surfacing within tree RPAs
- Locations, timing and method of installation of underground utilities

7.7. Subsequent pre-commencement site meetings will be held before commencement of each CONSTRUCTION and EXTERNAL WORKS Phase so that site conditions at the time can be assessed.

7.8. Required attendees:

- Project Site Manager
- Project Arboriculturist
- Other project specialists as agreed

7.9. Matters to be addressed:

- Identification of persons present and exchange of contact information
- Review of site conditions and work to date
- Reconfiguring of tree protection measures and site hoarding
- Phase-specific operations in relation to trees, such as:
  - Supervision of foundation construction for Plot C within tree RPAs
  - Locations, timing and method of installation of underground utilities
  - New hard surfacing specifications and methods within tree RPAs
  - Soft landscaping operations, including removal of tree protection measures
- Timing of monitoring visits by Project Arboriculturist
- Agree any required amendment/revision to approved AMS

7.10. The Project Arboriculturist shall provide written confirmation to the LBI Tree Officer that the meeting has occurred and how the specified matters have been addressed. If any amendment/revision of the approved AMS is required, the Project Arboriculturist will seek approval of the LBI Tree Officer.

8. TREE AND HEDGE REMOVAL & PRUNING

8.1. All tree work will be discussed and agreed in detail at the arboricultural pre-commencement meeting.

8.2. A specialist tree relocation contractor will be employed to relocate cherry trees T20, T21 and T22 to Plot C. The advice of the contractor should be sought at as early a stage as possible because the work will require trenching and root pruning phased over a period of time prior to final lifting. The timings and method for the lifting and relocation of will depend on ground investigations and will be take place as recommended by the relocation contractor. Temporary relocation of the trees to the area shown on the Tree Protection Plans or other suitable area (subject to an assessment of soil suitability) will allow the trees to be protected, maintained and watered until final soft landscaping of Plot C takes place.

8.3. The approved tree and hedge removals are shown shaded RED on the Tree Retention and Removal Plan BHA_630_02A in Section 3.

8.4. Stumps of felled trees will be treated as agreed with the Project Site Manager at the pre-commencement site meeting (i.e. mechanically ground-out by tree surgery contractor or grubbed out by groundworks/ construction contractor).

8.5. The lower crowns of trees T76 to T98 and G9 to G14 along the south-west site boundary will be crown lifted to a maximum of 5m above the site ground level and to a maximum distance of 2.5m from the site boundary.

8.6. All tree work will be carried out by a suitably qualified and experienced tree surgery contractor, and in accordance with British Standard BS3998: 2010 Tree work - recommendations.

8.7. All tree work operations must be carried out in-line with the contractor's own site specific risk assessment and method statement that shall be approved prior to commencement by the Site Manager.

8.8. All arisings shall be disposed of as instructed by the Site Manager.

8.9. Any additional tree pruning identified during the pre-commencement meeting as being essential will require written approval of LBI.

9. ERECT DEMOLITION TREE PROTECTION BARRIERS AND NOTICES

9.1. The tree protection barriers are to be installed in locations as specified on the Demolition Tree Protection Plan (TPP) BHA_630_03 in Section 4, and as marked-out and agreed at the pre-commencement meeting. The barriers will form the Demolition Construction Exclusion Zones (CEZs).

9.2. The tree protection barriers must be installed in accordance with the default BS5837:2012 specifications **Figure 2** that is shown on the TPP.

9.3. All-weather A3-sized notices as included below shall be attached to the tree protection barrier at 10-metre intervals.

9.4. Additional temporary ground protection may also be specified by the Project Arboriculturist once he has reviewed other approved documents or as a result of discussions at the pre-commencement meeting. Where specified, additional protective measures will be recorded on an updated plan. Where any temporary ground protection is specified before or during the demolition or construction phases, it will be of heavy-duty proprietary boards such as TuffTrack or IsoTrack H. These will be laid over 150mm well-rotted wood chip, separated from the soil with a permeable geo textile membrane. The boards can be secured in place if necessary using metal pins.

9.5. If a risk of run-off ground contamination beyond the protective measures is identified, a run-off containment system (e.g. Kraken contamination containment barriers or similar with impermeable membrane attached) must be affixed to the base of the fencing panels.

9.6. The Project Arboriculturist must approve the condition and positioning of the barriers, notices and (if applicable) temporary ground protection prior to commencement of further stages in the construction process.

9.7. The barriers and (if applicable) temporary ground protection must not be moved, altered or allowed to drift during demolition or construction activity. The barriers and ground protection will be checked at the beginning and end of each working day to ensure they remain fit for purpose of excluding any site activity and protecting the ground. They will remain in situ until all construction work on site has been completed.

9.8. If scaffolding is required to straddle tree protection barriers then kickboards must be fitted to the platforms to prevent falling debris and additional temporary ground protection must be provided below.

9.9. Except where expressly specified in this AMS, the CEZs formed by the barriers and temporary ground protection are to remain completely undisturbed for the duration of all development works. No activity of any description must occur at any time within these areas including but not restricted to the following: -

- No mixing of cement or any other materials.
- Storage or disposal of any soil, building materials, rubble, machinery, fuel, chemicals, liquids waste residues or materials/debris of any other description.
- Siting of any temporary structures of any description including site office buildings, temporary car parking facilities, porta-loos, storage compounds or hard standing areas of any other description.
- Soil/turf stripping, raising/lowering of existing levels, excavation or alterations to the existing surfaces/ ground conditions of any other description.
- Installation/siting of any underground services, temporary or otherwise including; drainage, water, gas, electricity, telephone, television, external lighting or any associated ducting.
- Parking/use of tracked or wheeled machinery or vehicles of any description.

In addition to the protection measures specified above,

- No fires shall be lit within 20 metres of the trunks of any trees or the centre line of any hedgerow shown to be retained.
- No signs, cables, fixtures or fittings of any other description shall be attached to any part of any retained tree.'

10. DEMOLITION

10.1. The working methods for demolition will be discussed in detail at the pre-commencement site meeting. Existing structures are in close proximity to retained trees and so great care will need to be taken during the demolition process so that they are not negatively impacted.

10.2. The removal of the structures within the Root Protection Areas (RPAs) of T51 and T72 must be carried out with appropriately sized plant in order to prevent damage to any parts of the retained tree canopies. The demolition plant will need to sit outside of the tree protection fencing and use a '*top down and pull back*' approach so that no debris enters the exclusion zone within the protection fencing. The plant machinery **must** work from within the footprint of the existing building or from existing hardstanding outside of the RPAs of the trees.

10.3. The removal of existing hard surfaces within the RPAs of T51 and T72 (but outside of the CEZs) will be carried out using a mechanical excavator located on the existing hard surfaces. The excavator must start work on the edge of the existing surface working backwards. Slabs must be lifted and tipped back on to the remaining surface before being broken up and removed.

10.4. All other structures, surfaces and sub-structures within the CEZs will remain in situ to be removed as part of the external works Phase.

10.5. All other demolition must be carried out outside of the CEZs. All restrictions and precautions specified in this AMS and in section 5 below must be adhered to.

11. ERECT CONSTRUCTION TREE PROTECTION BARRIERS AND NOTICES AND TEMPORARY GROUND PROTECTION

11.1. At an agreed time and with the prior approval of the Project Arboriculturist, the tree protection barriers and temporary ground protection will be installed/relocated to the locations as specified on the Construction Tree Protection Plan (TPP) BHA_630_03 in Section 4, and as marked-out and agreed at the Phase 1 pre-commencement meeting. The barriers will form the Construction CEZs.

11.2. The tree protection barriers must be installed in accordance with the default BS5837:2012 specifications **Figure 2** that is shown on the TPP.

11.3. If a risk of run-off ground contamination beyond the protective measures is identified, a run-off containment system (e.g. Kraken contamination containment barriers or similar with impermeable membrane attached) must be affixed to the base of the fencing panels.

11.4. All other requirements and precautions of paragraphs 9.7 to 9.9 above) will be adhered to.

11.5. The Project Arboriculturist must approve the condition and positioning of the barrier, notices and temporary ground protection prior to commencement of further stages in the construction process.

12. INSTALLATION OF UNDERGROUND UTILITIES

12.1. The locations of new underground service routes will be discussed in detail at the pre-commencement site meeting.

12.2. All underground service installations or upgrades within the site will follow NJUG Volume 4 - *Guidelines for the planning, installation and maintenance of utility apparatus in proximity to trees* ('NJUG4').

12.3. No new services should be installed within the RPA's of retained trees. However, if new service installation close to, or within, the RPA of any retained trees is unavoidable, then the project arboriculturist must be consulted so that the appropriate methodology can be adopted. Appropriate methodologies may include alternative excavation techniques such as broken-trench, air spade excavation, percussive boring or directional drilling. If such techniques are proposed to be used to install new utilities within the RPAs of retained trees, the Project Arboriculturist will detail the proposed locations and methods in writing to LBI for approval, and will be in attendance on site during installation.

13. GROUNDWORKS AND MAIN CONSTRUCTION PHASES

13.1. The tree protection barriers and any temporary ground protection must remain in situ for the duration of construction activity. The barriers and ground protection will be checked at the beginning and end of each working day to ensure they remain fit for purpose of excluding any site activity and protecting the ground. They will remain in situ until all construction work on site has been completed.

13.2. During the main construction Phases, the Project Arboriculturist will be instructed to attend site at least monthly to confirm that tree protection measures are fit for purpose and other site conditions are appropriate for tree protection.

13.3. All restrictions and precautions specified in this AMS must be adhered to.

14. ARBORICULTURAL SUPERVISION OF FOUNDATION CONSTRUCTION FOR PLOTS B & C WITHIN TREE RPAS

14.1. Construction of the foundations at the edges of the RPAs of horse chestnuts T62 and T67 will be discussed in detail at the pre-commencement meeting for Phases 1 and 3. Hand dug exploration holes will be employed to inform the detailed working methodology. The Project Arboriculturist will devise a separate arboricultural methodology for excavation and root pruning that may be required.

14.2. Additional protective barrier phasing and/or temporary ground protection may be specified by the Project Arboriculturist as a result of discussions at the pre-commencement meeting. Where specified, additional protective measures will be recorded on an updated plan.

14.3. The Project Arboriculturist will be instructed by the Site Project Manager to be in attendance on site during the foundation construction work in these areas and will oversee reinstatement of optimal tree protection measures once construction of foundations is complete.

15. EXTERNAL WORKS - HARD LANDSCAPING

15.1. Separate hard landscaping schemes for each Plot have been approved and will be discussed in detail at the pre-commencement meeting for the external works of each Phase.

15.2. Additional protective barrier phasing and/or temporary ground protection may be specified by the Project Arboriculturist once he has reviewed other approved documents or as a result of discussions at the pre-commencement meeting. Where specified, additional protective measures will be recorded on an updated plan.

15.3. The removal of any sub-structures within RPAs should only be undertaken if necessary or if the benefit of the removals to future tree root growth outweighs potential negative impacts. The removal of any sub-structures will only be carried out after the excavation of hand dug exploration holes, to inform the detailed working methodology. The Project Arboriculturist will assess each removal location at the pre-commencmenet meeting and may request to be be instructed by the Site Project Manager to be in attendance on site during the removal work.

15.4. Where proprietary systems are specified for the creation of new hard surfaces within the RPAs of retained trees, the supplier and/or landscape architect will specify the system design, materials and installation method. The Project Arboriculturist will assess each system location and application at the pre-commencmenet meeting and may request to be instructed by the Site Project Manager to be in attendance on site during installation of the system(s).

15.5. For locations within tree RPAs that the team identify as requiring new minor excavation to achieve level, the Project Arboriculturist will assess the existing levels and required excavation and make recommendations for the appropriate working methods.

15.6. Where new minor excavation is required it will be carried out with the use of an 'Air Spade', operated by a suitably qualified, trained and experienced arboriculturist. The 'Air Apade' is a specialist compressed air-powered tool which efficiently removes or loosens soil within the root zone without damaging a tree's delicate root system. Any Air Spade excavations will be carried out with the Project Arboriculturist in attendance in at least supervisory role, or directly carrying out the Air Spading work.

15.7. When an Air Spade is used, airborne stones or other particles can cause risk to nearby people and property within 7.5m or more. Mobile or fixed protective barriers (made from plywood or fabric) will be used during the operation to contain excavated soil and particles. The safety of the operator, and nearby people and property is of paramount importance when using compressed air powered tools such as an Air Spade.

15.8. If Air Spade excavations are required they will be carried out sensitively with a combination or air spading and hand digging (where appropriate, such as to move volumes of loosened soil) to reveal the exact location of the tree roots, allow agreement regarding depth and width dimensions to be confirmed and wrapping or other specific root protection measures to be implemented during the works.

15.9. Once necessary excavation is completed, the Project Arboriculturist may need to prune and/or train selected roots only as far as he/she considers necessary to facilitate the new installation. If the underlying ground is found to be severely compacted and/or anaerobic, the Air Spade will be used to provide a degree of decompaction of the soil.

15.10. The Project Arboriculturist will oversee care and protection of the exposed tree roots during and after Air Spade excavation until backfilling takes place. This will include the wrapping of larger roots with wet hessian and covering of the excavated trench to prevent root and soil desiccation.

15.11. Where hard surfaces and kerbing are to be reconfigured and/or resurfaced within the RPAs of trees, ground level changes in these areas must be avoided at all times as even small changes in ground level can severely effect the health of trees. If any changes to ground levels are later found to be required within the RPAs of these trees then the Project Arboriculturist **must** be consulted.

15.12. Resurfacing of existing road and footway surfaces within the RPAs of trees, where required, should always aim to leave the sub-base and kerbing in situ wherever possible.

15.13. For locations within tree RPAs that the team identify as requiring kerbing/haunching removal, the work **must** only be undertaken with the Project Arboriculturist in attendance on site with a watching brief. The Project Arboriculturist will direct localised repositioning of the tree protection barrier to facilitate temporary access. Work will proceed by hand using hand tools, and/or a digger bucket operated under arboricultural supervision. Where plant is used under supervision, it will work from the existing hardstanding and gently pull back the kerbing/haunching and surface on to the existing surface so that no debris enters the exclusion zone.

15.14. For locations within tree RPAs that the team identify as requiring new excavation for kerbing/haunching, the Project Arboriculturist will assess the location's existing levels and required excavation. Excavation will be carried out with the use of an 'Air Spade', operated by a suitably qualified, trained and experienced arboriculturist.

15.15. Final surfacing of new or reconfigured road and footway surfaces must be carefully planned and supervised by the Project Site Manager to prevent heat damage to tree crowns (foliage) above the working areas. This includes the crown immediately above the parking spaces as well as other areas of tree crown above the highway and/or within the site. Physical damage to branches from plant tipping must also be avoided. The Project Site Manager must seek the advice of the supplier before delivery to ascertain sufficient access, height clearance and appropriate tipping location.

15.16. Other installations within the RPAs of retained trees, such as posts and lighting, wiill also be discussed at the pre-commencement meeting, and the following will be adhered to:

- Footings for posts will be hand dug using hand tools.
- Where roots are encountered above 25mm diameter the post locations should be adjusted to avoid them. Where roots are encountered below 25mm diameter they can be clean pruned back the edge of the pits.
- Prior to setting the footings a 1200 gauge (or equivalent) damp proof membrane should be used to line the pits to prevent leachate contamination of the soil.

16. REMOVE TREE PROTECTION BARRIERS

16.1. The Construction tree protection barriers, temporary ground protection and site hoarding must not be removed or reconfigured without the prior approval of the Project Arboriculturist.

16.2. The Site Manager will ask the Project Arboriculturist to approve the removal or reconfiguration of protection measures and hoarding at each Phase. The Project Arboriculturist will assess site conditions and confirm that it is an appropriate stage at which to remove/reconfigure the protection measures and hoarding

16.3. Five working days written notice shall be given to the Local Planning Authority prior to the final removal of tree protection measures.

17. EXTERNAL WORKS - SOFT LANDSCAPING

17.1. Separate soft landscaping schemes for each Plot have been approved and will be discussed in detail at a pre-commencement meeting for the external soft landscaping works of each Phase.

17.2. The final relocation of cherry trees T20, T21 and T22 to Plot C will be managed by the specialist contractor.

17.3. General landscaping guidance:

1. All new tree planting must be carried out in accordance with the principles of 'BS8545: Trees: from nursery to independence in the landscape – recommendations.'
2. The site soil that has underlain buildings, hard surfaces and other structures may been a poor condition and/or anaerobic and require a significant degree of cultivation and improvement if new trees and shrubs are to thrive. The ground condition of planting locations for new trees and shrubs must be assessed individually so that the appropriate amelioration can be carried out. This should include assessments of soil structure/profile, pH, drainage, compaction and contamination.
3. All excavations within the RPA of retained trees must be carried out by hand. Where areas of concentrated pedestrian activity are required within RPAs, work shall be carried out on top of 25mm ply boards set on 100mm wood chip.
4. Where posts are to be concreted into the ground within the RPA of retained trees, excavated post holes must be lined with a heavy duty (damp proof course-type) plastic membrane to prevent any concrete from damaging roots.

18. TREE ESTABLISHMENT AND HEALTH/CONDITION MONITORING

18.1. A separate soft landscape management plan has been proposed and must be adhered to as approved.

18.2. Following the completion of external works for each Phase it will be necessary to continue monitoring to assess and evaluate the condition of both newly planted trees and trees that have been retained.

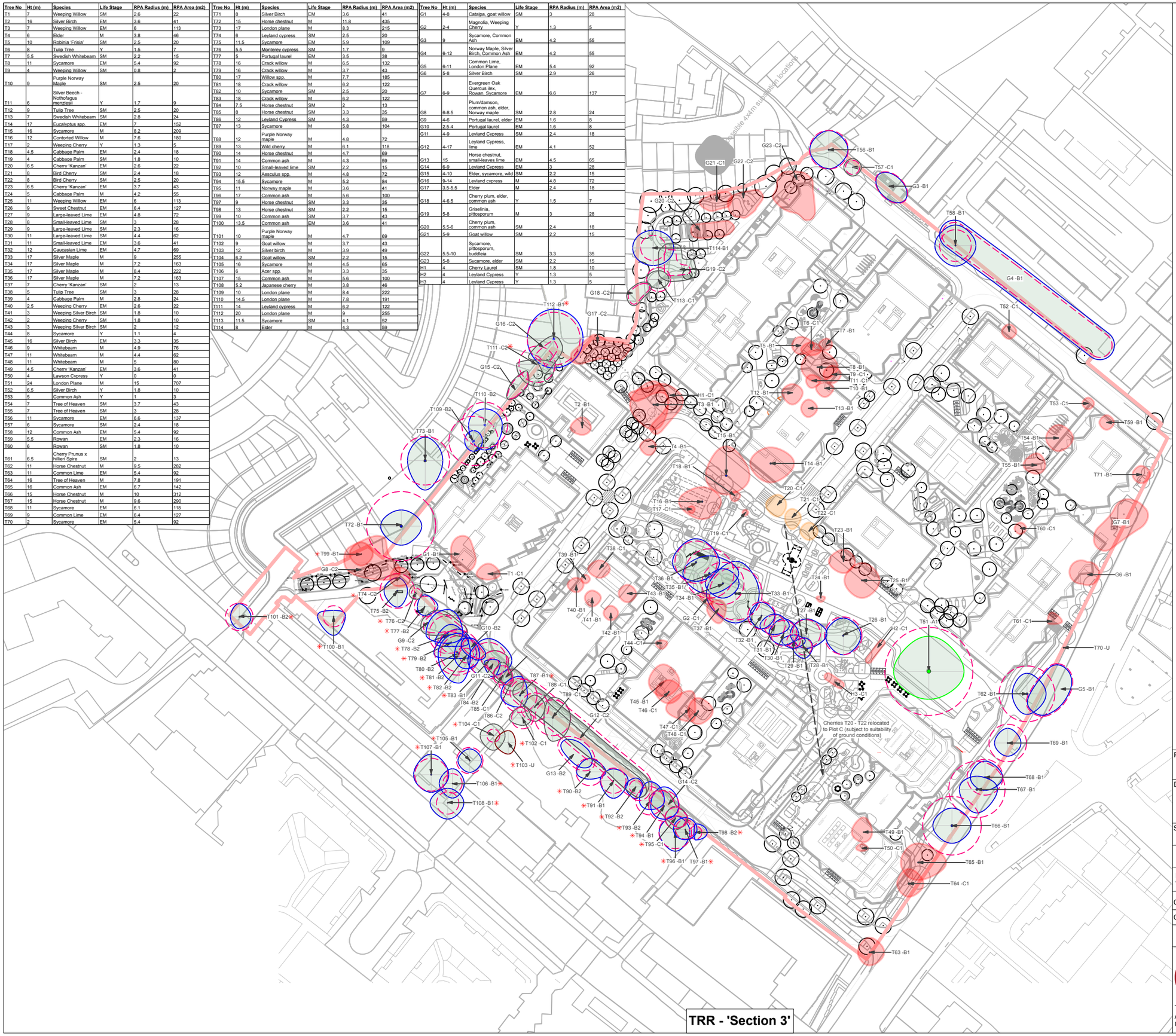
18.3. Immediately following the completion of landscaping works, the Project Arboriculturist or other suitably qualified and experienced arboricultural/landscape specialist must inspect the condition of all newly planted trees to ensure that planting specifications have been properly adhered to. This will involve checks of tree size and form, staking, individual protection and weed control. Feedback must be provided to the Site Manager and to the Local Authority Tree Officer along with clear specifications for remedial action as may be necessary.

18.4. Subsequently, at intervals and for the period specified in the approved management plan, the Project Arboriculturist or other suitably qualified and experienced arboricultural/landscape specialist shall inspect all the trees on the site and make recommendations for remedial action as may be necessary. This will involve visual assessment of the condition of retained trees, an assessment of the effectiveness of tree protection and weed control in relation to newly planted trees and identification of trees that require formative pruning to improve long-term structural form. Again, Feedback must be provided to the Site Manager and to the LBI Tree Officer along with clear specifications for remedial action as may be necessary.

Tree No	Ht (m)	Species	Life Stage	RPA Radius (m)	RPA Area (m2)
T1	7	Weeping Willow	SM	2.6	22
T2	16	Silver Birch	EM	3.6	41
T3	7	Weeping Willow	EM	6	113
T4	6	Elder	M	3.8	46
T5	10	Robinia 'Frisia'	SM	2.5	20
T6	8	Tulip Tree	Y	1.5	7
T7	5.5	Swedish Whitebeam	SM	2.2	15
T8	11	Sycamore	EM	5.4	92
T9	4	Weeping Willow	SM	0.8	2
T10	9	Purple Norway Maple	SM	2.5	20
T11	6	Silver Beech - Nothofagus menziesii	Y	1.7	9
T12	9	Tulip Tree	SM	2.5	20
T13	7	Swedish Whitebeam	SM	2.8	24
T14	17	Eucalyptus spp.	EM	7	152
T15	16	Sycamore	M	8.2	209
T16	12	Contorted Willow	M	7.6	180
T17	2	Weeping Cherry	Y	1.3	5
T18	4.5	Cabbage Palm	EM	2.4	18
T19	4	Cabbage Palm	SM	1.8	10
T20	6.5	Cherry 'Kanzan'	EM	2.6	22
T21	8	Bird Cherry	SM	2.4	18
T22	8	Bird Cherry	SM	2.5	20
T23	6.5	Cherry 'Kanzan'	EM	3.7	43
T24	5	Cabbage Palm	M	4.2	55
T25	11	Weeping Willow	EM	6	113
T26	9	Sweet Chestnut	EM	6.4	127
T27	9	Large-leaved Lime	EM	4.8	72
T28	8	Small-leaved Lime	SM	3	28
T29	9	Large-leaved Lime	SM	2.3	16
T30	11	Large-leaved Lime	SM	4.4	62
T31	11	Small-leaved Lime	EM	3.6	41
T32	12	Caucasian Lime	EM	4.7	69
T33	17	Silver Maple	M	9	255
T34	17	Silver Maple	M	7.2	163
T35	17	Silver Maple	M	8.4	222
T36	17	Silver Maple	M	7.2	163
T37	7	Cherry 'Kanzan'	SM	2	13
T38	5	Tulip Tree	SM	3	28
T39	4	Cabbage Palm	M	2.8	24
T40	2.5	Weeping Cherry	EM	2.6	22
T41	3	Weeping Silver Birch	SM	1.8	10
T42	2	Weeping Cherry	SM	1.8	10
T43	3	Weeping Silver Birch	SM	2	12
T44	8	Sycamore	Y	1.1	4
T45	16	Silver Birch	EM	3.3	35
T46	9	Whitebeam	M	4.9	76
T47	11	Whitebeam	M	4.4	62
T48	11	Whitebeam	M	5	80
T49	4.5	Cherry 'Kanzan'	EM	3.6	41
T50	4	Lawson Cypress	Y	0	0
T51	24	London Plane	M	15	707
T52	6.5	Silver Birch	Y	1.8	10
T53	5	Common Ash	Y	1	3
T54	7	Tree of Heaven	SM	3.7	43
T55	7	Tree of Heaven	SM	3	28
T56	11	Sycamore	EM	6.6	137
T57	6	Sycamore	SM	2.4	18
T58	12	Common Ash	EM	5.4	92
T59	5.5	Rowan	EM	2.3	16
T60	6	Rowan	SM	1.8	10
T61	6.5	Cherry Prunus x hillieri Spire	SM	2	13
T62	11	Horse Chestnut	M	9.5	282
T63	11	Common Lime	EM	5.4	92
T64	16	Tree of Heaven	M	7.8	191
T65	16	Common Ash	EM	6.7	142
T66	15	Horse Chestnut	M	10	312
T67	15	Horse Chestnut	M	9.6	290
T68	11	Sycamore	EM	6.1	118
T69	9	Common Lime	EM	6.4	127
T70	2	Sycamore	EM	5.4	92

Tree No	Ht (m)	Species	Life Stage	RPA Radius (m)	RPA Area (m2)
T71	8	Silver Birch	EM	3.6	41
T72	15	Horse chestnut	M	11.8	435
T73	17	London plane	M	8.3	215
T74	6	Leyland cypress	SM	2.5	20
T75	11.5	Sycamore	EM	5.9	109
T76	5.5	Monterey cypress	SM	1.7	9
T77	5	Portugal laurel	EM	3.5	38
T78	16	Crack willow	M	6.5	132
T79	16	Crack willow	M	3.7	43
T80	17	Willow spp.	M	7.7	185
T81	18	Crack willow	M	6.2	122
T82	10	Sycamore	SM	2.5	20
T83	18	Crack willow	M	6.2	122
T84	7.5	Horse chestnut	SM	2	13
T85	8	Horse chestnut	SM	3.3	35
T86	12	Leyland Cypress	SM	4.3	59
T87	13	Sycamore	M	5.8	104
T88	12	Purple Norway maple	M	4.8	72
T89	13	Wild cherry	M	6.1	118
T90	14	Horse chestnut	M	4.7	69
T91	14	Common ash	M	4.3	59
T92	10	Small-leaved lime	SM	2.2	15
T93	12	Aesculus spp.	M	4.8	72
T94	15.5	Sycamore	M	5.2	84
T95	11	Norway maple	M	3.6	41
T96	17	Common ash	M	5.6	100
T97	9	Horse chestnut	SM	3.3	35
T98	13	Horse chestnut	SM	2.2	15
T99	10	Common ash	SM	3.7	43
T100	13.5	Common ash	EM	3.6	41
T101	10	Purple Norway maple	M	4.7	69
T102	9	Goat willow	M	3.7	43
T103	12	Silver birch	M	3.9	49
T104	6.2	Goat willow	SM	2.2	15
T105	16	Sycamore	M	4.5	65
T106	6	Acer spp.	M	3.3	35
T107	15	Common ash	M	5.6	100
T108	5.2	Japanese cherry	M	3.8	46
T109	10	London plane	M	8.4	222
T110	14.5	London plane	M	7.8	191
T111	14	Leyland cypress	M	6.2	122
T112	20	London plane	M	9	255
T113	11.5	Sycamore	SM	4.1	52
T114	8	Elder	M	4.3	59

Tree No	Ht (m)	Species	Life Stage	RPA Radius (m)	RPA Area (m2)
G1	4-8	Catalpa, goat willow	SM	3	28
G2	2-4	Magnolia, Weeping Cherry	Y	1.3	5
G3	9	Sycamore, Common Ash	EM	4.2	55
G4	6-12	Norway Maple, Silver Birch, Common Ash	EM	4.2	55
G5	6-11	Common Lime, London Plane	EM	5.4	92
G6	5-8	Silver Birch	SM	2.9	26
G7	6-9	Evergreen Oak Quercus ilex, Rowan, Sycamore	EM	6.6	137
G8	6-8.5	Plum/damson, common ash, elder, Norway maple	SM	2.8	24
G9	4-6	Portugal laurel, elder	EM	1.6	8
G10	2.5-4	Portugal laurel	EM	1.6	8
G11	4-9	Leyland Cypress	SM	2.4	18
G12	4-17	Leyland Cypress, lime	EM	4.1	52
G13	15	Horse chestnut, small-leaves lime	EM	4.5	65
G14	6-9	Leyland Cypress	EM	3	28
G15	4-10	Elder, sycamore, wild	SM	2.2	15
G16	9-14	Leyland cypress	M	4.8	72
G17	3.5-5.5	Elder	M	2.4	18
G18	4-6.5	Cherry plum, elder, common ash	Y	1.5	7
G19	5-8	Griselinia, pittosporum	M	3	28
G20	5.5-6	Cherry plum, common ash	SM	2.4	18
G21	5-9	Goat willow	SM	2.2	15
G22	5.5-10	Sycamore, pittosporum, buddleia	SM	3.3	35
G23	5-8	Sycamore, elder	SM	2.2	15
H1	4	Cherry Laurel	SM	1.8	10
H2	4	Leyland Cypress	Y	1.3	5
H3	4	Leyland Cypress	Y	1.3	5



TRR - 'Section 3'

KEY

- Category A Tree - High quality (Retention highly desirable)
- Category A - Hedgerow, Group, Woodland - High quality (Retention highly desirable)
- Category B Tree - Moderate quality (Retention desirable)
- Category B - Hedgerow, Group, Woodland - Moderate quality (Retention desirable)
- Category C Tree - Low quality (May be retained but should not constrain development)
- Category C - Hedgerow, Group, Woodland - Low quality (May be retained but should not constrain development)
- Category U Tree - Very low quality (Mostly unsuitable for retention)
- Category U - Hedgerow, Group, Woodland - Very low quality (Mostly unsuitable for retention)
- Root Protection Area (RPA) - Layout design tool indicating the minimum area around a tree deemed to contain sufficient roots and soil volume to maintain the tree's viability
- Stem position not shown/shown correctly on topographical survey. Tree located using laser measure triangulation off fixed point, but position is approximat
- Site Boundary
- Tree / Group / Hedge to be removed
- Tree to be relocated to Plot C (subject to suitability of ground conditions)

Note: The original of this drawing was produced in colour – a monochrome copy should not be relied upon. This drawing should be interpreted with reference to the accompanying tree schedule and written advice

N
GRID NORTH

0 10 20 30 40 50
Meters

PROJECT TITLE
Former Holloway Prison, Parkhurst Road

DRAWING TITLE
Tree Retention & Removal Plan

SCALE	DRAWING NUMBER
1:1250 @ A3	BHA_630_02A

DRAWN BY	APPROVED BY	REVISION	SHEET	DATE
SD	IM	A	-	20/09/2021

LAYOUT USED WITHIN DRAWING: **Masterplan Roof Plan Rev J**
General Arrangement Plan - Ground Floor Rev SK02

CLIENT: **Peabody Construction Limited**

COORDINATE SYSTEM / DATUM: **British National Grid / Newlyn Datum (AOD)**

Barton Hyett Associates
Arboricultural Consultants
Tel: 01386 576161 Website: www.barton-hyett.co.uk
Address: Barn 2,Oxpens Farm,Yanworth,
Cheltenham,Gloucestershire,GL54 3QE

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T1	7	Weeping Willow	SM	2.6	22
T2	16	Silver Birch	EM	3.6	41
T3	7	Weeping Willow	EM	6	113
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T5	10	Robinia 'Frisia'	SM	2.5	20
T6	8	Tulip Tree	Y	1.5	7
T7	5.5	Swedish Whitebeam	SM	2.2	15
T8	11	Sycamore	EM	5.4	92
T9	4	Weeping Willow	SM	0.8	2
T10	9	Purple Norway Maple	SM	2.5	20
T11	6	Silver Beech - Nothofagus menziesii	Y	1.7	9
T12	9	Tulip Tree	SM	2.5	20
T13	7	Swedish Whitebeam	SM	2.8	24
T14	17	Eucalyptus spp.	EM	7	152
T15	16	Sycamore	M	8.2	209
T16	12	Contorted Willow	M	7.6	180
T17	2	Weeping Cherry	Y	1.3	5
T18	4.5	Cabbage Palm	EM	2.4	18
T19	4	Cabbage Palm	SM	1.8	10
T20	6.5	Cherry 'Kanzan'	EM	2.6	22
T21	8	Bird Cherry	SM	2.4	18
T22	8	Bird Cherry	SM	2.5	20
T23	6.5	Cherry 'Kanzan'	EM	3.7	43
T24	5	Cabbage Palm	M	4.2	55
T25	11	Weeping Willow	EM	6	113
T26	9	Sweet Chestnut	EM	6.4	127
T27	9	Large-leaved Lime	EM	4.8	72
T28	8	Small-leaved Lime	SM	3	28
T29	9	Large-leaved Lime	SM	2.3	16
T30	11	Large-leaved Lime	SM	4.4	62
T31	11	Small-leaved Lime	EM	3.6	41
T32	12	Caucasian Lime	EM	4.7	69
T33	17	Silver Maple	M	9	255
T34	17	Silver Maple	M	7.2	163
T35	17	Silver Maple	M	8.4	222
T36	17	Silver Maple	M	7.2	163
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T39	4	Cabbage Palm	M	2.8	24
T40	2.5	Weeping Cherry	EM	2.6	22
T41	3	Weeping Silver Birch	SM	1.8	10
T42	2	Weeping Cherry	SM	1.8	10
T43	3	Weeping Silver Birch	SM	2	12
T44	8	Sycamore	Y	1.1	4
T45	16	Silver Birch	EM	3.3	35
T46	9	Whitebeam	M	4.9	76
T47	11	Whitebeam	M	4.4	62
T48	11	Whitebeam	M	5	80
T49	4.5	Cherry 'Kanzan'	EM	3.6	41
T50	4	Lawson Cypress	Y	0	0
T51	24	London Plane	M	15	707
T52	6.5	Silver Birch	Y	1.8	10
T53	5	Common Ash	Y	1	3
T54	7	Tree of Heaven	SM	3.7	43
T55	7	Tree of Heaven	SM	3	28
T56	11	Sycamore	EM	6.6	137
T57	6	Sycamore	SM	2.4	18
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T59	5.5	Rowan	EM	2.3	16
T60	6	Rowan	SM	1.8	10
T61	6.5	Cherry Prunus x hillieri Spire	SM	2	13
T62	11	Horse Chestnut	M	9.5	282
T63	11	Common Lime	EM	5.4	92
T64	16	Tree of Heaven	M	7.8	191
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T67	15	Horse Chestnut	M	9.6	290
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T80	17	Willow spp.	M	7.7	185
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T84	7.5	Horse chestnut	SM	2	13
T85	8	Horse chestnut	SM	3.3	35
T86	12	Leyland Cypress	SM	4.3	59
T87	13	Sycamore	M	5.8	104
T88	12	Purple Norway maple	M	4.8	72
T89	13	Wild cherry	M	6.1	118
T90	14	Horse chestnut	M	4.7	69
T91	14	Common ash	M	4.3	59
T92	10	Small-leaved lime	SM	2.2	15
T93	12	Aesculus spp.	M	4.8	72
T94	15.5	Sycamore	M	5.2	84
T95	11	Norway maple	M	3.6	41
T96	17	Common ash	M	5.6	100
T97	9	Horse chestnut	SM	3.3	35
T98	13	Horse chestnut	SM	2.2	15
T99	10	Common ash	SM	3.7	43
T100	13.5	Common ash	EM	3.6	41
T101	10	Purple Norway maple	M	4.7	69
T102	9	Goat willow	M	3.7	43
T103	12	Silver birch	M	3.9	49
T104	6.2	Goat willow	SM	2.2	15
T105	16	Sycamore	M	4.5	65
T106	6	Acer spp.	M	3.3	35
T107	15	Common ash	M	5.6	100
T108	5.2	Japanese cherry	M	3.8	46
T109	10	London plane	M	8.4	222
T110	14.5	London plane	M	7.8	191
T111	7.4	Leyland cypress	M	6.2	122
T112	20	London plane	M	9	255
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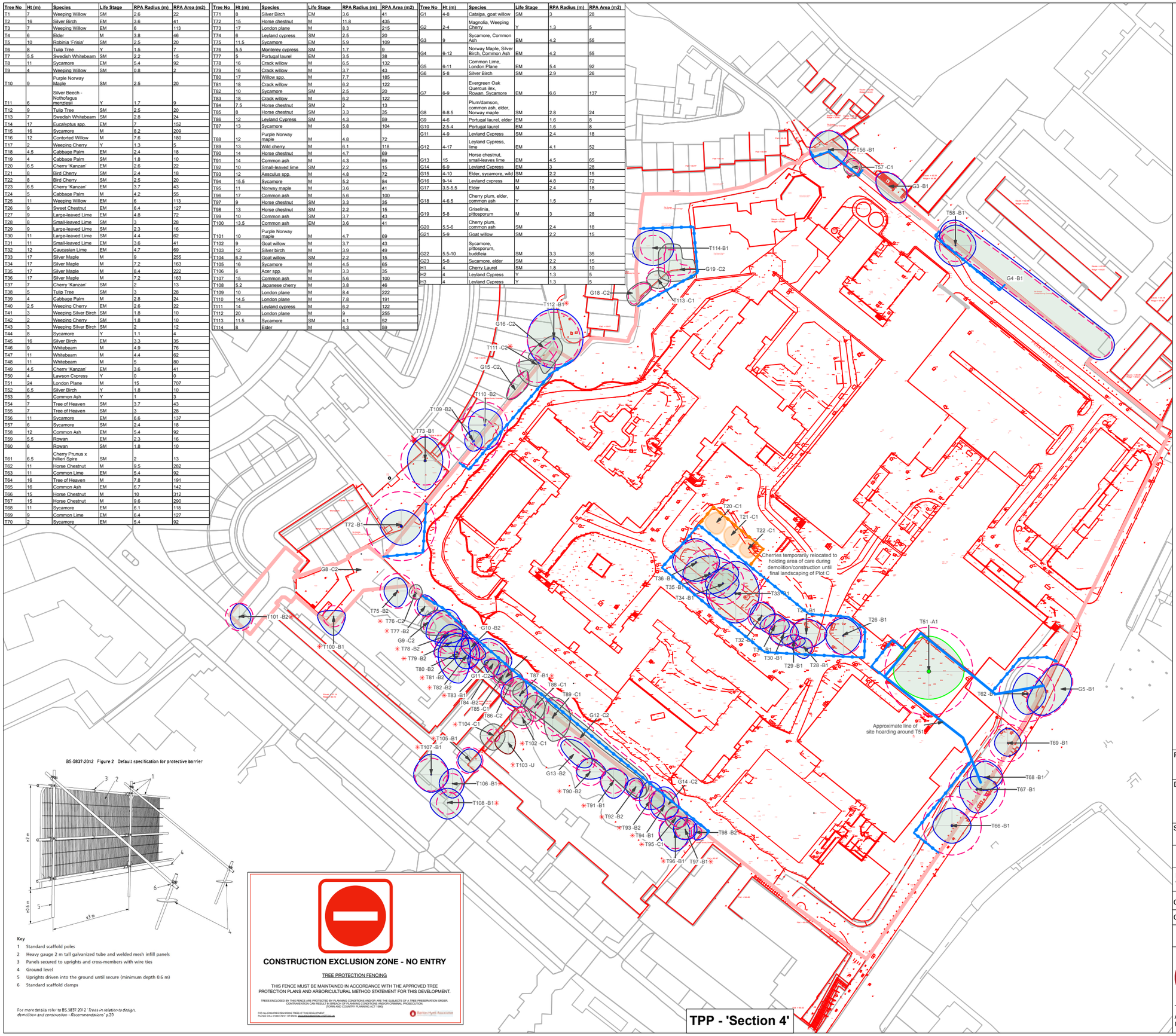
G4	6-12	Norway Maple, Silver Birch, Common Ash	EM	4.2	55
G5	6-11	Common Lime, London Plane	EM	5.4	92
G6	5-8	Silver Birch	SM	2.9	26
G7	6-9	Evergreen Oak Quercus ilex, Rowan, Sycamore	EM	6.6	137
G8	6-8.5	Plum/damson, common ash, elder, Norway maple	SM	2.8	24
G9	4-6	Portugal laurel, elder	EM	1.6	8
G10	2.5-4	Portugal laurel	EM	1.6	8
G11	4-9	Leyland Cypress	SM	2.4	18
G12	4-17	Leyland Cypress, lime	EM	4.1	52
G13	15	Horse chestnut, small-leaves lime	EM	4.5	65
G14	6-9	Leyland Cypress	EM	3	28
G15	4-10	Elder, sycamore, wild	SM	2.2	15
G16	9-14	Leyland cypress	M	4.8	72
G17	3.5-5.5	Elder.	M	2.4	18
G18	4-6.5	Cherry plum, elder, common ash	Y	1.5	7
G19	5-8	Griselinia, pittosporum	M	3	28
G20	5.5-6	Cherry plum, common ash	SM	2.4	18
G21	5-9	Goat willow	SM	2.2	15
G22	5.5-10	Sycamore, pittosporum, buddleia	SM	3.3	35
G23	5-8	Sycamore, elder	SM	2.2	15
H1	4	Cherry Laurel	SM	1.8	10
H2	4	Leyland Cypress	Y	1.3	5
H3	4	Leyland Cypress	Y	1.3	5



BS:5837:2012 Figure 2 Default specification for protective barrier

Key
1 Standard scaffold poles
2 Heavy gauge 2 m tall galvanized tube and welded mesh infill panels
3 Panels secured to uprights and cross-members with wire ties
4 Ground level
5 Uprights driven into the ground until secure (minimum depth 0.6 m)
6 Standard scaffold clamps

For more details refer to BS.5837:2012 'Trees in relation to design, demolition and construction - Recommendations' p.20

CONSTRUCTION EXCLUSION ZONE - NO ENTRY

TREE PROTECTION FENCING

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FOR ALL ENQUIRIES REGARDING TREES AT THIS DEVELOPMENT PLEASE CALL 01386 576161 OR EMAIL

Barton Hyett Associates

TPP - 'Section 4'

KEY

- Category A Tree - High quality (Retention highly desirable)
- Category A - Hedgerow, Group, Woodland - High quality (Retention highly desirable)
- Category B Tree - Moderate quality (Retention desirable)
- Category B - Hedgerow, Group, Woodland - Moderate quality (Retention desirable)
- Category C Tree - Low quality (May be retained but should not constrain development)
- Category C - Hedgerow, Group, Woodland - Low quality (May be retained but should not constrain development)
- Category U Tree - Very low quality (Mostly unsuitable for retention)
- Category U - Hedgerow, Group, Woodland - Very low quality (Mostly unsuitable for retention)
- Root Protection Area (RPA) - Layout design tool indicating the minimum area around a tree deemed to contain sufficient roots and soil volume to maintain the tree's viability
- Stem position not shown/shown correctly on topographical survey. Tree located using laser measure triangulation off fixed point, but position is approximat
- Site Boundary
- Tree to be relocated to Plot C (subject to suitability of ground conditions)

Protection Measures

- Tree Protection Barrier
- Secondary Tree Protection Barrier to allow access for maintenance of trees in process of being relocated
- Temporary Ground Protection during demolition phase

Note: The original of this drawing was produced in colour – a monochrome copy should not be relied upon. This drawing should be interpreted with reference to the accompanying tree schedule and written advice

N
GRID NORTH

0 10 20 30 40 50
Meters

PROJECT TITLE
Former Holloway Prison, Parkhurst Road

DRAWING TITLE
DRAFT Tree Protection Plan - Demolition

SCALE		DRAWING NUMBER
1:1250	@ A3	BHA_630_03

DRAWN BY	APPROVED BY	REVISION	SHEET	DATE
SD	IM	-	-	20/09/2021

LAYOUT USED WITHIN DRAWING **Masterplan Roof Plan Rev J**
General Arrangement Plan - Ground Floor Rev SK02

CLIENT **Peabody Construction Limited**

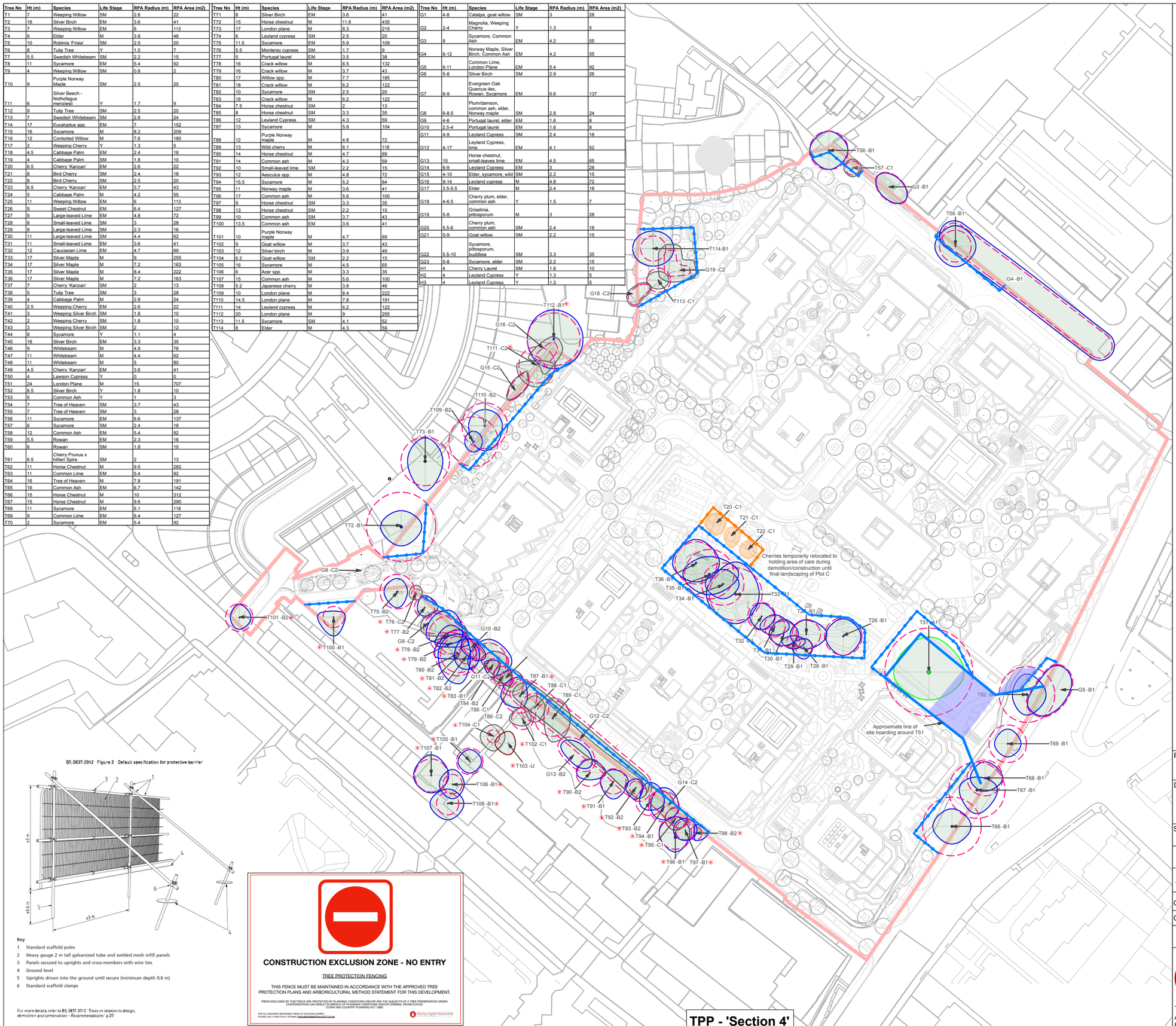
COORDINATE SYSTEM / DATUM **British National Grid / Newlyn Datum (AOD)**

Barton Hyett Associates
Arboricultural Consultants
Tel: 01386 576161 Website: www.barton-hyett.co.uk
Address: Barn 2,Oxpens Farm,Yanworth,
Cheltenham,Gloucestershire,GL54 3QE

Tree No	Ht (m)	Species	Life Stage	RPA Radius (m)	RPA Area (m2)
T1	7	Weeping Willow	SM	2.6	22
T2	16	Silver Birch	EM	3.6	41
T3	7	Weeping Willow	EM	6	113
T4	6	Elder	M	3.8	46
T5	10	Robinia 'Frisia'	SM	2.5	20
T6	8	Tulip Tree	Y	1.5	7
T7	5.5	Swedish Whitebeam	SM	2.2	15
T8	11	Sycamore	EM	5.4	92
T9	4	Weeping Willow	SM	0.8	2
T10	9	Purple Norway Maple	SM	2.5	20
T11	6	Silver Beech - Nothofagus menziesii	Y	1.7	9
T12	9	Tulip Tree	SM	2.5	20
T13	7	Swedish Whitebeam	SM	2.8	24
T14	17	Eucalyptus spp.	EM	7	152
T15	16	Sycamore	M	8.2	209
T16	12	Contorted Willow	M	7.6	180
T17	2	Weeping Cherry	Y	1.3	5
T18	4.5	Cabbage Palm	EM	2.4	18
T19	4	Cabbage Palm	SM	1.8	10
T20	6.5	Cherry 'Kanzan'	EM	2.6	22
T21	8	Bird Cherry	SM	2.4	18
T22	8	Bird Cherry	SM	2.5	20
T23	6.5	Cherry 'Kanzan'	EM	3.7	43
T24	5	Cabbage Palm	M	4.2	55
T25	11	Weeping Willow	EM	6	113
T26	9	Sweet Chestnut	EM	6.4	127
T27	9	Large-leaved Lime	EM	4.8	72
T28	8	Small-leaved Lime	SM	3	28
T29	9	Large-leaved Lime	SM	2.3	16
T30	11	Large-leaved Lime	SM	4.4	62
T31	11	Small-leaved Lime	EM	3.6	41
T32	12	Caucasian Lime	EM	4.7	69
T33	17	Silver Maple	M	9	255
T34	17	Silver Maple	M	7.2	163
T35	17	Silver Maple	M	8.4	222
T36	17	Silver Maple	M	7.2	163
T37	7	Cherry 'Kanzan'	SM	2	13
T38	5	Tulip Tree	SM	3	28
T39	4	Cabbage Palm	M	2.8	24
T40	2.5	Weeping Cherry	EM	2.6	22
T41	3	Weeping Silver Birch	SM	1.8	10
T42	2	Weeping Cherry	SM	1.8	10
T43	3	Weeping Silver Birch	SM	2	12
T44	8	Sycamore	Y	1.1	4
T45	16	Silver Birch	EM	3.3	35
T46	9	Whitebeam	M	4.9	76
T47	11	Whitebeam	M	4.4	62
T48	11	Whitebeam	M	5	80
T49	4.5	Cherry 'Kanzan'	EM	3.6	41
T50	4	Lawson Cypress	Y	0	0
T51	24	London Plane	M	15	707
T52	6.5	Silver Birch	Y	1.8	10
T53	5	Common Ash	Y	1	3
T54	7	Tree of Heaven	SM	3.7	43
T55	7	Tree of Heaven	SM	3	28
T56	11	Sycamore	EM	6.6	137
T57	6	Sycamore	SM	2.4	18
T58	12	Common Ash	EM	5.4	92
T59	5.5	Rowan	EM	2.3	16
T60	6	Rowan	SM	1.8	10
T61	6.5	Cherry Prunus x hillieri Spire	SM	2	13
T62	11	Horse Chestnut	M	9.5	282
T63	11	Common Lime	EM	5.4	92
T64	16	Tree of Heaven	M	7.8	191
T65	16	Common Ash	EM	6.7	142
T66	15	Horse Chestnut	M	10	312
T67	15	Horse Chestnut	M	9.6	290
T68	11	Sycamore	EM	6.1	118
T69	9	Common Lime	EM	6.4	127
T70	2	Sycamore	EM	5.4	92

Tree No	Ht (m)	Species	Life Stage	RPA Radius (m)	RPA Area (m2)
T71	8	Silver Birch	EM	3.6	41
T72	15	Horse chestnut	M	11.8	435
T73	17	London plane	M	8.3	215
T74	6	Leyland cypress	SM	2.5	20
T75	11.5	Sycamore	EM	5.9	109
T76	5.5	Monterey cypress	SM	1.7	9
T77	5	Portugal laurel	EM	3.5	38
T78	16	Crack willow	M	6.5	132
T79	16	Crack willow	M	3.7	43
T80	17	Willow spp.	M	7.7	185
T81	18	Crack willow	M	6.2	122
T82	10	Sycamore	SM	2.5	20
T83	18	Crack willow	M	6.2	122
T84	7.5	Horse chestnut	SM	2	13
T85	8	Horse chestnut	SM	3.3	35
T86	12	Leyland Cypress	SM	4.3	59
T87	13	Sycamore	M	5.8	104
T88	12	Purple Norway maple	M	4.8	72
T89	13	Wild cherry	M	6.1	118
T90	14	Horse chestnut	M	4.7	69
T91	14	Common ash	M	4.3	59
T92	10	Small-leaved lime	SM	2.2	15
T93	12	Aesculus spp.	M	4.8	72
T94	15.5	Sycamore	M	5.2	84
T95	11	Norway maple	M	3.6	41
T96	17	Common ash	M	5.6	100
T97	9	Horse chestnut	SM	3.3	35
T98	13	Horse chestnut	SM	2.2	15
T99	10	Common ash	SM	3.7	43
T100	13.5	Common ash	EM	3.6	41
T101	10	Purple Norway maple	M	4.7	69
T102	9	Goat willow	M	3.7	43
T103	12	Silver birch	M	3.9	49
T104	6.2	Goat willow	SM	2.2	15
T105	16	Sycamore	M	4.5	65
T106	6	Acer spp.	M	3.3	35
T107	15	Common ash	M	5.6	100
T108	5.2	Japanese cherry	M	3.8	46
T109	10	London plane	M	8.4	222
T110	14.5	London plane	M	7.8	191
T111	14	Leyland cypress	M	6.2	122
T112	20	London plane	M	9	255
T113	11.5	Sycamore	SM	4.1	52
T114	8	Elder	M	4.3	59

Tree No	Ht (m)	Species	Life Stage	RPA Radius (m)	RPA Area (m2)
G1	4-8	Catalpa, goat willow	SM	3	28
G2	2-4	Magnolia, Weeping Cherry	Y	1.3	5
G3	9	Sycamore, Common Ash	EM	4.2	55
G4	6-12	Norway Maple, Silver Birch, Common Ash	EM	4.2	55
G5	6-11	Common Lime, London Plane	EM	5.4	92
G6	5-8	Silver Birch	SM	2.9	26
G7	6-9	Evergreen Oak Quercus ilex, Rowan, Sycamore	EM	6.6	137
G8	6-8.5	Plum/damson, common ash, elder, Norway maple	SM	2.8	24
G9	4-6	Portugal laurel, elder	EM	1.6	8
G10	2.5-4	Portugal laurel	EM	1.6	8
G11	4-9	Leyland Cypress	SM	2.4	18
G12	4-17	Leyland Cypress, lime	EM	4.1	52
G13	15	Horse chestnut, small-leaves lime	EM	4.5	65
G14	6-9	Leyland Cypress	EM	3	28
G15	4-10	Elder, sycamore, wild	SM	2.2	15
G16	9-14	Leyland cypress	M	4.8	72
G17	3.5-5.5	Elder	M	2.4	18
G18	4-6.5	Cherry plum, elder, common ash	Y	1.5	7
G19	5-8	Griselinia, pittosporum	M	3	28
G20	5.5-6	Cherry plum, common ash	SM	2.4	18
G21	5-9	Goat willow	SM	2.2	15
G22	5.5-10	Sycamore, pittosporum, buddleia	SM	3.3	35
G23	5-8	Sycamore, elder	SM	2.2	15
H1	4	Cherry Laurel	SM	1.8	10
H2	4	Leyland Cypress	Y	1.3	5
H3	4	Leyland Cypress	Y	1.3	5



BS:5837:2012 Figure 2 Default specification for protective barrier

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CONSTRUCTION EXCLUSION ZONE - NO ENTRY

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Barton Hyett Associates

TPP - 'Section 4'

KEY

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- Temporary Ground Protection construction phase

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N
GRID NORTH

0 10 20 30 40 50
Meters

PROJECT TITLE
Former Holloway Prison, Parkhurst Road

DRAWING TITLE
DRAFT Tree Protection Plan - Construction

SCALE		DRAWING NUMBER
1:1250	@ A3	BHA_630_04

DRAWN BY	APPROVED BY	REVISION	SHEET	DATE
SD	IM	-	-	20/09/2021

LAYOUT USED WITHIN DRAWING: **Masterplan Roof Plan Rev J**
General Arrangement Plan - Ground Floor Rev SK02

CLIENT: **Peabody Construction Limited**

COORDINATE SYSTEM / DATUM: **British National Grid / Newlyn Datum (AOD)**

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Address: Barn 2,Oxpens Farm,Yanworth,
Cheltenham,Gloucestershire,GL54 3QE

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Barton Hyett Associates
Arboricultural Consultants

TREE SURVEY SCHEDULE

FORMER HOLLOWAY PRISON

PROJECT NO: R.3291

SURVEYOR: IAN MONGER

CLIENT: PEABODY CONSTRUCTION LIMITED

SURVEY DATE: 27 AUGUST AND 4 SEPTEMBER 2019

Barton Hyett
Arboricultural Consultants

INDIVIDUAL TREES

Ref	Species	On/off site	Height (m)	No. of Stems	Est diam ?	Calc. / Actual Stem Dia. (mm)	Crown radii (m) N-E-S-W	Avg. Canopy Height (m)	1st branch ht (m)	1st branch dir.	Life Stage	Special importance	General Observations	Health & vitality	Struct. cond.	Estimated Remaining Contribution (Years)	BS5837 Category	RPA Radius (m)	RPA m²
T1	Weeping Willow	On	7	1	-	220	3.5-4-2-4	0.0	2	N	SM	None	Growing at base of retaining wall.	Good	Good	20	C1	2.6	22
T2	Silver Birch	On	16	1	-	300	3.5-3-2.5-4	3.0	4	N	EM	None	Good early form.	Good	Good	40	B1	3.6	41
T3	Weeping Willow	On	7	1	#	500	8-5-8.5-8	0.0	1.5	W	EM	None	Inaccessible. Low branching form.	Good	Good	40	B1	6.0	113
T4	Elder	On	6	7	#	320	2.5-2.5-3-3	1.0	2	N	M	None	Growing on earth bank.	Good	Good	40	B1	3.8	46
T5	Robinia 'Frisia'	On	10	1	-	210	3-4.5-3-3	1.5	2.5	N	SM	None	Minor deadwood.	Good	Good	40	B1	2.5	20
T6	Tulip Tree	On	8	1	-	120	2.5-3.5-2-3.5	1.5	2	W	Y	None	Staked tree.	Good	Good	40	C1	1.5	7
T7	Swedish Whitebeam	On	6	1	-	180	2-2-2-2.5	1.5	2	SW	SM	None	Basal shoots.	Good	Good	40	B1	2.2	15
T8	Sycamore	On	11	3	-	450	6-7-5-5.5	1.5	2	N	EM	None	Three stems from 1m. Leader dieback.	Good	Good	40	B1	5.4	92
T9	Weeping Willow	On	4	4	#	70	3-3-3-3	0.0	0.3	W	SM	None	Stump coppiced at 0.3m with regrowth.	Good	Fair	10	C1	0.8	2
T10	Purple Norway Maple	On	9	1	-	210	2-3-3-3	3.0	2.5	S	SM	None	Minor dieback to north.	Good	Good	40	B1	2.5	20
T11	Silver Beech - Nothofagus menziesii	On	6	1	-	140	2-3-2.5-2	1.5	1.5	W	Y	None	Young established tree. Lower crown dieback.	Fair	Good	10	C1	1.7	9
T12	Tulip Tree	On	9	1	-	210	3-3.5-4-3.5	1.0	2	A	SM	None	Original leader lost at 2m.	Good	Good	40	B1	2.5	20
T13	Swedish Whitebeam	On	7	1	-	230	3-3-3-2.5	1.5	2	NW	SM	None	Good form.	Good	Good	40	B1	2.8	24

TREE SURVEY SCHEDULE

FORMER HOLLOWAY PRISON

PROJECT NO: R.3291

SURVEYOR: IAN MONGER

CLIENT: PEABODY CONSTRUCTION LIMITED

SURVEY DATE: 27 AUGUST AND 4 SEPTEMBER 2019

Barton Hyett
Arboricultural Consultants

Ref	Species	On/off site	Height (m)	No. of Stems	Est diam ?	Calc. / Actual Stem Dia. (mm)	Crown radii (m) N-E-S-W	Avg. Canopy Height (m)	1st branch ht (m)	1st branch dir.	Life Stage	Special importance	General Observations	Health & vitality	Struct. cond.	Estimated Remaining Contribution (Years)	BS5837 Category	RPA Radius (m)	RPA m²
T14	Eucalyptus spp.	On	17	1	-	580	5.5-8-6.5-7	3.0	4	S	EM	None	Not on topo. Position approximate. Canopy overhangs and in contact with adjacent building. Stem removal wound.	Good	Good	40.0	B1	7.0	152
T15	Sycamore	On	16	2	-	680	10-8-6.5-7	6.0	4	E	M	None	Two stems from near ground. Basal shoots. Historic crown reduction.	Good	Good	40.0	B1	8.2	209
T16	Contorted Willow	On	12	5	-	630	5-6.5-6-8	1.0	1	W	M	None	Minor deadwood.	Good	Good	40.0	B1	7.6	180
T17	Weeping Cherry	On	2	1	#	100	1-1-1.5-1.5	0.0	1	S	Y	None	Lopped branches.	Good	Good	20	C1	1.3	5
T18	Cabbage Palm	On	5	1	-	200	1.5-2-2-1.5	3.0	1.5	S	EM	None	No significant defects.	Good	Good	40	B1	2.4	18
T19	Cabbage Palm	On	4	1	-	150	1-1-1-1	3.0	2.5	N	SM	None	No significant defects.	Good	Good	20	C1	1.8	10
T20	Cherry 'Kanzan'	On	7	2	-	220	3.5-3-4-4	2.0	2	N	EM	None	Not on topo. Position approximate. Canopy in contact with building. Crown lift wounds. Past crown reduction.	Fair	Good	20	C1	2.6	22
T21	Bird Cherry	On	8.0	3	-	200	3-3-4-2.5	1.5	1.5	S	SM	None	Past crown reduction.	Fair	Good	20	C1	2.4	18
T22	Bird Cherry	On	8.0	3	-	210	3-3-3-3	2.0	1.5	W	SM	None	Basal shoots.	Fair	Good	20	C1	2.5	20
T23	Cherry 'Kanzan'	On	6.5	1	-	310	4-4-4-5	3.0	1.5	W	EM	None	Inspection chamber at base.	Good	Good	40	B1	3.7	43
T24	Cabbage Palm	On	5.0	12	#	350	0.5-1.5-1.5-1.5	2.0	0.5	E	M	None	No significant defects.	Good	Good	40	B1	4.2	55
T25	Weeping Willow	On	11.0	1	-	500	6-6-6-6	0.0	2.5	W	EM	None	Inspection chamber at base. Pruning wounds and stubs. Canopy overhangs building. Deadwood.	Good	Fair	40	B1	6.0	113

TREE SURVEY SCHEDULE

FORMER HOLLOWAY PRISON

PROJECT NO: R.3291

SURVEYOR: IAN MONGER

CLIENT: PEABODY CONSTRUCTION LIMITED

SURVEY DATE: 27 AUGUST AND 4 SEPTEMBER 2019

Barton Hyett Arboricultural Consultants

Ref	Species	On/off site	Height (m)	No. of Stems	Est diam ?	Calc. / Actual Stem Dia. (mm)	Crown radii (m) N-E-S-W	Avg. Canopy Height (m)	1st branch ht (m)	1st branch dir.	Life Stage	Special importance	General Observations	Health & vitality	Struct. cond.	Estimated Remaining Contribution (Years)	BS5837 Category	RPA Radius (m)	RPA m²
T26	Sweet Chestnut	On	9.0	1	-	530	6-6-6.5-6	2.5	2	A	EM	None	Crown lift stubs.	Good	Good	40	**B1**	6.4	127
T27	Large-leaved Lime	On	9.0	1	-	400	5-7-5-5.5	1.5	2	E	EM	None	Not on topo. Position approximate. Two stems from 1.5m.	Good	Good	40	**B1**	4.8	72
T28	Small-leaved Lime	On	8.0	1	-	250	3-3-4-4	2.5	2.5	S	SM	None	Pruning stubs.	Good	Good	40	**B1**	3.0	28
T29	Large-leaved Lime	On	9.0	1	-	190	2-4-2.5-4	3.0	2.5	E	SM	None	Pruning stubs	Good	Good	40	**B1**	2.3	16
T30	Large-leaved Lime	On	11.0	3	-	370	5-5-4-5	2.0	2	N	SM	None	Crown lift wounds.	Good	Good	40	**B1**	4.4	62
T31	Small-leaved Lime	On	11.0	1	-	300	4-5-3-5	2.5	2.5	N	EM	None	Included bark union at 2m.	Good	Fair	40	**B1**	3.6	41
T32	Caucasian Lime	On	12.0	1	-	390	4.5-4.5-4.5-4	2.5	3	NW	EM	None	Raised surface roots. Included bark unions at 2m.	Good	Fair	40	**B1**	4.7	69
T33	Silver Maple	On	17.0	1	#	750	11-8-10-10	4.0	3	A	M	None	Stem base obscured by vegetation. Previously pollarded at 8m apex with mature regrowth.	Good	Good	40	**B1**	9.0	255
T34	Silver Maple	On	17.0	1	#	600	5-5.5-5-6	5.0	3.5	N	M	None	Stem base obscured by vegetation. Previously pollarded at 8m apex with mature regrowth.	Good	Good	40	**B1**	7.2	163
T35	Silver Maple	On	17.0	1	#	700	6-10-7-9	5.0	2.5	N	M	None	Stem base obscured by vegetation. Previously pollarded at 8m apex with mature regrowth.	Good	Good	40	**B1**	8.4	222
T36	Silver Maple	On	17.0	1	-	600	8-8-6.5-8	5.0	3	NE	M	None	Stem Previously pollarded at 8m apex with mature regrowth.	Good	Good	40	**B1**	7.2	163

TREE SURVEY SCHEDULE

FORMER HOLLOWAY PRISON

PROJECT NO: R.3291

SURVEYOR: IAN MONGER

CLIENT: PEABODY CONSTRUCTION LIMITED

SURVEY DATE: 27 AUGUST AND 4 SEPTEMBER 2019

Barton Hyett
Arboricultural Consultants

Ref	Species	On/off site	Height (m)	No. of Stems	Est diam ?	Calc. / Actual Stem Dia. (mm)	Crown radii (m) N-E-S-W	Avg. Canopy Height (m)	1st branch ht (m)	1st branch dir.	Life Stage	Special importance	General Observations	Health & vitality	Struct. cond.	Estimated Remaining Contribution (Years)	BS5837 Category	RPA Radius (m)	RPA m²
T37	Cherry 'Kanzan'	On	7.0	2	-	170	3-2.5-5-4	2.0	1.5	S	SM	None	Pruning wounds.	Good	Good	40	B1	2.0	13
T38	Tulip Tree	On	5.0	1	-	250	3-3.5-3-4	1.0	1.5	NE	SM	None	Foliage affected by likely viral disease. Active mammal burrows in root plate.	Fair	Good	20	C1	3.0	28
T39	Cabbage Palm	On	4.0	1	-	230	1.5-1.5-1.5-1.5	2.5	1.5	W	M	None	No significant defects.	Good	Good	40	B1	2.8	24
T40	Weeping Cherry	On	2.5	1	-	220	2.5-2.5-2.5-3	0.0	1.5	W	EM	None	Top-grafted specimen.	Good	Good	40	B1	2.6	22
T41	Weeping Silver Birch	On	3.0	1	-	150	2.5-3-3-2.5	0.0	2	N/A	SM	None	Top-grafted specimen.	Good	Good	40	B1	1.8	10
T42	Weeping Cherry	On	2.0	1	-	150	2.5-2.5-2.5-2.5	0.0	1.5	N/A	SM	None	Top-grafted specimen.	Good	Good	40	B1	1.8	10
T43	Weeping Silver Birch	On	3.0	1	-	160	3-3-3-3	0.5	2	N/A	SM	None	Top-grafted specimen.	Good	Good	40	B1	2.0	12
T44	Sycamore	On	8.0	1	-	90	1-2-2-2	1.5	0.3	N	Y	None	Inappropriate location.	Good	Good	20	C1	1.1	4
T45	Silver Birch	On	16.0	1	-	280	6-5.5-5-5	4.0	4	E	EM	None	Growing on earth bank. Historically pollarded.	Good	Good	40	B1	3.3	35
T46	Whitebeam	On	9.0	1	-	410	4-4.5-4-4.5	4.0	1.5	W	M	None	Pollarded at 5m apex with mature regrowth.	Good	Good	40	C1	4.9	76
T47	Whitebeam	On	11.0	1	-	370	6-2-4.5-8	4.0	1.5	SW	M	None	Pollarded at 6m apex with mature regrowth.	Good	Good	40	C1	4.4	62
T48	Whitebeam	On	11.0	1	-	420	4.5-5-4.5-3.5	4.0	2	S	M	None	Pollarded at 6m apex with mature regrowth.	Good	Good	40	C1	5.0	80
T49	Cherry 'Kanzan'	On	4.5	1	-	300	5-3-3.5-4	2.0	2	W	EM	None	Pruning wound at 2m.	Good	Good	40	B1	3.6	41
T50	Lawson Cypress	On	4.0	6	#	10	1.5-2-1-2	0.0	0.2	N/A	Y	None	No significant defects.	Good	Good	40	C1	0.0	0
T51	London Plane	On	24.0	1	-	1320	12-12-9.5-12	3.0	9	SW	M	None	Tree of excellent form.	Good	Good	40	A1	15.0	707

TREE SURVEY SCHEDULE

FORMER HOLLOWAY PRISON

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SURVEYOR: IAN MONGER

CLIENT: PEABODY CONSTRUCTION LIMITED

SURVEY DATE: 27 AUGUST AND 4 SEPTEMBER 2019

Barton Hyett
Arboricultural Consultants

Ref	Species	On/off site	Height (m)	No. of Stems	Est diam ?	Calc. / Actual Stem Dia. (mm)	Crown radii (m) N-E-S-W	Avg. Canopy Height (m)	1st branch ht (m)	1st branch dir.	Life Stage	Special importance	General Observations	Health & vitality	Struct. cond.	Estimated Remaining Contribution (Years)	BS5837 Category	RPA Radius (m)	RPA m²
T52	Silver Birch	On	6.5	1	-	150	2.5-2.5-2.5-2.5	2.0	2	W	Y	None	Hard surfaced over 100% RPA. Stem deformed against vehicle barrier. Inappropriate location.	Good	Good	20	C1	1.8	10
T53	Common Ash	On	5.0	1	-	80	2-2-2-2	1.5	1.5	N	Y	None	Inappropriate location.	Good	Good	10	C1	1.0	3
T54	Tree of Heaven	On	7.0	4	-	310	4.5-5-4.5-4.2	1.0	1.5	S	SM	None	Multi-stemmed from ground. Growing against fence line.	Good	Good	40	B1	3.7	43
T55	Tree of Heaven	On	7.0	2	-	250	4-3-3-4.5	1.0	3	S	SM	None	Growing in fence line.	Good	Good	40	B1	3.0	28
T56	Sycamore	On	11.0	3	#	550	6.5-6.5-6.5-6.5	5.0	3	W	EM	None	Not on topo. Position approximate. Third-party tree. Offsite. Inaccessible.	Good	Good	40	B1	6.6	137
T57	Sycamore	Off	6.0	1	#	200	3-3-3-3	3.0	1.5	E	SM	None	Not on topo. Position approximate. Third-party tree. Offsite. Inaccessible.	Good	Good	20	C1	2.4	18
T58	Common Ash	On	12.0	2	-	450	7-7-7-7	3.0	4	N	EM	None	Minor deadwood.	Good	Good	40	B1	5.4	92
T59	Rowan	On	5.5	1	-	190	2.5-2.5-2.5-2.5	2.0	2	N	EM	None	Hard surfacing disrupted by root system growth.	Good	Good	40	B1	2.3	16
T60	Rowan	On	6.0	1	-	150	2-2-2-2	2.5	2	N	SM	None	Raised soil level around stem base causing cambium stress. Early upper crown decline.	Fair	Good	20	C1	1.8	10
T61	Cherry Prunus x hillieri Spire	On	6.5	3	-	170	3-3.5-1-1.5	2.0	1	N	SM	None	Unbalanced crown.	Good	Good	20	C1	2.0	13
T62	Horse Chestnut	On	11.0	1	-	790	7-6.5-7-5	3.0	4	N	M	None	Historically pollarded at 5m and more recently at 8m, with regrowth. Basal bark wound.	Fair	Fair	20	B1	9.5	282

TREE SURVEY SCHEDULE

FORMER HOLLOWAY PRISON

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SURVEYOR: IAN MONGER

CLIENT: PEABODY CONSTRUCTION LIMITED

SURVEY DATE: 27 AUGUST AND 4 SEPTEMBER 2019

Barton Hyett
Arboricultural Consultants

Ref	Species	On/off site	Height (m)	No. of Stems	Est diam ?	Calc. / Actual Stem Dia. (mm)	Crown radii (m) N-E-S-W	Avg. Canopy Height (m)	1st branch ht (m)	1st branch dir.	Life Stage	Special importance	General Observations	Health & vitality	Struct. cond.	Estimated Remaining Contribution (Years)	BS5837 Category	RPA Radius (m)	RPA m²
T63	Common Lime	On	11.0	1	#	450	5-5-4.5-4	2.0	5	S	EM	None	Not on topo. Position approximate. Inaccessible. Basal shoots. Recent construction activity within tree RPA.	Good	Good	40	B1	5.4	92
T64	Tree of Heaven	On	16.0	1	-	650	5-5-4.5-4	2.0	3.5	W	M	None	Raised surface roots. Probable basal decay. Second co-dominant stem felled at base. Bark wound at 3.5m Pollarded at 7m with regrowth.	Fair	Fair	10	C1	7.8	191
T65	Common Ash	On	16.0	1	-	560	6.5-9.5-6-6	4.5	3.5	N	EM	None	Pollarded at 8m apex with regrowth. Minor deadwood.	Good	Good	40	B1	6.7	142
T66	Horse Chestnut	On	15.0	1	-	830	6-6.5-6-6.5	2.0	5	NE	M	None	Pollarded at 8m apex with regrowth. Crown reduced, with regrowth.	Good	Good	40	B1	10.0	312
T67	Horse Chestnut	On	15.0	1	-	800	4.5-7-8-6	3.0	4	N	M	None	Historically pollarded at 5m and more recently crown-reduced, with regrowth.	Good	Good	40	B1	9.6	290
T68	Sycamore	On	11.0	1	-	510	5.5-6-4.5-5	2.0	3.5	S	EM	None	Pollarded at 6m with regrowth. Exudate from old pruning wound cavity.	Good	Good	40	B1	6.1	118
T69	Common Lime	On	9.0	1	-	530	5-4.5-4.5-4.5	2.5	3.5	NW	EM	None	Basal shoots. Pollarded at 5m with regrowth	Good	Good	40	B1	6.4	127
T70	Sycamore	On	2.0	1	-	450	0-0-0-0	0.0	0	n/a	EM	None	Felled to 2m stump.	Dead	Dead	<10	U	5.4	92
T71	Silver Birch	On	8.0	1	#	300	3-3-3-3	3.0	1.5	S	EM	None	Not on topo. Position approximate. Inaccessible. Ivy on stem. Growing in raised bed.	Good	Good	40	B1	3.6	41

TREE SURVEY SCHEDULE

FORMER HOLLOWAY PRISON

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SURVEYOR: IAN MONGER

CLIENT: PEABODY CONSTRUCTION LIMITED

SURVEY DATE: 27 AUGUST AND 4 SEPTEMBER 2019

Barton Hyett Arboricultural Consultants

Ref	Species	On/off site	Height (m)	No. of Stems	Est diam ?	Calc. / Actual Stem Dia. (mm)	Crown radii (m) N-E-S-W	Avg. Canopy Height (m)	1st branch ht (m)	1st branch dir.	Life Stage	Special importance	General Observations	Health & vitality	Struct. cond.	Estimated Remaining Contribution (Years)	BS5837 Category	RPA Radius (m)	RPA m²
T72	Horse chestnut	On	15.0	1	-	980	5.5-7-6.5-7	3.0	5	S	M	None	Occluding bole wounds.	Good	Good	40	B1	11.8	435
T73	London plane	On	17.0	1	-	690	8-6-10-6	5.0	5.5	SW	M	None	Crown lifted over adjacent building.	Good	Good	40	B1	8.3	215
T74*	Leyland cypress	On	6.0	1	-	210	4-4-2.5-3	0.0	0.5	n/a	SM	None	Partially suppressed.	Good	Good	20	C2	2.5	20
T75	Sycamore	Off	11.5	3	-	490	4.5-3.5-5.5-4.5	2.5	2.5	N	EM	None	Three separate stems from ground. South-east stem topped at 2.5m.	Good	Good	40	B2	5.9	109
T76*	Monterey cypress	Off	5.5	1	-	140	3-2-2-2.5	0.0	0.5	S	SM	None	Smaller Monterey cypress growing within canopy spread.	Good	Good	40	C2	1.7	9
T77*	Portugal laurel	Off	5.0	5	#	290	4-4.5-3-2.5	0.0	1	N	EM	None	Clipped at pedestrian height.	Good	Fair	20	B2	3.5	38
T78*	Crack willow	Off	16.0	1	-	540	8.5-5-3-7.5	2.5	2	N	M	None	Decayed branch removal wound at 2m. Previously pollarded at 11m.	Good	Fair	20	B2	6.5	132
T79*	Crack willow	Off	16.0	1	-	310	6-6-1.5-5.5	3.0	3.5	NE	M	None	Occluding branch tear wounds on stem. Minor deadwood.	Good	Good	20	B2	3.7	43
T80	Willow spp.	Off	17.0	1	-	640	8-6.5-2-8	3.0	2	W	M	None	Slightly weeping form. Included bark stem union at 1.5m. Previously high pollarded.	Good	Fair	20	B2	7.7	185
T81*	Crack willow	Off	18.0	1	-	520	7-4-10-7	3.5	2	E	M	None	Previously high pollarded.	Good	Fair	20	B2	6.2	122
T82*	Sycamore	Off	10.0	1	-	210	6-4.5-4.5-4	2.0	3	N	SM	None	Original leader lost at 6m.	Good	Fair	20	B2	2.5	20
T83*	Crack willow	Off	18.0	1	-	520	7.5-8-5.5-7	3.5	6.5	E	M	None	Pruned back from building.	Good	Good	40	B1	6.2	122

TREE SURVEY SCHEDULE

FORMER HOLLOWAY PRISON

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SURVEYOR: IAN MONGER

CLIENT: PEABODY CONSTRUCTION LIMITED

SURVEY DATE: 27 AUGUST AND 4 SEPTEMBER 2019

Barton Hyett
Arboricultural Consultants

Ref	Species	On/off site	Height (m)	No. of Stems	Est diam ?	Calc. / Actual Stem Dia. (mm)	Crown radii (m) N-E-S-W	Avg. Canopy Height (m)	1st branch ht (m)	1st branch dir.	Life Stage	Special importance	General Observations	Health & vitality	Struct. cond.	Estimated Remaining Contribution (Years)	BS5837 Category	RPA Radius (m)	RPA m²
T84	Horse chestnut	Off	7.5	1	-	170	1.5-2.5-4.5-3	2.0	3	W	SM	None	Suppressed.	Fair	Good	20.0	B2	2.0	13
T85	Horse chestnut	Off	8.0	1	-	280	4.5-3-2.5-3	3.0	3	N	SM	None	Extensive Bleeding Canker exudation and dead bark. Tree has been reduced.	Poor	Fair	10.0	C1	3.3	35
T86	Leyland Cypress	Off	12.0	1	-	360	4.5-4-3-3	1.5	1.5	E	SM	None	Crown is suppressed to north-west.	Good	Good	20.0	C2	4.3	59
T87*	Sycamore	Off	13.0	1	-	480	6.5-2.5-4-6.5	4.0	4.5	S	M	None	Two stems from ground. Branches pruned back from building.	Good	Good	40	B1	5.8	104
T88	Purple Norway maple	Off	12.0	1	-	400	4-3.5-5-3.5	5.0	2	E	M	None	Bark loss and decay cavity on west stem at 3m. Bark wounding and necrosis throughout crown structure.	Fair	Poor	<10	C1	4.8	72
T89	Wild cherry	Off	13.0	1	-	510	7-6-8-3	4.5	2	E	M	None	Exudate on bole. Silver leaf foliage symptoms. Thinning crown with dieback.	Poor	Fair	10	C1	6.1	118
T90*	Horse chestnut	Off	14.0	1	-	390	4.5-5.5-2.5-4.5	2.2	3	N	M	None	Occluded Bleeding Canker fissures on bole and stems.	Fair	Good	20	B2	4.7	69
T91*	Common ash	Off	14.0	1	-	360	4-5-6-4.5	4.5	4	S	M	None	High canopy. Minor deadwood.	Good	Good	20	B1	4.3	59
T92*	Small-leaved lime	Off	10.0	1	-	180	3-2.5-4-3.5	5.0	3	N	SM	None	Possibly occluded basal crack. Drawn-up form.	Good	Fair	20	B2	2.2	15
T93*	Aesculus spp.	Off	12.0	1	-	400	6.5-5-3-3.5	1.5	5	N	M	None	Bark fissures on bole. Large branch removal wound. Bark fissures with likely decay at base of NE stem at 6m.	Fair	Fair	20	B2	4.8	72

TREE SURVEY SCHEDULE

FORMER HOLLOWAY PRISON

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CLIENT: PEABODY CONSTRUCTION LIMITED

SURVEY DATE: 27 AUGUST AND 4 SEPTEMBER 2019

Barton Hyett Arboricultural Consultants

Ref	Species	On/off site	Height (m)	No. of Stems	Est diam ?	Calc. / Actual Stem Dia. (mm)	Crown radii (m) N-E-S-W	Avg. Canopy Height (m)	1st branch ht (m)	1st branch dir.	Life Stage	Special importance	General Observations	Health & vitality	Struct. cond.	Estimated Remaining Contribution (Years)	BS5837 Category	RPA Radius (m)	RPA m²
T94*	Sycamore	Off	15.5	1	-	430	6.5-5-4.5-4.5	2.5	3.5	E	M	None	High canopy.	Good	Good	40	B1	5.2	84
T95*	Norway maple	Off	11.0	1	-	300	4-4-4-3.5	5.0	3.5	NE	M	None	Crown lift wounds. Bark necrosis and/or squirrel damage and dieback from last reduction work has led to poor form. Deadwood.	Fair	Poor	10	C1	3.6	41
T96*	Common ash	Off	17.0	1	-	470	5.5-5-6.5-5.5	5.0	3.5	S	M	None	Good upright form.	Good	Good	20	B1	5.6	100
T97*	Horse chestnut	Off	9.0	1	-	280	4-4-3.5-4	3.0	3	N	SM	None	No significant defects.	Good	Good	20	B1	3.3	35
T98*	Horse chestnut	Off	13.0	1	-	180	3-4-2.5-0.5	2.0	3.5	E	SM	None	Growing phototrophically towards east.	Good	Fair	20	B2	2.2	15
T99*	Common ash	On	10.0	1	-	310	4-4-4-4	3.0	4.5	SE	SM	None	Multi-stemmed.	Good	Good	20	B1	3.7	43
T100*	Common ash	On	13.5	1	-	300	2-4-6.5-5.5	4.0	4	S	EM	None	Good form.	Good	Good	20	B1	3.6	41
T101*	Purple Norway maple	On	10.0	1	-	390	4.5-4-4-3	2.5	3	n/a	M	None	Growing in planting pit and kicking up hard surfacing. Previously reduced. Vehicle strike wounds at 4m. Bark necrosis in crown and upper crown dieback.	Fair	Fair	20	B2	4.7	69
T102*	Goat willow	Off	9.0	1	-	310	4-3-2.5-4.5	5.0	5	W	M	None	Crown lift wound at 2m on stem with decay present. Thinning canopy.	Fair	Fair	10	C1	3.7	43
T103*	Silver birch	Off	12.0	1	-	330	4-2.5-4-4.5	5.0	6	W	M	None	Moribund tree.	Poor	Poor	<10	U	3.9	49
T104*	Goat willow	Off	6.2	2	-	180	4-4-5-4.5	2.5	2	W	SM	None	Planted in garden patron raised 60cm from footpath. Growing against wall.	Good	Good	10	C1	2.2	15

TREE SURVEY SCHEDULE

FORMER HOLLOWAY PRISON

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SURVEYOR: IAN MONGER

CLIENT: PEABODY CONSTRUCTION LIMITED

SURVEY DATE: 27 AUGUST AND 4 SEPTEMBER 2019

Barton Hyett
Arboricultural Consultants

Ref	Species	On/off site	Height (m)	No. of Stems	Est diam ?	Calc. / Actual Stem Dia. (mm)	Crown radii (m) N-E-S-W	Avg. Canopy Height (m)	1st branch ht (m)	1st branch dir.	Life Stage	Special importance	General Observations	Health & vitality	Struct. cond.	Estimated Remaining Contribution (Years)	BS5837 Category	RPA Radius (m)	RPA m²
T105 *	Sycamore	Off	16.0	1	-	380	4-4-4-4	6.0	4.5	S	M	None	Good upright form.	Good	Good	40	B1	4.5	65
T106 *	Acer spp.	Off	6.0	1	-	280	5-4-5-4.5	3.0	2	n/a	M	None	Growing in paved area.	Good	Good	20	B1	3.3	35
T107 *	Common ash	Off	15.0	1	-	470	7-6-6-6	2.5	3.5	N	M	None	Growing in raised walled bed. Previously reduced.	Good	Good	20	B1	5.6	100
T108 *	Japanese cherry	Off	5.2	1	-	320	5-5.5-5.5-6	2.0	2	n/a	M	None	Top-grafted spreading form. Exposed surface roots.	Good	Good	20	B1	3.8	46
T109	London plane	Off	10.0	1	#	700	3.5-3-3.5-3	3.0	5	n/a	M	None	5m pollard with max 80mm basal diameter regrowth.	Good	Good	40	B2	8.4	222
T110	London plane	Off	14.5	1	#	650	5.5-6-8.5-5.5	6.0	4.5	SE	M	None	Previously reduced and crown lifted over site.	Good	Good	40	B2	7.8	191
T111	Leyland cypress	Off	14.0	2	#	520	1.5-6-7.5-7	3.0	2	SW	M	None	End tree of linear outgrown hedge group. Growing in narrow strip between chain link and concrete panel fences.	Good	Fair	10	C2	6.2	122
T112	London plane	Off	20.0	1	#	750	10-10-10-9	9.0	9	S	M	None	Historically high-pollarded. Upper crown twig dieback.	Good	Good	40	B1	9.0	255
T113	Sycamore	On	11.5	3	#	340	3-3.5-3-4	4.0	3.5	S	SM	None	Three stems from near ground. Crown lifted. Included bark stem union. Natural regeneration.	Good	Fair	20	C1	4.1	52
T114	Elder	On	8.0	1	#	360	6-7-6-7	0.5	1.5	S	M	None	Naturally regenerated and smothered with ivy.	Good	Fair	20	B1	4.3	59

TREE SURVEY SCHEDULE

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CLIENT: PEABODY CONSTRUCTION LIMITED

SURVEY DATE: 27 AUGUST AND 4 SEPTEMBER 2019

Barton Hyett
Arboricultural Consultants

GROUPS OF TREES

Ref	Species	On/off site	Height range (m)	No. of trees	Est diam?	Max stem diam (mm)	Av. Crown radius (m)	Avg. Canopy Height (m)	Life Stage	Special importance	General Observations	Health & vitality	Struct. cond.	Estimated Remaining Contribution (Years)	BS5837 Category	RPA Radius (m)
G1	Catalpa, goat willow	On	4-8	6	#	250	4	1.0	SM	None	Growing in raised bed behind retaining wall.	Good	Good	40	B1	3.0
G2	Magnolia, Weeping Cherry	On	2-4	2	#	100	1.5	0.0	Y	None	No significant defects.	Good	Good	40	C1	1.3
G3	Sycamore, Common Ash	Off	9	3	#	350	4	3.0	EM	None	Not on topo. Position approximate. Third-party trees.	Good	Good	40	B1	4.2
G4	Norway Maple, Silver Birch, Common Ash	Off	6-12	15	#	350	5	2.0	EM	None	Not on topo. Position approximate. Third-party trees. Low canopies over car parking spaces.	Good	Good	40	B1	4.2
G5	Common Lime, London Plane	On	6-11	4	-	450	5	3.0	EM	None	Pollarded at 5m with regrowth.	Good	Good	40	B1	5.4
G6	Silver Birch	On	5-8	3	#	240	4	2.0	SM	None	Inaccessible. Planted in raised bed.	Good	Good	40	B1	2.9
G7	Evergreen Oak Quercus ilex, Rowan, Sycamore	On	6-9	3	#	550	3.5	2.0	EM	None	Inaccessible. Planted in raised bed.	Good	Good	40	B1	6.6
G8	Plum/damson, common ash, elder, Norway maple	On	6-8.5	15	#	230	3	1.5	SM	None	Scrubby group of damson with young to s3mi-mature natural regeneration.	Good	Fair	10	C2	2.8
G9	Portugal laurel, elder	Off	4-6	6	-	130	2.5	1.0	EM	None	Scrubby group with bark wounds. Provides some screening.	Fair	Fair	10	C2	1.6
G10	Portugal laurel	Off	2.5-4	5	-	130	2.2	0.0	EM	None	Provides good screening.	Good	Good	20	B2	1.6
G11	Leyland Cypress	Off	4-9	9	-	200	2.5	0.2	SM	None	Generally suppressed. Growing close to boundary retaining wall.	Good	Fair	10.0	C2	2.4
G12	Leyland Cypress, lime	Off	4-17	30	-	340	3	0.5	EM	None	Tightly planted screen group growing close to boundary retaining wall.	Good	Good	10.0	C2	4.1
G13	Horse chestnut, small-leaves lime	Off	15	6	-	380	3.5	2.5	EM	None	Line of four Limes in north of group are suppressed.	Good	Good	40	B2	4.5
G14	Leyland Cypress	Off	6-9	6	-	250	3	0.5	EM	None	Tightly planted screen group growing close to boundary retaining wall.	Good	Good	10	C2	3.0

TREE SURVEY SCHEDULE

FORMER HOLLOWAY PRISON

PROJECT NO: R.3291

SURVEYOR: IAN MONGER

CLIENT: PEABODY CONSTRUCTION LIMITED

SURVEY DATE: 27 AUGUST AND 4 SEPTEMBER 2019

Barton Hyett
Arboricultural Consultants

Ref	Species	On/off site	Height range (m)	No. of trees	Est diam?	Max stem diam (mm)	Av. Crown radius (m)	Avg. Canopy Height (m)	Life Stage	Special importance	General Observations	Health & vitality	Struct. cond.	Estimated Remaining Contribution (Years)	BS5837 Category	RPA Radius (m)
G15	Elder, sycamore, wild cherry	Off	4-10	6	#	180	2.5	2.5	SM	None	Taller semi-mature sycamore with smaller early mature elder and young cherry suckers.	Good	Fair	20	C2	2.2
G16	Leyland cypress	Off	9-14	11	#	400	6.5	2.5	M	None	Trees within line more suppressed form and stem size. Growing in narrow gap between chainlink and concrete panel fences.	Good	Fair	10	C2	4.8
G17	Elder	On	3.5-5.5	6	#	200	2.5	0.0	M	None	Scrubby natural regeneration with bramble.	Fair	Fair	20	C2	2.4
G18	Cherry plum, elder, common ash	On	4-6.5	10	#	120	2	0.0	Y	None	Cherry plum sucker growth and young ash.	Good	Fair	10	C2	1.5
G19	Griselinia, pittosporum	On	5-8	10	-	250	5	1.5	M	None	Multi-stemmed outgrown hedge group growing in rubble.	Good	Fair	10	C2	3.0
G20	Cherry plum, common ash	On	5.5-6	3	#	200	3	1.5	SM	None	Multi stemmed with young ash.	Good	Fair	10	C2	2.4
G21	Goat willow	On	5-9	3	-	180	2.5	3.5	SM	None	Squirrel damage.	Fair	Fair	20	C1	2.2
G22	Sycamore, pittosporum, buddleia	On	5.5-10	3	#	280	3.5	3.0	SM	None	Multi-stemmed sycamore natural regeneration of poor form and outgrown garden shrub.	Good	Fair	20	C2	3.3
G23	Sycamore, elder	On	5-8	9	#	180	2.5	1.0	SM	None	Scattered natural regeneration of poor location and/or form.	Good	Fair	10	C2	2.2

HEDGES

Ref	Species	On/off site	Av. Height (m)	Av. width (m)	Av. Stem diam (mm)	Avg. Canopy Height (m)	Life Stage	General Observations	Health & vitality	Struct. cond.	Estimated Remaining Contribution (Years)	BS5837 Category	RPA Radius (m)
H1	Cherry Laurel	On	4	3	150	0.0	SM	Multi-stemmed shrubs.	Good	Good	20+	C1	1.8
H2	Leyland Cypress	On	3	2	100	0.0	Y	Previously maintained hedge.	Good	Good	20+	C1	1.3
H3	Leyland Cypress	Pn	4	2.5	100	0.0	Y	Previously maintained hedge.	Good	Good	20+	C1	1.3

Barton Hyett
Arboricultural Consultants

THE IMPORTANCE OF TREES

Wider benefits:

There is a growing body of evidence that trees bring a wide range of benefits to the places people live.

Some Economic benefits of trees include:

- Trees can increase property values
- As trees grow larger, the lift they give to property values grows proportionately
- They can improve the environmental performance of buildings by reducing heating and cooling costs, thereby cutting bills
- Mature landscapes with trees can be worth more as development sites
- Trees create a positive perception of a place for potential property buyers
- Urban trees improve the health of local populations, reducing healthcare costs

Some Social benefits of trees include:

- Trees help create a sense of place and local identity
- They benefit communities by increasing pride in the local area
- They can create focal points and landmarks
- They have a positive impact on people's physical and mental health
- They can have a positive impact on crime reduction

Some Environmental benefits of trees include:

- Urban trees reduce the 'urban heat island effect' of localised temperature extremes
- They provide shade, making streets and buildings cooler in summer
- They help remove dust and particulates from the air
- They help to reduce traffic noise by absorbing and deflecting sound
- They help to reduce wind speeds
- By providing food and shelter for wildlife they help increase biodiversity
- They can reduce the effects of flash flooding by slowing the rate at which rainfall reaches the ground
- They can help remediate contaminated soil

On new development sites:

Trees bring many benefits to new development. Where retained successfully they can form important and sustainable elements of green infrastructure, contribute to urban cooling and reduce energy demands in buildings. Their importance is acknowledged in relation to adaptation to the effects of climate change. Other benefits brought by trees include:

- increasing property values
- softening, complementing and adding maturity to built form
- displaying seasonal change
- increasing wildlife opportunities in built-up areas
- contributing to screening and shade
- reducing wind speed and turbulence

INFORMATIVE - HOW TREE DAMAGE CAN OCCUR

Above the ground

Damage can occur as a result of contacts between branches and/or tree trunks. This is often but not always associated with machine operations, groundworks excavations, MEWPs, high sided vehicles and crane use. Other forms of above ground damage include fixings to trunk and unauthorised cutting back of branches.

Below the ground

It is often not appreciated that the majority of most tree roots are generally located within the top 600mm of the ground. On this basis it needs to be understood that damage to roots can occur in two ways:

Root severance can occur as a result of, for example, soil stripping during site clearance or excavations.
Root dieback and death can result from compaction of the soil. Compaction can occur as a result of vehicle weight, weight of stored materials or increased pedestrian access. Compaction crushes out soil pore space and prevents tree respiration from occurring (respiration requires gas exchange between the ground and the atmosphere). Compacted soil is denser and therefore inhibits/prevents any further new root growth.

The effects of these impacts can be disfiguring to a tree's appearance and also weaken a tree making it more liable to attack by pest and diseases. In addition, root damage or death results in corresponding decline above the ground with dieback occurring within the tree crown.

The effects of damage to trees generally take some time to become fully apparent. In many cases, damaged trees decline slowly after the completion of a new development, until they eventually need to be removed due to ill health.

A construction exclusion zone (CEZ) has been defined in order to prevent soil compaction from taking place.

GENERAL SITE RULES FOR TREE PROTECTION

Do not independently carry out any activity that is at odds with the site Scheme of Tree Protection.

In simple terms: do not carry out any work within the CEZ without prior liaison with the Project Arboriculturist and written authorisation from the Local Planning Authority.
Within the CEZ:

- No excavation of any description.
- No storage, disposal of soil, rubble or materials of any other description.
- No alterations to existing levels or ground conditions.
- No use of any tracked or wheeled machinery of any description.
- No tree works, without the written consent of the Local Planning Authority's Development Management service
- No erection of temporary structures of any description.
- No fixtures or fittings of any description, security lighting, signage etc shall be attached to any part of a tree.
- No fires shall be light within 10 metres of the canopies of any tree or spread of any hedge.
- No chemicals, fuel, liquids/waste residues of any other description to be stored or disposed of within close proximity to or drained towards/ into protection areas.

Fires on site should be avoided if possible. Where they are unavoidable, they must not be lit in a position where heat could damage foliage or branches. Fires must be a minimum of 20m from the trunk of any retained tree or the centre line of any hedgerow to be retained.

No signs, cables, fixtures or fittings of any other description shall be attached to any part of a retained tree

STATUTORY CONTROLS

Statutory tree protection

Works to trees which are covered by Tree Preservation Orders (TPOs) or are within a Conservation Area (CA) require permission or consent from the Local Planning Authority. Where information is available on any Statutory designations such as this they are identified within the summary table in section 1 and in the Tree Survey Schedule in section 3.

Notwithstanding specific exceptions and in general terms, a TPO prevents the cutting down, uprooting, topping, lopping, wilful damage or wilful destruction of protected trees or woodlands without the prior written consent of the LPA.

Penalties for contravention of a TPO tend to reflect the extent of damage caused but can, in the event of a tree being destroyed, result in a fine of up to £20,000 if convicted in a Magistrates' Court, or an unlimited fine is the matter is determined by the Crown Court.

Similarly, and again notwithstanding specific exceptions, it is an offence to carry out any works to a tree in a Conservation Area with a trunk diameter greater than 75mm diameter at 1.5 height without having first provided the LPA with 6 weeks written notification of intent to carry out the works.

On many non-residential sites (excluding specific exemptions) there is also a statutory restriction relating to tree felling that relates to quantities of timber that can be removed within set time periods. In basic terms, it is an offence to remove more than 5 cubic metres of timber in any one calendar quarter without having first obtained a felling licence from the Forestry Commission.

Any proposed tree works that are planned to be carried out on site must be carried out in accordance with the statutory controls outlined.

Statutory Wildlife Protection

Although preliminary visual checks from ground level of likely wildlife habitats are made at the time of surveying, detailed ecological assessments of wildlife habitats are not made by the arboriculturist and fall outside of the scope for this report.

Trees which contain holes, splits, cracks and cavities could potentially provide a habitat for protected species such as bats in addition to birds and small mammals. It is advised that in some instances specialist ecological advice may be required. This may result in tree works being carried out following a

detailed climbing inspection to the tree to ensure that protected species or their nests/roosts are not disturbed. If any are found, the site manager, site owner or consulting arboriculturist should be informed and appropriate action taken as recommended by the appointed Ecologist or Natural England.

It is advised that tree/hedgerow works are carried out with the understanding that birds will generally nest in trees, hedges and shrubs between March and August. This time period only provides an indication of likely nesting times and as such diligence is required when undertaking tree works at all times.

Irrespective of the time of year, and other than any actions approved under General Licence, it is an offence to intentionally kill, injure or take any wild bird or to intentionally take, damage or destroy the nest or eggs of any wild bird. Ideally, tree operations should be avoided during the likely bird nesting period. However, any tree works should always only be carried out following a preliminary visual check of the vegetation.

For information, the Wildlife and Countryside Act 1981 (as amended), The Countryside and Rights of Way Act 2000 (as amended) and the Conservation of Habitat and Species Regulations 2010, form the basis of the statutory legislation for flora and fauna in England and Wales. A different legislative framework applies in Scotland and Northern Ireland.