

WRITTEN SCHEME OF INVESTIGATION

FOR AN ARCHAEOLOGICAL

WATCHING BRIEF

AT OLD FURNACE COTTAGE, FORGE ROAD, TINTERN
(MONMOUTHSHIRE)

Prepared for:

Mr Stephen R Taylor

Planning Application Number: DC/2017/00821

Project No: 2557

September 2017



Contents	Page
Summary	3
1. Introduction and planning background.....	3
2. Site Description.....	4
3. Archaeological background	5
4. Objectives	6
4.1. Site Specific Research Aims	6
5. Timetable of works	7
5.1. Fieldwork	7
5.2. Report delivery	7
6. Fieldwork.....	7
6.1. Detail.....	7
6.2. Recording	8
6.3. Finds.....	8
6.4. Environmental sampling strategy.....	9
6.5. Human remains	9
6.6. Specialist advisers	9
7. Monitoring.....	10
8. Post-fieldwork programme.....	10
8.1. Archive assessment.....	10
8.2. Reports and archive deposition.....	11
9. Staff.....	12
Additional Considerations.....	12
10. Health and Safety	12
10.1. Risk assessment.....	12
10.2. Other guidelines.....	13
11. Community Engagement and Outreach	13
12. Insurance.....	13
13. Quality Control.....	13
13.1. Professional standards	13
13.2. Project tracking	13
14. Arbitration	14
15. References.....	14

Figure 1. Site location

Figure 2. Detailed plan of the site

Figure 3. Existing surfaces plan

Figure 4. Proposed surfaces plan

Figure 5. Proposed floor plan

Appendix 1:

Architect drawings

Summary

This Written Scheme of Investigation (WSI) details the methodology for a watching brief to be undertaken by Archaeology Wales at the request of Mr Stephen R Taylor.

The watching brief will be undertaken during ground works associated with the proposed development at Old Furnace Cottage, Forge Road, Tintern NP16 6TR (NGR SO5128900374). This includes the demolition of an existing extension and replacement with a new single storey extension with new roof, improved insulation and associated landscape improvements and construction of detached single garage. The associated Planning Application No. is DC/2017/00821.

The cottage is in close proximity to a series of walls and terraces probably associated with the blast furnace at Old Furnace (Scheduled Ancient Monument MM197). Furthermore, documentary and archaeological sources evidence the existence of other iron working sites in the area, some of which may be of Medieval origin. The first cartographic source that documents the cottage dates to mid-1880s. No buildings related to the furnace are documented on this map. The existing building is first documented in the first decades of the 20th century.

Glamorgan Gwent Archaeological Trust – Planning Division (GGAT-PD) has recommended that an archaeological watching brief is carried out during the demolition and ground breaking phases of the proposed works in order to mitigate the impact of the proposed development on the archaeological resource.

All work will be undertaken in accordance with the standards and guidelines of the Chartered Institute for Archaeologists (2014).

1. Introduction and planning background

This WSI details the methodology for watching brief to be undertaken in association with the proposed development which includes the demolition of an existing extension and replacement with a new single storey extension with new roof, improved insulation and associated landscape improvements and construction of detached single garage at Old Furnace Cottage, Forge Road, Tintern NP16 6TR (NGR SO5128900374) (Figure 1-4). The associated Planning Application No. is DC/2017/00821.

A desk based assessment carried out in the area (Phillips 2008) indicated that the cottage is in close proximity to a series of walls and terraces probably associated with the blast furnace at Old Furnace (SAM MM197). Furthermore, documentary and archaeological sources evidence the existence of other iron working sites in the area, some of which may be of Medieval origin. The first cartographic source that documents the cottage dates to mid-1880s. No buildings related to the furnace are documented on this map. GGAT-PD has recommended that an archaeological watching brief is carried out during the demolition and ground breaking phases of

the proposed works in order to mitigate the possibility of revealing the remains of medieval structures during groundworks associated to the extension and the garage. This recommendation is laid out in condition 3 of the planning decision and states:

'No development shall take place until the applicant, or their agents or successors in title, has secured agreement for a written scheme of historic environment mitigation which has been submitted by the applicant and approved by the local planning authority. Thereafter, the programme of work will be fully carried out in accordance with the requirements and standards of the written scheme.'

The reason stated is:

'To identify and record any features of archaeological interest discovered during the works, in order to mitigate the impact of the works on the **archaeological resource**.'

This WSI has been prepared by Dr Irene Garcia Rovira, Project Manager, Archaeology Wales Ltd (henceforth - AW) at the request of Mr Stephen R Tylor.

The methodology set out in this WSI has been agreed with GGAT-PD in its capacity as archaeological advisors to Monmouthshire County Council.

The recommendations made by GGAT-PD are set out in a letter to Monmouthshire County Council dated to the 7th of August 2017.

All work will be undertaken to the standards and guidance set by the Chartered Institute for Archaeologists (2014). AW is a Registered Organisation with the CIfA.

2. Site Description

The proposed development site is defined by the property boundary of Old Furnace Cottage and its associated land. The building is composed of a main structure and an attached extension to the east of the house. An area of lawn is located to the east and west of the cottage. Furthermore, the eastern area contains a garage and a shed. To the north, the development area is flanked by an access track and a forest. The Angiddy River defines the southern boundary of the site. A forest is also located immediately south of the river. The site is at approximately 86m AOD.

The underlying geology is characterised by the Brownstones Formation, composed of sedimentary rock (sandstone) formed during the Devonian period. The British Geological Survey does not record the superficial deposits of the area (BGS 2017).

3. Archaeological background

Prehistoric and early historic activity

Prehistoric and early historic evidence within and around the development area is sparse. The closest remains to the site dating to Palaeolithic times are found c.25km N of the development, at Symonds Yat (Phillips 2008). Three Bronze Age round barrows are located some 1km to the north-east of the development area (MM191).

Medieval activity

The Medieval landscape in the region is focussed on Tintern Abbey situated c.2.5km to the west of the development area, on the valley floor, adjacent to the River Wye. The Cistercian abbey was founded in 1132 and was dissolved in 1536. The abbey sits in a wider medieval landscape that includes the iron working sites found along the valley. A number of these sites appear to have been directly related to Tintern Abbey, and therefore, of possible Medieval origin¹.

While the evidence documents the significance of the area for iron works in post-medieval times, it is significant to note that Paar and Tucker (1975) state the possible existence of medieval activity in the form of water driven mills. While this claim is not supported by documentary or archaeological evidence, the possibility of encountering remains of medieval times should not be altogether discarded.

Post-medieval activity

The Abbey Blast Furnace (SAM MM197) is located within 85m SE of the development site². This furnace operated from the 17th century to 1826, and probably was the first charcoal house to be equipped with blowing cylinder and not with bellows. A number of walls and terraces are documented in proximity to the development site, some of which might be related to the Scheduled Monument (Parry, RCAHMW 2011; Phillips 2008).

The cottage: post-medieval to modern activity

The first cartographic source that documents the cottage dates to mid-1880s. No buildings related to the furnace are documented on this map. GGAT has recommended that an archaeological watching brief is carried out during the demolition and ground breaking phases of the proposed works in order to mitigate

¹ See GGAT archaeological planning letter to Monmouthshire County Council dating to the 7th of August 2017.

² Cadw is currently extending the scheduled area to include a section of the leat which provided water to the furnace. This leat is only 18m away from the development site.

the possibility of revealing the remains of medieval structures during groundworks associated to the extension and the garage.

Historic mapping shows that the cottage dates from before the 1880's (see OS map 1,2500 1879-80). This map indicated that by the 1880's no buildings associated with the furnace still standing. However, the existing main building is only documented in cartographic sources dating to between the 1901 and 1921 (OS map 1,2500 1901-1921, third edition).

4. Objectives

This WSI sets out a program of works to ensure that the watching brief will meet the standard required by The Chartered **Institute for Archaeologist's** *Standard and Guidance for Archaeological Watching Briefs (2014)*.

The objective of the watching brief will be:

- to allow a rapid investigation and recording of any archaeological features that are uncovered during the proposed groundworks within the application area.
- to provide the opportunity, if needed, for the watching archaeologist to signal to all interested parties, before the destruction of the material in question, that an archaeological find has been made for which the resources allocated to the watching brief are not sufficient to support the treatment to a satisfactory or proper standard.

A written report will be compiled following the fieldwork. Sufficient desk-top research will be undertaken to ensure that the results of this work are properly understood, interpreted and reported.

The report will include a comprehensive assessment of the historic context within which the archaeological evidence rests and will aim to highlight any relevant research issues within regional, national and, if relevant, international research frameworks.

4.1. Site Specific Research Aims

It is important to recognize that whilst primarily designed to mitigate impacts, developer-led archaeology is also regarded as research activity with an academic basis, the aim of which is to add to the sum of human knowledge. Curators recognize the desirability of incorporating agreed research priorities as a means of enhancing the credibility of the development control process, ensuring cost-effectiveness and legitimately maximizing intellectual return.

A research framework for the archaeology of Wales has been produced (2011-2014) and currently in the process of review. This document highlights that industrial archaeology sites are often affected by development proposals, and that in these schemes adequate resources for investigation are often lacking.

This watching brief has the capacity to identify areas where subsequent mitigation may contribute to the create better understandings of industrial archaeology within the region.

The results obtained during the watching brief can also be significant for a better understanding of the extent, nature, economy and character of settlement and landscape use of the area.

5. Timetable of works

5.1. Fieldwork

The watching brief will be undertaken prior to the ground works associated with the proposed development. GGAT-PD will be advised of the start date in advance of the works commencing on site.

5.2. Report delivery

The report will be submitted to Mr Stephen R Taylor and to GGAT-PD within three months of the completion of the fieldwork. A copy of the report will also be sent to the regional HER.

6. Fieldwork

6.1. Detail

The work will be undertaken to meet the standard required by The Chartered Institute for Archaeologist's *Standard and Guidance for Watching Briefs* (2014).

An archaeological watching brief will be undertaken during all intrusive ground works. This will include, but not be limited to:

- The demolition of the existing extension and all ground works associated with the building of the new single storey extension. This will include a photographic account of the exterior of the building prior to demolition, during demolition and after demolition. It will detail any structural and architectural detail or feature revealed during demolition.
- All groundworks associated with the extension and garage, specifically foundation excavation.
- All groundworks for services associated with the extension and garage.
- All groundwork associated with landscaping.
- Any other ground work.

If the ground work is undertaken by a mechanical excavator then this should be fitted with a flat bladed bucket.

The site archaeologist undertaking the watching brief will be afforded the required access by the main contractor in order to observe and where necessary to record any archaeological remains revealed. Groundwork will not be undertaken without the presence of the site archaeologist. The site archaeologist will record finds and less significant archaeological deposits and features without significant delay to the work program.

Where significant or complex archaeological deposits or features are encountered there will be a requirement for those areas to be fenced off and highlighted to all contractors employed on the site. Machines or contractors shall not enter this area until archaeological recording has been completed. If significant archaeological features are revealed during the work a meeting between Mr Stephen R Taylor and GGAT-PD and AW will be called at the earliest convenience.

To comply with professional guidelines, a contingency for additional access to each area of archaeological significance and for a team additional archaeologists to be employed should be provided. Contingency costs will be agreed in advance before any extension to the programme commences and will follow a site meeting between Archaeology Wales, Mr Stephen R Taylor and GGAT-PD.

6.2. Recording

Recording will be carried out using AW recording systems (pro-forma context sheets etc) using a continuous number sequence for all contexts.

Plans and sections will be drawn to a scale of 1:50, 1:20 and 1:10 as required and related to Ordnance Survey datum and published boundaries where appropriate.

All features identified will be tied in to the OS survey grid and fixed to local topographical boundaries.

Photographs will be taken in digital format with an appropriate scale, using a 12MP camera with photographs stored in Tiff format.

The archaeologist undertaking the watching brief will have access to the AW metal detector and be trained in its use.

6.3. Finds

The professional standards set in the Chartered Institute for **Archaeologists' Standard and guidance for the collection, documentation, conservation and research of archaeological (2014)** will form the basis of finds collection, processing and recording.

All manner of finds regardless of category and date will be retained.

Finds recovered that are regarded as Treasure under *The Treasure Act 1996* will be reported to HM Coroner for the local area.

Any finds which are considered to be in need of immediate conservation will be referred to a UKIC qualified conservator (normally Phil Parkes at Cardiff University).

6.4. Environmental sampling strategy

Deposits with a significant potential for the preservation of palaeoenvironmental material will be sampled, by means of the most appropriate method (bulk, column etc). Where sampling will provide a significant contribution to the understanding of the site AW will draw up a site-specific sampling strategy alongside a specialist environmental archaeologist. All environmental sampling and recording and will **follow English Heritage's *Guidelines for Environmental Archaeology* (2002)**.

6.5. Human remains

In the event that human remains are encountered, their nature and extent will be established and the coroner informed. All human remains will be left *in situ* and protected during backfilling. Where preservation *in situ* is not possible the human remains will be fully recorded and removed under conditions that comply with all current legislation and include acquisition of licenses and provision for reburial following all analytical work. Human remains will be excavated in accordance with the Chartered **Institute for Archaeologist's *Excavation and Post-Excavation Treatment of Cremated and Inhumed Human Remains: Technical Paper Number 13* (1993)**.

A meeting with GGAT - PD, Mr Stephen R Taylor and AW will be called if the human remains uncovered are of such complexity or significance that the contingency arrangement (6.1 above) would not be of sufficient scope.

6.6. Specialist advisers

In the event of certain finds, features or sites being discovered, AW will seek specialist opinion and advice. A list of specialists is given in the table below although this list is not exhaustive.

Artefact type	Specialist
Flint	Kate Pitt (Archaeology Wales)
Animal bone	Richard Madgwick (Cardiff University)
CBM, heat affected clay, Daub etc.	Rachael Hall (APS)
Clay pipe	Hilary Major (Freelance)
Glass	Rowena Hart (Archaeology Wales)
Cremated and non-cremated human bone	Malin Holst (University of York)/Richard Madgwick (Cardiff University)

Metalwork	Kevin Leahy (University of Leicester)/ Quita Mold (Freelance)
Metal work and metallurgical residues	Dr Tim Young (GeoArch)
Neo/BA pottery	Dr Alex Gibson (Bradford University)
IA/Roman pottery	Jane Timby (Freelance)
Roman Pottery	Rowena Hart (Archaeology Wales)/ Peter Webster (Freelance)
Post Roman pottery	Stephen Clarke (Monmouthshire Archaeology)
Charcoal (wood ID)	John Carrot (Freelance)
Waterlogged wood	Nigel Nayling (University of Wales – Lampeter)
Molluscs and pollen	Dr James Rackham
Charred and waterlogged plant remains	Wendy Carruthers (Freelance)

6.6.1. Specialist reports

Specialist finds and palaeoenvironmental reports will be written by AW specialists, or sub-contracted to external specialists when required.

7. Monitoring

GGAT-PD will be contacted approximately five days prior to the commencement of archaeological site works, and subsequently once the work is underway.

Any changes to the WSI that AW may wish to make after approval will be communicated to GGAT-PD for approval on behalf of Planning Authority.

8. Post-fieldwork programme

8.1. Archive assessment

8.1.1. Site archive

An ordered and integrated site archive will be prepared in accordance with: Management of Research Projects in the Historic Environment (MoRPHE) (Historic England 2006) upon completion of the project.

The site archive (including artefacts and samples) will be prepared in accordance with the National Monuments Record (Wales) agreed structure and

deposited with an appropriate receiving organisation, in compliance with ClFA Guidelines (*Standard and guidance for the creation, compilation, transfer and deposition of archaeological archives*, 2014). The legal landowners consent will be gained for deposition of finds.

8.1.2. Analysis

Following a rapid review of the potential of the site archive, a programme of analysis and reporting will be undertaken. This will result in the following inclusions in the final report:

- Non-technical summary
- Location plan showing the area/s covered by the watching brief, all artefacts, structures and features found
- Plan and section drawings (if features are encountered) with ground level, ordnance datum and vertical and horizontal scales.
- Written description and interpretation of all deposits identified, including their character, function, potential dating and relationship to adjacent features. Specialist descriptions and illustrations of all artefacts and soil samples will be included as appropriate.
- An indication of the potential of archaeological deposits which have not been disturbed by the development
- A discussion of the local, regional and national context of the remains by means of reviewing published reports, unpublished reports, historical maps, documents from local archives and the regional HER as appropriate.
- A detailed archive list at the rear listing all contexts recorded, all samples finds and find types, drawings and photographs taken. This will include a statement of the intent to deposit, and location of deposition, of the archive.

8.2. Reports and archive deposition

8.2.1. Report to client

Copies of all reports associated with watching brief, together with inclusion of supporting evidence in appendices as appropriate, including photographs and illustrations, will be submitted to Mr Stephen R Taylor and GGAT-PD upon completion.

8.2.2. Additional reports

After an appropriate period has elapsed, copies of all reports will be deposited with the relevant county Historical Environment Record, the National Monuments Record and, if appropriate, Cadw.

8.2.3. Summary reports for publication

Short archaeological reports will be submitted for publication in relevant journals; as a minimum, a report will be submitted to the annual publication of the regional CBA group or equivalent journal.

8.2.4. Notification of important remains

Where it is considered that remains have been revealed that may satisfy the criteria for statutory protection, AW will submit preliminary notification of the remains to Cadw.

8.2.5. Archive deposition

The final archive (site and research) will, whenever appropriate, be deposited with a suitable receiving institution, usually the relevant Local Authority museums service. Arrangements will be made with the receiving institution before work starts.

Although there may be a period during which client confidentiality will need to be maintained, copies of all reports and the final archive will be deposited no later than six months after completion of the work.

Copies of all reports, the digital archive and an archive index will be deposited with the *National Monuments Record*, RCAHMW, Aberystwyth.

Wherever the archive is deposited, this information will be relayed to the HER. A summary of the contents of the archive will be supplied to GGAT-PD.

8.2.6. Finds deposition

The finds, including artefacts and ecofacts, excepting those which may be subject to the Treasure Act, will be deposited with the same institution, subject to the agreement of the legal land owners.

9. Staff

The project will be managed by Irene Garcia Rovira (AW Project Manager) and the fieldwork undertaken by Dan Moore (Archaeology Wales). Any alteration to staffing before or during the work will be brought to the attention of GGAT-PD and Mr Stephen R Taylor.

Additional Considerations

10. Health and Safety

10.1. Risk assessment

Prior to the commencement of work AW will carry out a site visit and produce a formal Health and Safety Risk Assessment in accordance with *The Management of Health and Safety Regulations 1992*. A copy of the risk assessment will be kept on site and be available for inspection on request. A copy will be sent to the client (or their agent as necessary) for their information. All members of AW staff on site will sign and will adhere to the content of this document.

10.2. Other guidelines

AW will adhere to best practice with regard to Health and Safety in Archaeology as set out in the FAME (Federation of Archaeological Managers and Employers) health and safety manual *Health and Safety in Field Archaeology (2002)*.

11. Community Engagement and Outreach

Wherever possible, AW will ensure suitable measures are in place to inform the local community and any interested parties of the results of the site investigation work. This may occur during the site investigation work or following completion of the work. The form of any potential outreach activities may include lectures and talks to local groups, interested parties and persons, information boards, flyers and other forms of communication (social media and websites), and press releases to local and national media.

The form of any outreach will respect client confidentiality or contractual agreements. Any form of outreach will be agreed in advance with the client. As a rule, outreach will be proportional to the size of the project.

Where outreach activities have a cost implication these will need to be negotiated in advance and in accordance with the nature of the desired response and learning outcomes.

12. Insurance

AW is fully insured for this type of work, and holds Insurance with Aviva Insurance Ltd and Hiscox Insurance Company Limited through Towergate Insurance. Full details of these and other relevant policies can be supplied on request.

13. Quality Control

13.1. Professional standards

AW works to the standards and guidance provided by the *Chartered Institute for Archaeologists*. AW fully recognise and endorse the Chartered Institute for **Archaeologists' Code of Conduct**, *Code of Approved Practice for the Regulation of Contractual Arrangements in Field Archaeology* and the *Standard and Guidance for archaeological watching briefs* currently in force. All employees of AW, whether corporate members of the Chartered Institute for Archaeologists or not, are expected to adhere to these Codes and Standards during their employment.

13.2. Project tracking

The designated AW manager will monitor all projects in order to ensure that agreed targets are met without reduction in quality of service.

14. Arbitration

Disputes or differences arising in relation to this work shall be referred for a decision in accordance with the Rules of the Chartered Institute of Arbitrators' *Arbitration Scheme for the Institute for Archaeologists* applying at the date of the agreement.

15. References

Chartered Institute for Archaeologists, 2014. Standards and guidance for the collection, compilation, transfer and deposition of archaeological archives.

Chartered Institute for Archaeologists, 2014. Standards and guidance for the collection, documentation, conservation and research of archaeological materials.

Chartered Institute for Archaeologists, 2014. Standards and guidance for an archaeological watching brief.

English Heritage, 2002. Guidelines for Environmental Archaeology.

English Heritage, 2006. Management Of Research Projects in the Historic Environment (MORPHE).

McKinley, J., Roberts C., 1993, Excavation and post-excavation treatment of cremated and inhumed human remains, Technical Paper 13.

Paar HW, Tucker DG. 1975. The old wireworks and ironworks of the Angidy Valley at Tintern, Monmouthshire.

Phillips, N. 2008. Proposed Hydro-electric project. Angudy River, Tintern DBA. APAC. DBA/TAB/08.

British Geological Survey: Geology of Britain viewer:

www.bgs.ac.uk/discoveringGeology/geologyOfBritain/viewer.html

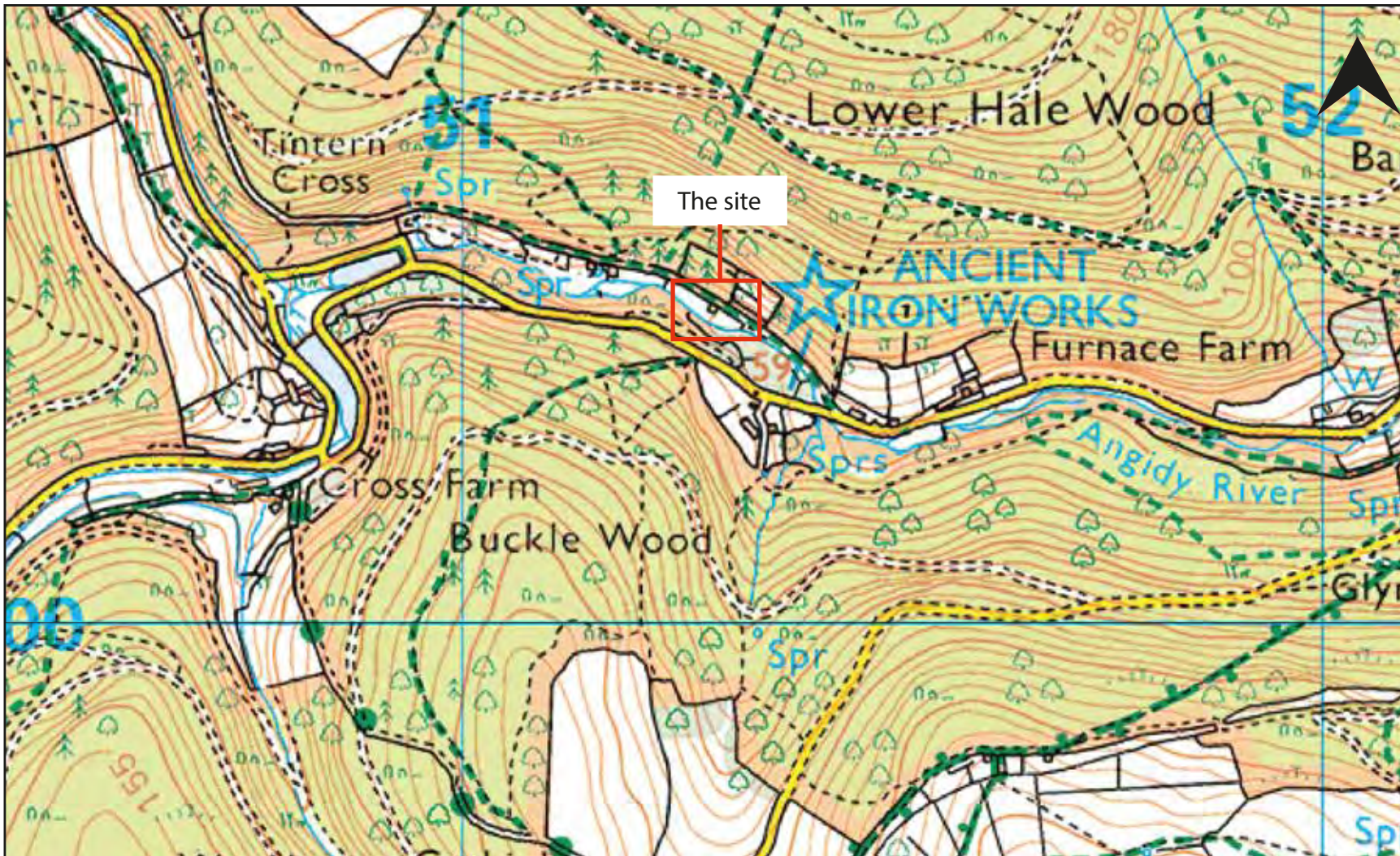


Figure 1.
Location of site
within wider
landscape.

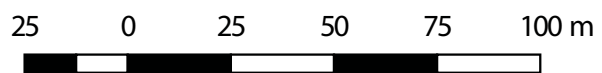
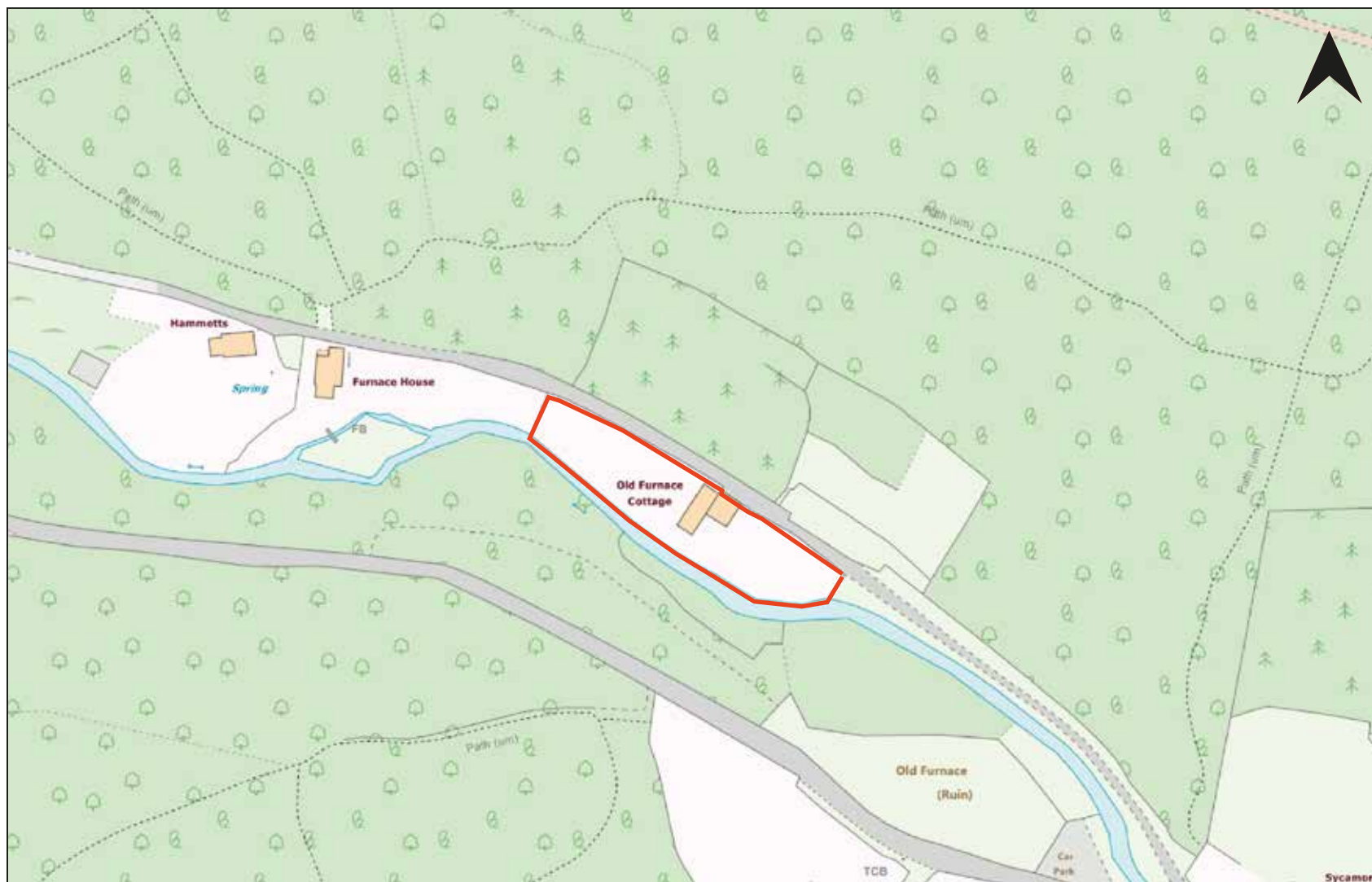


Figure 2.
Location of site
marked in red.

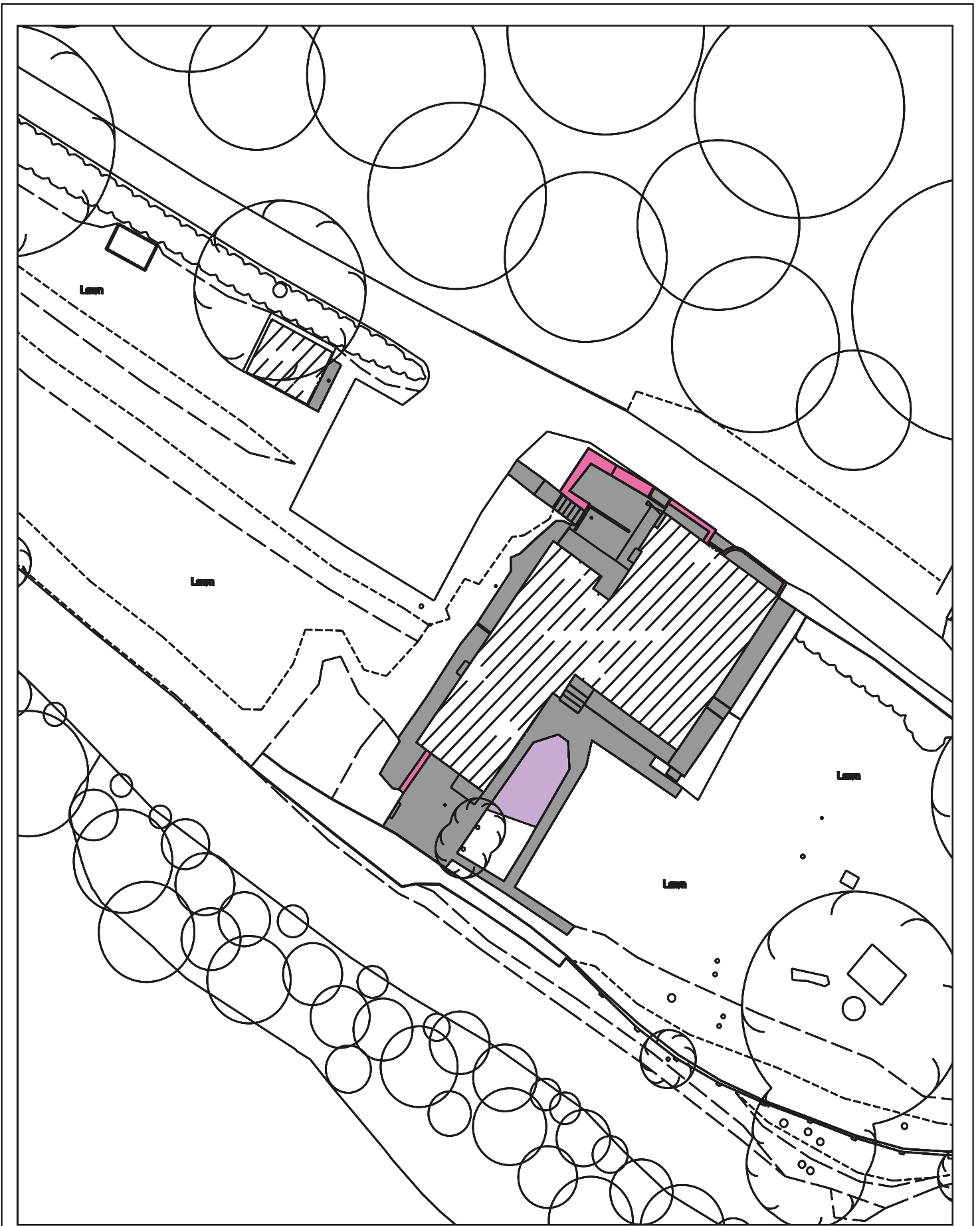


Figure 3.
Existing surfaces plan.

Key to landscape surfaces:

■	Concrete paving
■	Gravel
■	Low level garden walls

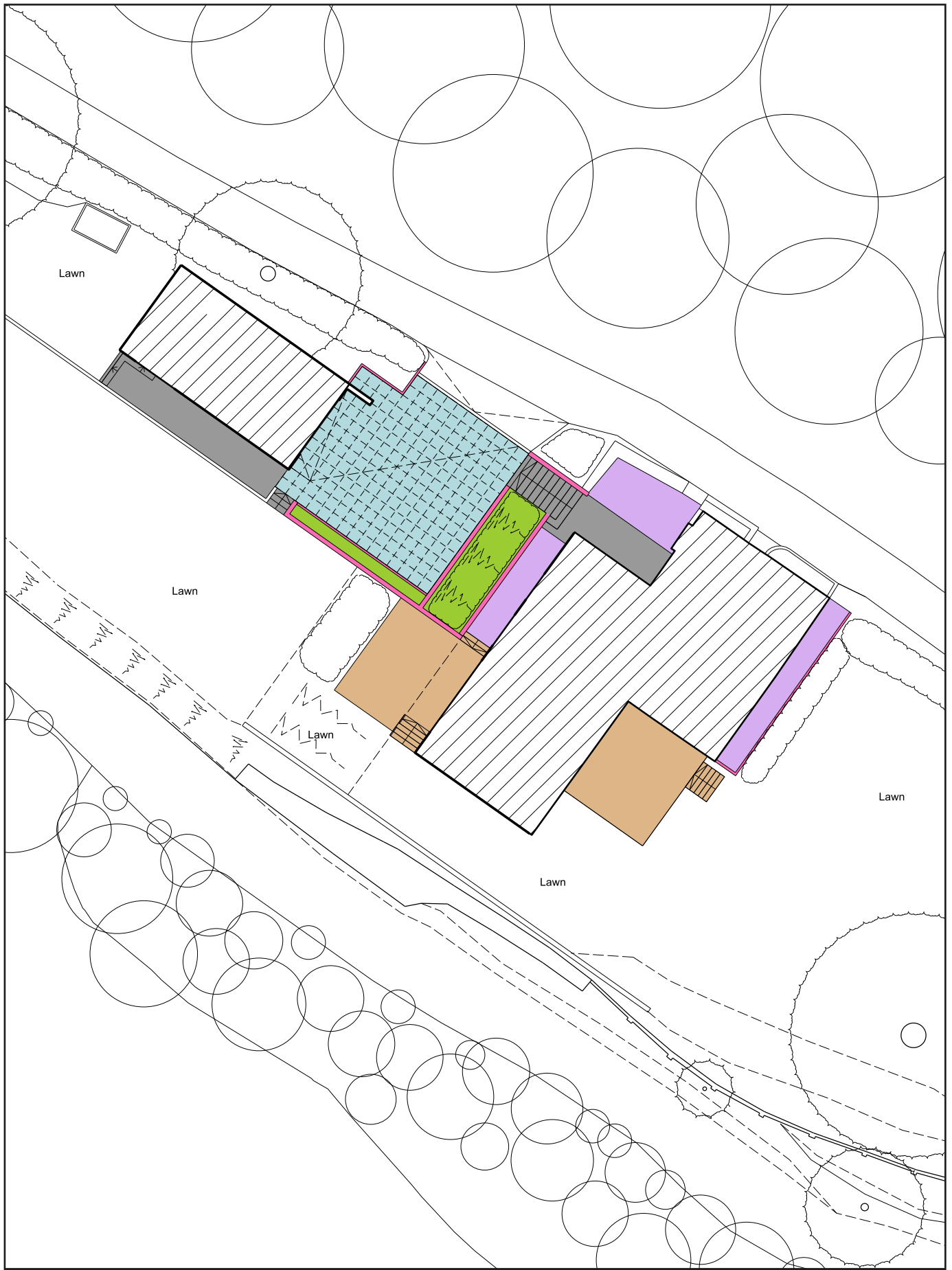


Figure 4.
Proposed surfaces plan.

Key to landscape surfaces:

- | | |
|--|---|
|  Earth planter |  Permeable paving |
|  Permeable deck |  Paving |
|  Gravel |  Lowe level garden walls |

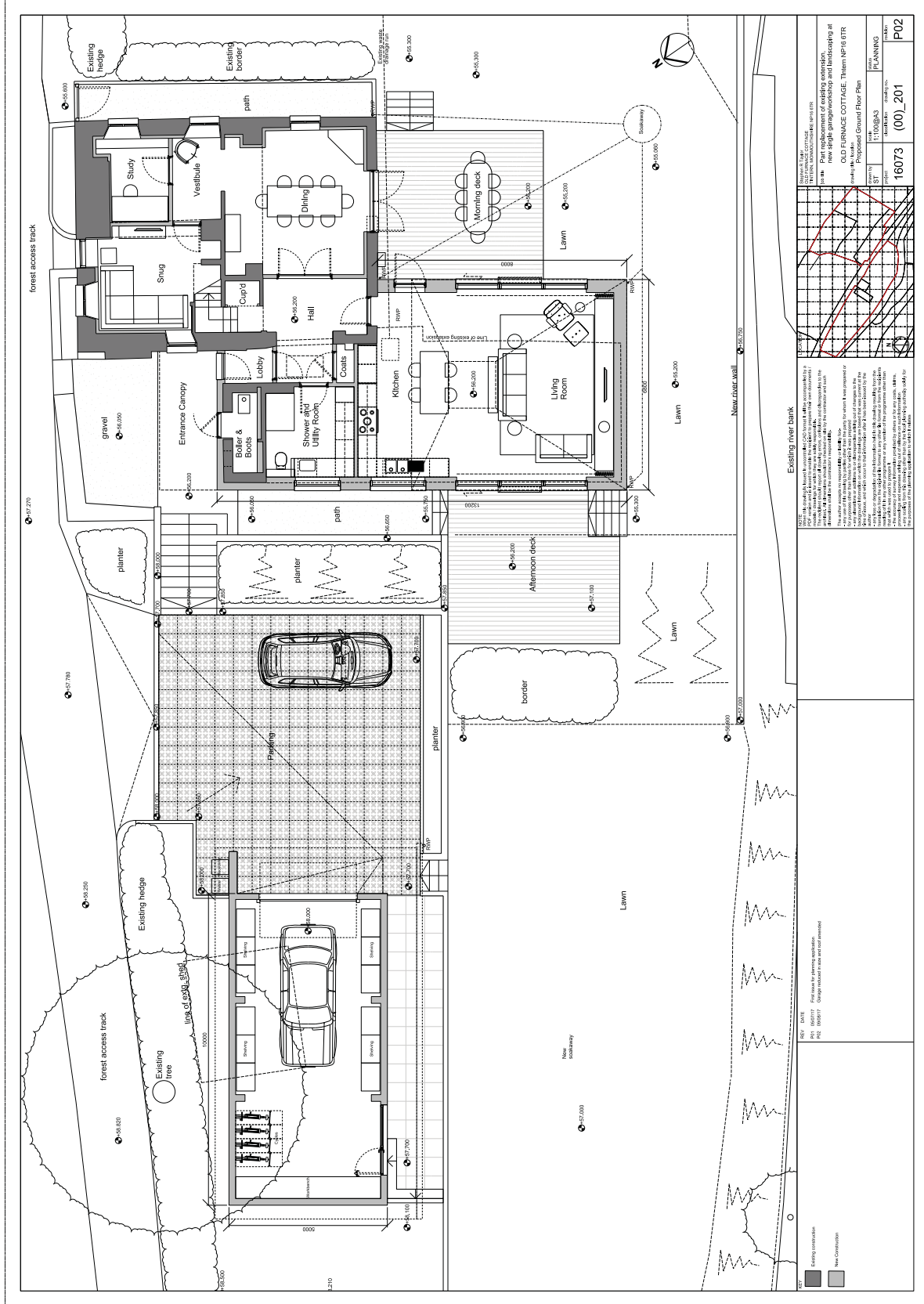


Figure 5. Proposed floor plan