

The National Trust

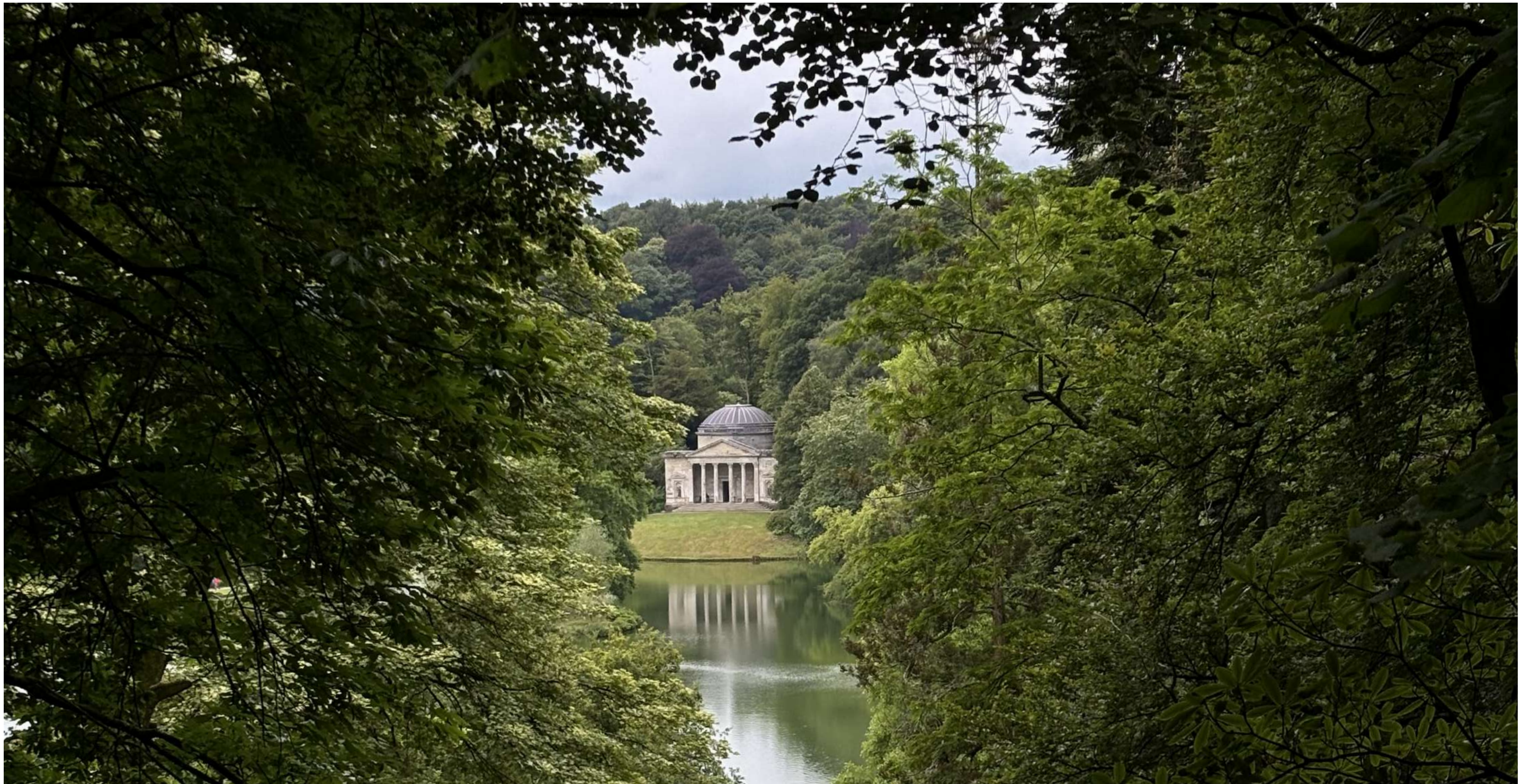


Stourhead Garden Pathway Improvement Project

Design & Access Statement

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Prepared by LUC



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Project Team
The landscape design has been prepared by a team led by LUC in collaboration with The National Trust, SFK Consulting, Bosky Trees & Johns' Associates.

All comments and contributions to the development of the study are gratefully acknowledged.

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Note

This document and its contents have been prepared by LUC for The National Trust and is intended solely for use in relation to the Stourhead Garden Pathway Improvement project.

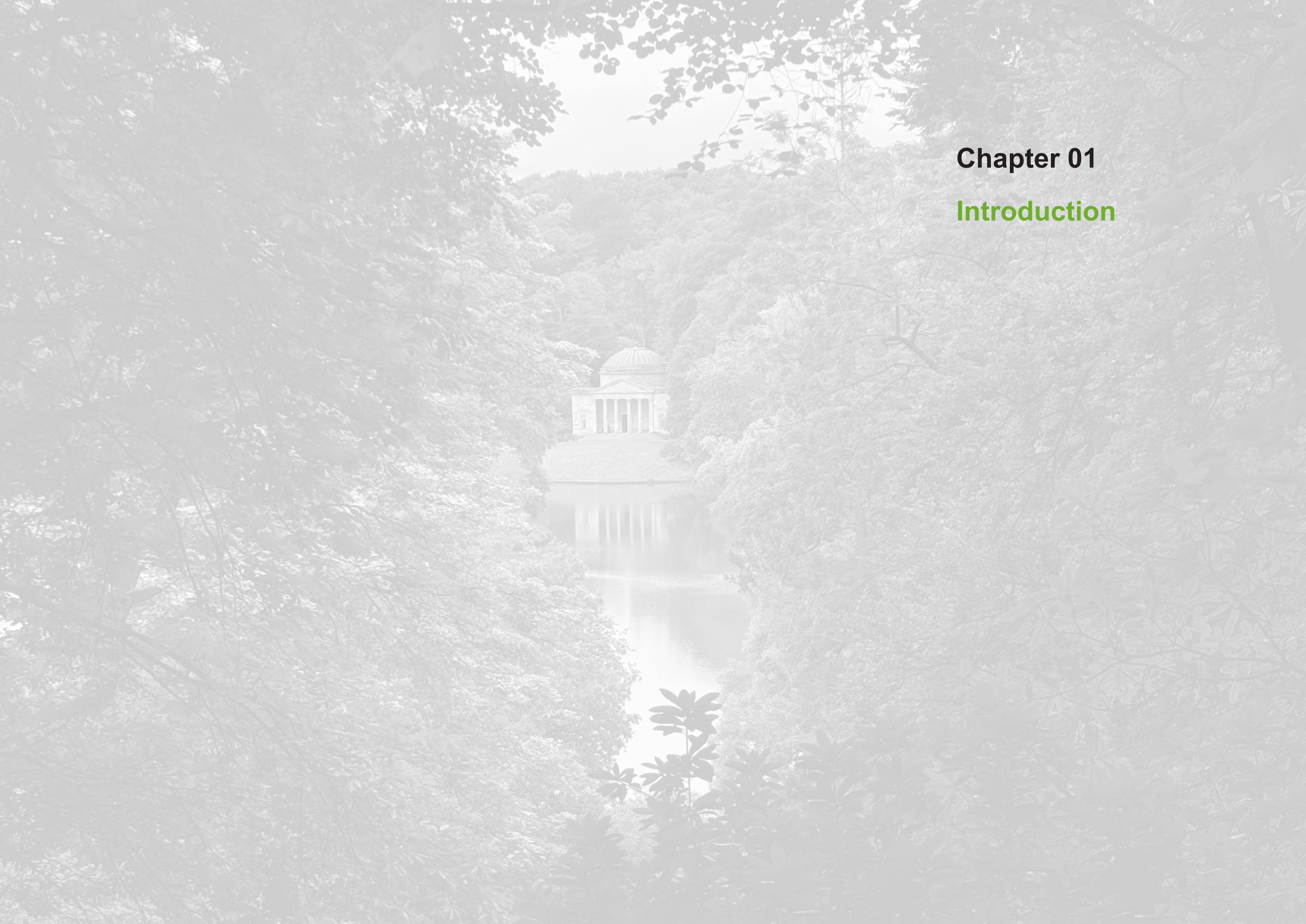
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Contents

Chapter 01	Introduction	<i>page</i>	Chapter 04	Design Proposals	<i>page</i>
The Project	5		Proposed Path Widths	38	
Planning Policy Context	6		Proposed Path Edging	39	
Historical Designations	7		Path Detail	40	
Planning Designations	8		Pantheon Frontage	41	
The Site	9		Temple of Flora Frontage	44	
Footpath Significance	11		Benches	45	
			Hard Materials Palette	46	
			Soft Landscape	47	
Chapter 02	Site Analysis		Chapter 05	Engagement	
Existing Condition	13		Engagement	49	
Arboricultural Survey	15				
Arboricultural Constraints	16				
Ecology	17				
Existing Path Profile Sections	18		Chapter 06	Construction Considerations	
Existing Path Profiles	19		Seasonal & Time Constraints	53	
Existing Path Widths	20		Phase 1 & Future Phases	54	
Existing Path Gradients	21		Logistics & Compounds	55	
Garden Character Areas	22				
Existing Drainage	23		Chapter 07	Summary	
Existing Path Ground Investigation	24		Conclusion	57	
Chapter 03	Strategic Options				
Proposed Path Profiles	26				
Materiality	27				
Path Material Matrix	29				
Selected Surface Types	30				
Tar Spray & Chip Gravel Selection	31				
Surfacing Options	33				
Drainage Strategy	34				

Chapter 01

Introduction



Introduction

The Project

In June 2024 The National Trust appointed LUC to develop a RIBA Stage 1-2 study providing three strategic options for the conservation of the Georgian Circuit Path at Stourhead.

Stourhead, a Grade I Listed 18th-century landscape garden, is one of the UK's most visited National Trust properties and is recognised across the world as a quintessential English Landscape Garden. Designed 300 years ago by three generations of the Hoare banking family, the garden now welcomes 400,000 to 500,000 visitors annually, with up to 6,000 visitors in a single day during peak season. The Georgian Circuit Path, a foundational element of the garden since the 1740s, is central to the visitor experience. The Stourhead Garden Pathway Improvement Project aims to conserve and future-proof this significant path by implementing a thoughtfully designed solution to address its continued degradation.

The aspirations outlined in the project brief are listed below:

- Future-proof the path network for a minimum of 25 years and improve Stourhead's vast path network to maximise accessibility, presentation and visitor experience for projected visitor uplift and diversified visitor use.
- Improve access for maintenance & events vehicles.
- Align with the National Trust's sustainability targets and follow best practice to create a safe path within accepted standards and regulations.
- Achieve a robust, resilient and sensitive long-term drainage solution to Stourhead's projected flood risk, reduce gravel wash-off and silt build-up in the Lake, prevent changes to the pH of the Lake and reduce risks to plant health.
- Achieve a robust surfacing solution that allows for seamless future alteration, reduces the need for ongoing repairs and maintenance, and reduces erosion, drain clogging and volume/ frequency of top dressing.
- The path design should implement identified future-proofing opportunities for service runs.
- Minimise the amount of waste removed from the site and remain cognisant of biosecurity.
- Achieve a quality solution, approved by Key and Statutory Stakeholders, in-keeping with the Grade I Listed landscape and the Spirit of Place.

With the above in mind, LUC is leading a multi-disciplinary team on behalf of the National Trust. This Design & Access Statement is provided to support the detailed planning application for the Stourhead Garden Pathway Improvement Project made to Wiltshire Council. It is hoped this will provide all parties with the confidence to move towards implementing a solution that preserves the unique beauty of Stourhead for everyone to access and experience in perpetuity.



Figure 1. View west across the Lake with the Palladian Bridge to the foreground and the Pantheon temple to the rear

Introduction

Planning Policy Context

The statutory development plan policies which are relevant to this planning application are listed below. Please refer to Chapter 4 of the Planning Statement for further details on the relevant statutory development plan policies and material considerations..

Wiltshire Core Strategy (2015)

- Core Policy 1: Settlement Strategy
- Core Policy 2: Delivery Strategy
- Core Policy 17: Spatial Strategy for the Mere Community Area
- Core Policy 39: Tourist Development
- Core Policy 50: Biodiversity and Geodiversity
- Core Policy 51: Landscape
- Core Policy 57: Ensuring High Quality Design and Place Shaping
- Core Policy 58: Ensuring the Conservation of the Historic Environment

Planning History

A number of planning applications relating to Stourhead have been submitted in the last five years, these are listed in detail within the separate Planning Statement.

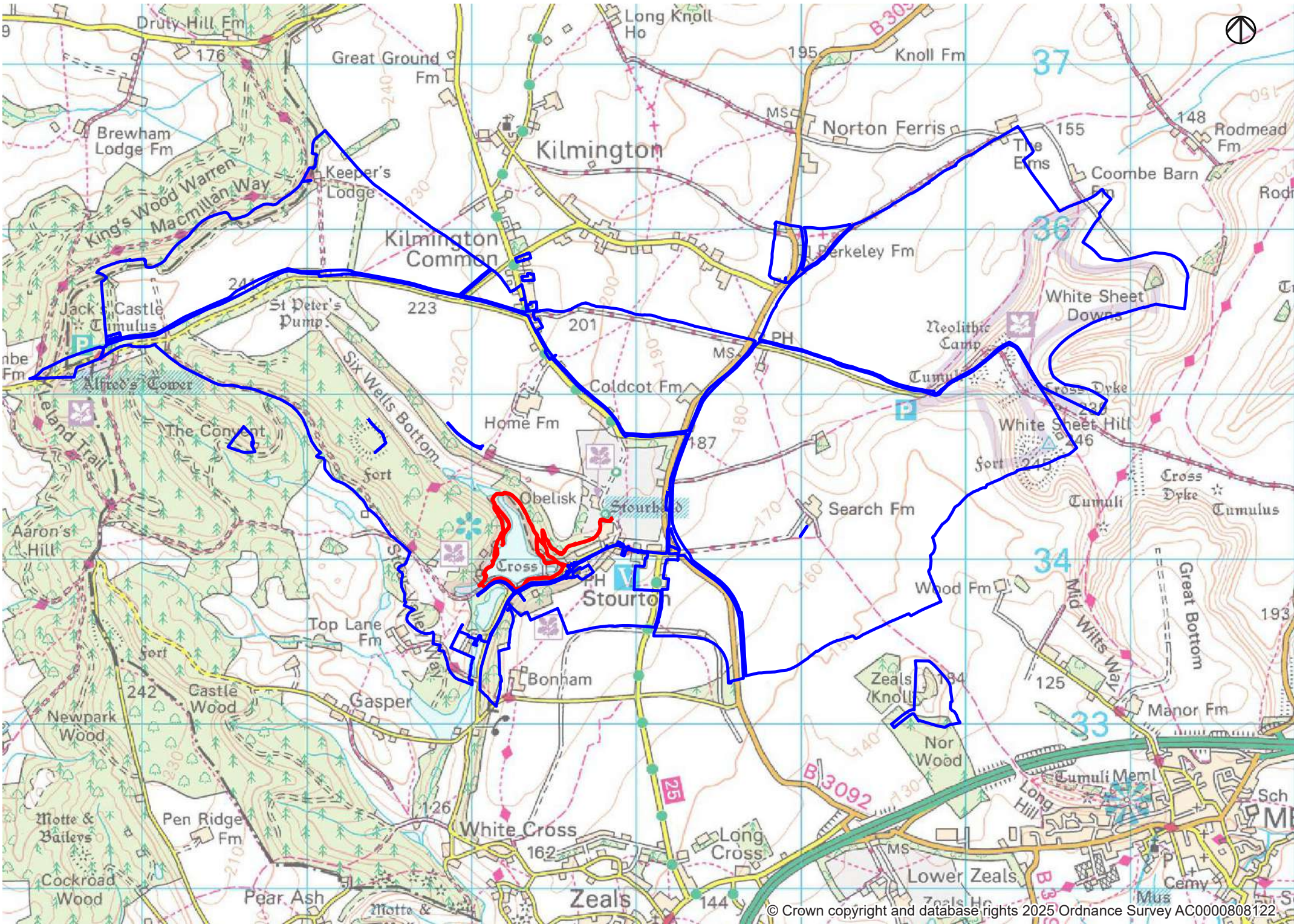


Figure 2. View west across the Lake with the Palladian Bridge to the foreground and the Pantheon temple to the rear

Key

- Application Boundary
- Ownership Boundary

Introduction

Historical Designations

Designations

The key heritage designations are set out on Figure 3. Stourhead is a Grade I Registered Park and Garden and located in the Stourton Conservation Area. There are a number of listed buildings within / immediately adjacent to the site, surrounding the lake, including:

- Grade I listed Grotto and the River God's Cave
- Grade I listed Gothic Cottage
- Grade I listed Pantheon
- Grade I listed Rockwork Bridge
- Grade I listed Palladian Bridge
- Grade I listed Temple of Flora
- Grade I listed Paradise Well
- Grade II listed Iron Bridge
- Grade II listed Horse Trough in Lake on South Side of Garden Lake Dam
- Grade II listed Small Grotto Below Temple of Flora
- Grade II Rockwork Boathouse

Key

Application Boundary

Stourton Conservation Area

Grade I Registered Park and Garden

Listed building/ structure

Grade I

Grade II



Figure 3. Key Heritage Designations

Introduction

Planning Designations

The remaining key planning designations covering the site are set out on figure 4. The site is located within the Cranborne Chase National Landscape (formerly Area of Outstanding Natural Beauty). An area to the north west of the lake is ancient woodland. The majority of the land surrounding the lake (excluding the existing path network) is priority habitat - deciduous woodland. The area surrounding the lake is located in Flood Zone 1.

- Key
- Application Boundary
 - Cranborne Chase National Landscape
 - Ancient woodland
 - Ancient & Semi-Natural woodland
 - Priority habitat - deciduous woodland



Figure 4. Key Planning Designations

Introduction

The Site

Stourhead, located near Mere in Wiltshire, England, is home to one of the most celebrated landscape gardens in the country. It forms part of the wider Stourhead estate, which is owned and managed by the National Trust. Covering over 2,600 acres, the estate includes the famous landscape garden, woodlands, farmland, and Stourhead House, a Palladian mansion.

Designed in the 18th century by banker Henry Hoare II, the garden is considered a masterpiece of the English landscape style. Hoare worked with renowned architect Henry Flitcroft to create a landscape that was both natural and theatrical, using features such as a large artificial lake, classical temples, grottoes and carefully framed views. The garden is designed to evoke the feel of an Arcadian paradise, with paths leading visitors through a carefully orchestrated sequence of vistas and viewpoints, reminiscent of landscape paintings.

Stourhead Gardens in Wiltshire is one of the National Trust's most popular sites, attracting high visitor numbers throughout the year. The garden is exceptionally well-used by a wide demographic, including families, retirees, dog walkers, and visitors of all ages who come to enjoy its tranquil setting and classical landscape design. The circular route around the central lake serves as the primary focus for most visits, offering a gentle and accessible walk that reveals carefully composed views of temples, grottoes, and mature woodland. This well-trodden path provides a structured yet immersive way for visitors to experience the garden's changing character through the seasons, making it a regular destination for both first-time tourists and local repeat visitors.

The National Trust is committed to improving the accessibility and sustainability of its sites, and Stourhead is no different can be enjoyed by everyone, now and in the future. Therefore ongoing investment in path upgrades, inclusive wayfinding, and environmentally sensitive management practices are all key elements of this project to open up the historic landscape to all while reducing its environmental footprint.

The National Trust is committed to improving accessibility and sustainability across its sites, and Stourhead is no exception. Ongoing investment in path upgrades, inclusive wayfinding, and environmentally sensitive management will help open up the historic landscape to all while reducing environmental impact.

Key

Application Boundary



Figure 5. Aerial photo of the site, showing planning application boundary

Introduction
The Site

The adjacent photos illustrate key views and path sections along the historic lake circuit. This orbital walk offers a variety of experiences, from open, expansive areas and carefully composed vistas to enclosed wooded sections and the delight of discovering temples and follies integrated into the landscape.

This project encompasses a range of paths around the lake, including the main approach from the mansion, the Bristol Cross entrance, the steeper western routes known as the ‘Shades’, and the central, lower ‘accessible’ path identified as suitable for wheelchairs and other mobility aids.



Figure 6. Selected site photos

Introduction

Footpath Significance

The works to future-proof the footpaths at Stourhead are seen very much as a conservation project. The circuit path walks within Stourhead’s Grade I Listed Landscape Garden are a significant and foundational component to the experience of the Georgian Landscape. Carefully considered and designed to create elements of light and shade, open and closed views to connect and lead the walker to the garden buildings and structures as they journey through the garden. The path routes and setting are a key part of the experience and to understanding the landscape, as it has been since its opening in the 1740s.

The image adjacent is an extract from the Stourhead Garden Paths Historic Development and Significance report and shows the individual significance of the surviving and lost paths within the landscape garden.

For further details please refer to:

- Heritage Impact Assessment, by Purcell, June 2025.
- Stourhead Garden Paths Historic Development and Significance Report, by Judith Teasdale June 2022.

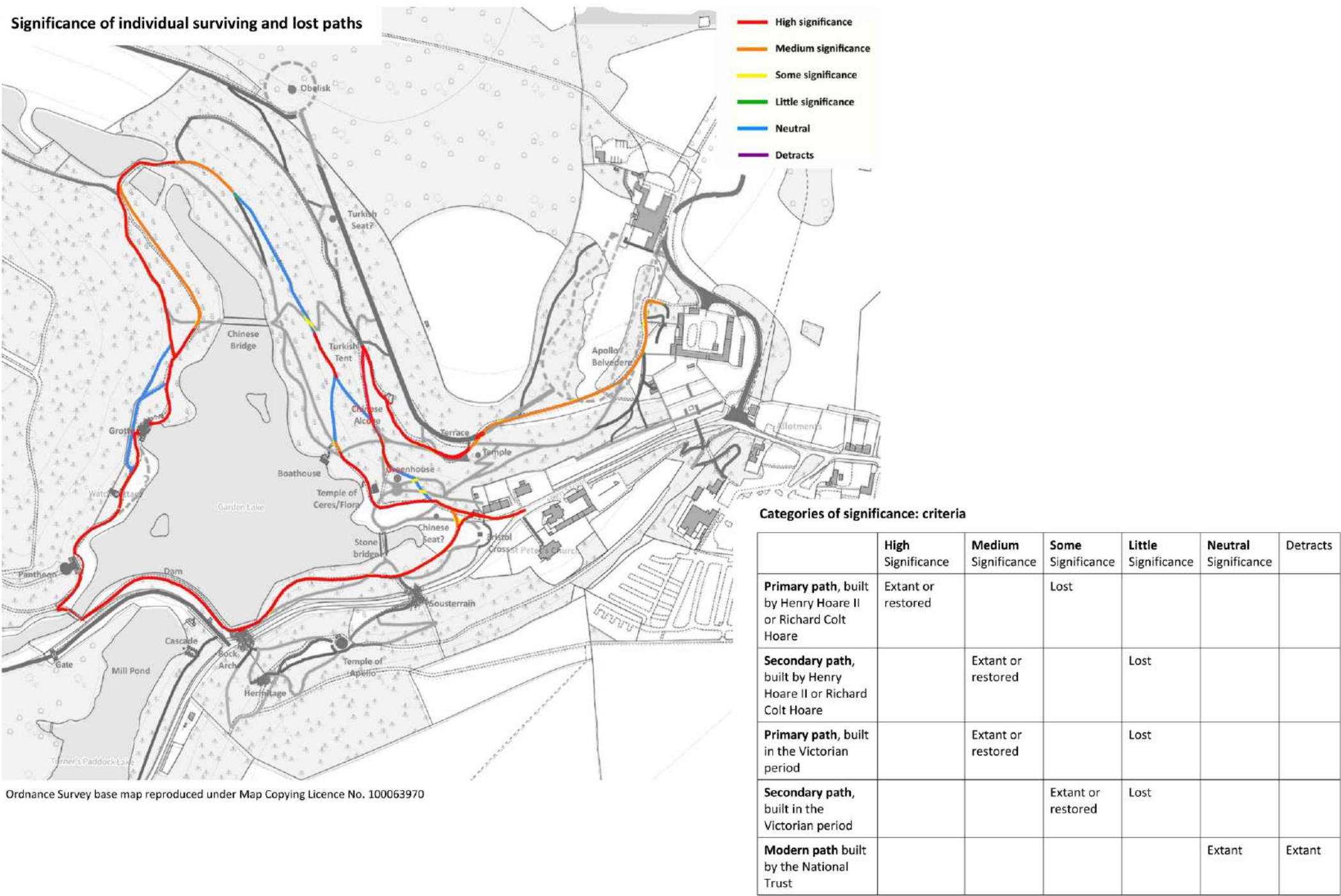


Figure 7. Historic Path Development and Significance (note only paths included in project scope are coloured)

Chapter 02

Site Analysis



Site Analysis

Existing Condition

In recent years, the Georgian Circuit Walk has been progressively deteriorating due to both natural and physical factors. The garden’s steep slopes and paths are integral to its design, offering visitors scenic views as they navigate the landscape. However, the Garden’s pronounced topography and the effects of climate change make the Garden increasingly vulnerable to flash flooding and severe weather, which has contributed to significant wear and tear on the pathways. The poor condition of the paths now restricts access, requiring constant repair and maintenance and forces closures that detract from the visitor experience.

The majority of existing paths are buff coloured self-binding gravel. In places, the paths have been repaired using alternative materials in an effort to stem their deterioration. Concrete has been used on the slope down to the Temple of Apollo viewpoint in The Shades and an alternative self-binding gravel from the Rock Arch up to the Temple of Apollo. Both solutions have their merits but neither is deemed an appropriate long-term solution.

One of the key issues affecting the condition of the paths is drainage. Blocked gullies and drains contribute to poor drainage throughout the garden leading to excessive rilling on sloped sections and pooling in flatter areas of the path where water cannot shed. As the surface deteriorates, erosion of the wearing course has occurred, exposing the sub-base and creating an uneven and hazardous surface. The raised gullies and drains have become a particular trip hazard, further hindering safe access for visitors.

Excessive foot traffic and erosion has reduced the overall level of the pathway, causing the path edges to become higher than the center. The lowered surface traps water, further exacerbating the drainage issues. Visitors are forced onto the path verges to avoid the resulting pools which has caused the paths to widen in places, ultimately, to the detriment of the Garden’s character.



Exposed sub-base at the viewpoint looking towards the Temple of Apollo



Water flowing through the Garden Entrance



Pooling on the Dam looking towards the Pantheon

Figure 8. Existing Condition Site Photos

Site Analysis Existing Condition

The adjacent images illustrate the array of issues present on site, the issues are also listed below:

- Blocked drains
- Tree drip lines
- Scour and erosion
- Path widening
- Ponding on the dam
- Water-logging
- Exposed sub-base
- Exposed tree roots
- Gravel wash-off
- Blocked gullies
- Raised drainage features



Blocked drains



Tree drip lines



Scour



Path widening



Erosion



Exposed sub-base



Exposed tree roots



Gravel wash-off



Blocked gullies



Water-logging



Ponding along the dam



Pooling



Raised drains



Exposed sub-base



Raised gullies

Figure 9. Existing Issues

Site Analysis

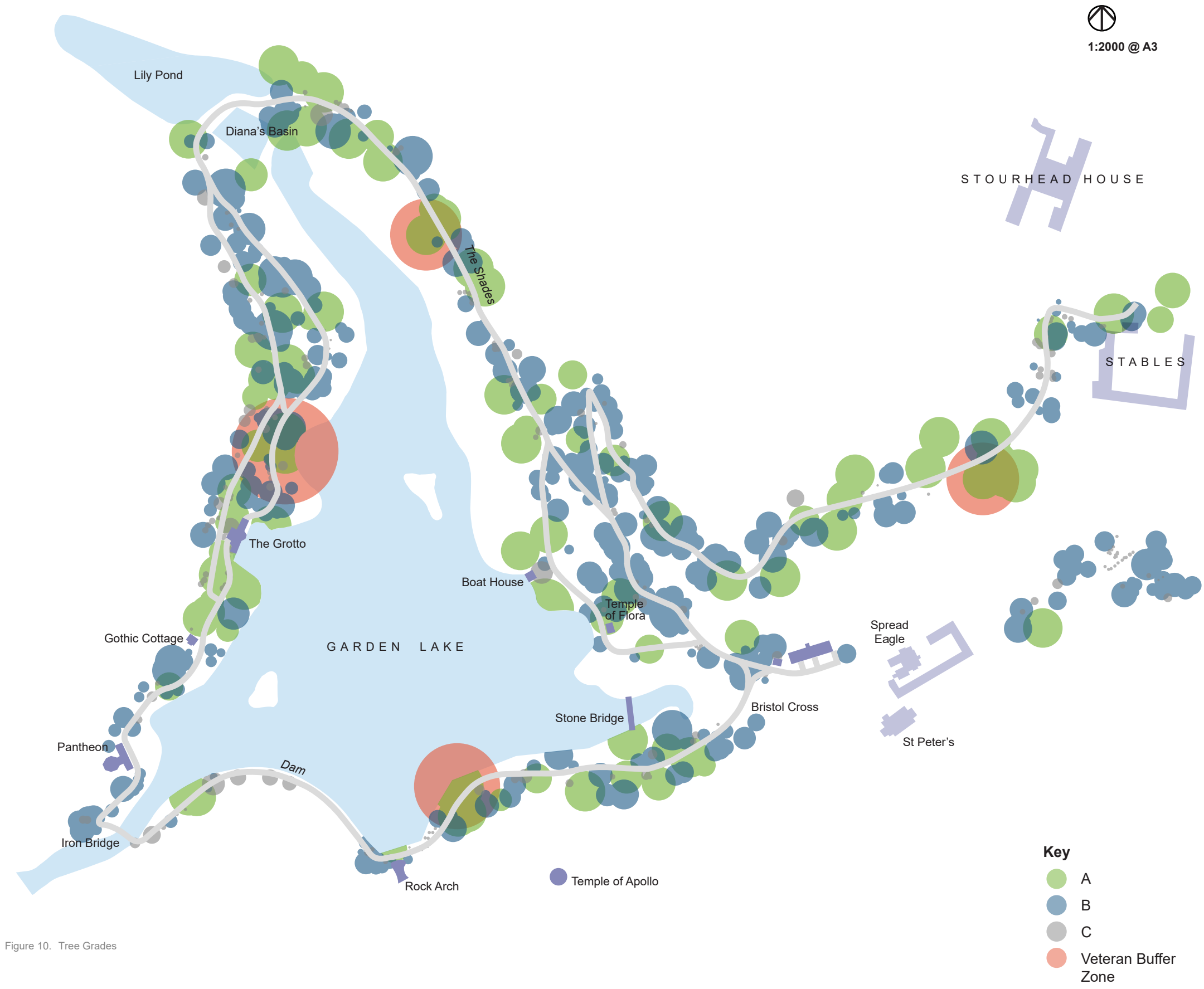
Arboricultural Survey

Stourhead's Landscape Garden is home to a remarkable collection of trees and woodland. Some trees can be traced back with some certainty to the C18th. This value is recognised by the Garden's inclusion within the Stourton Conservation Area. The designation protects all trees within the area by law and requires notification or consent prior to any work being undertaken.

In July 2024, all of the existing trees within the immediate vicinity of the path were fully surveyed in accordance with BS 5837:2012. In total, 687 no. individual trees, tree groups & hedges were surveyed and 4no. veteran trees were identified. An overview of the survey findings is provided below:

Retention Category A	94 (including 4 veteran trees)
Retention Category B	345
Retention Category C	190
Retention Category U	6
Groups & Hedges	84 (53 Groups & 31 Hedges)
Total	687

The project intends to retain all existing trees and where possible to optimise the health and condition of selected trees by making minor adjustments to the route of the path within their root protection areas.



Site Analysis

Arboricultural Constraints

The adjacent diagram inverts the Arboricultural Survey to illustrate the length of path that falls within the root protection area of existing trees. The diagram clearly illustrates the extent of arboricultural constraints involved, approximately 85% of the existing path falls within the root protection areas of the existing trees. The design solution therefore requires careful thought and collaboration with the project Arboricultural Consultant to ensure tree health is not impacted - this includes the use of 'no-dig' path resurfacing for the majority of areas in addition to optimisation of the path route to reduce existing impacts.

For further information relating to the existing trees, please refer to the separate Arboriculture reports.

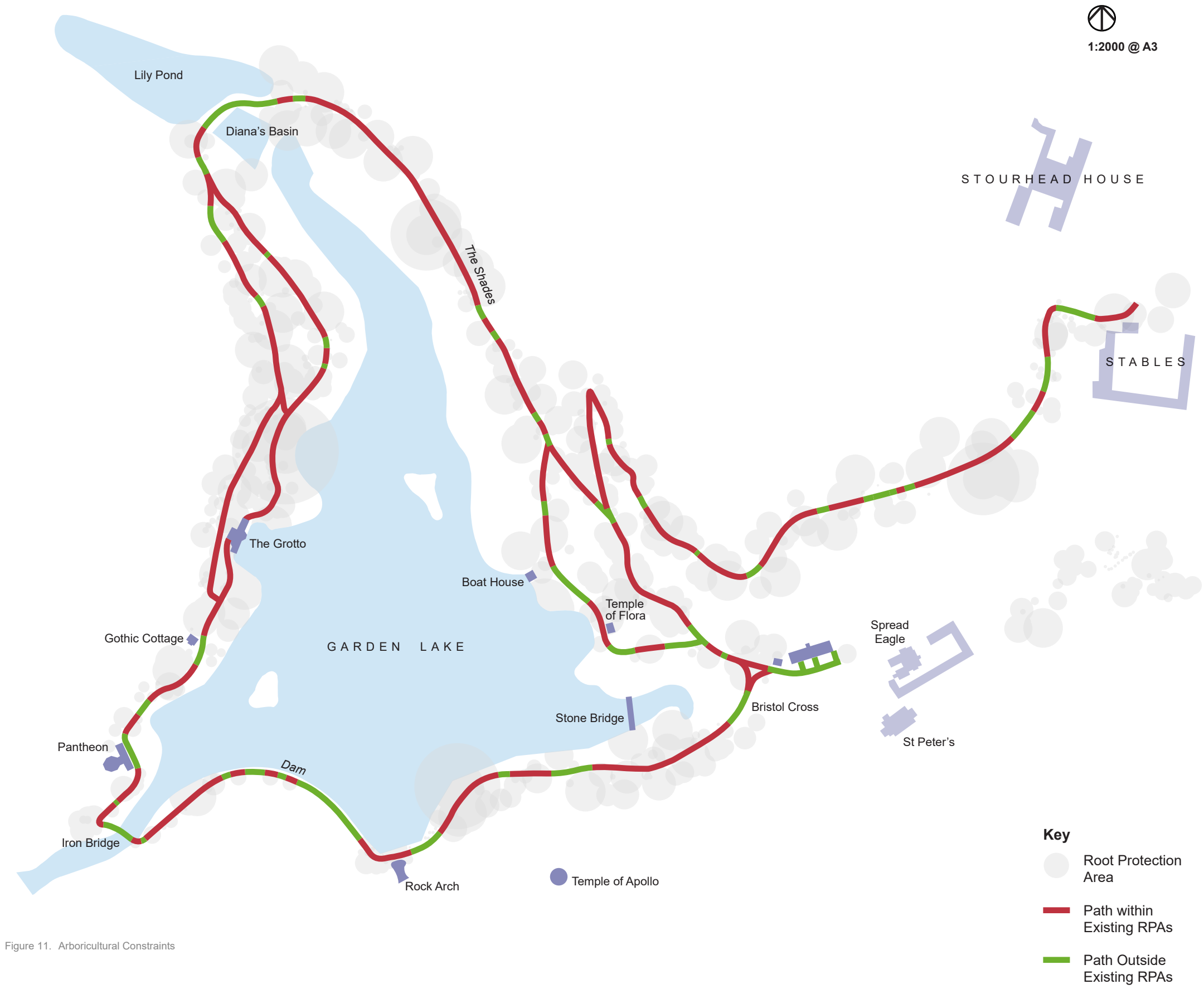


Figure 11. Arboricultural Constraints

Site Analysis
Ecology

A Preliminary Ecological Survey and assessment was undertaken by Johns' Associates to inform the design and delivery of the proposed path works, in line with UKHAB guidance. The survey covered the path and a 10m buffer, recording habitat types, condition, and plant species. Nine habitat types were identified, including Modified Grassland, Mixed Scrub, Rivers and Lakes, Buildings, Suburban Mosaic, Sparsely Vegetated Urban Land, and three woodland types.

A Badger Survey found no evidence of activity. Most habitat was unsuitable for reptiles, though small areas of long grass and scrub could support slow worm and common lizard, while vegetated lake edges may support grass snake. These areas, along with nearby scrub and woodland, are also likely to support amphibians and bird species, as well as invertebrates. Trees flanking the path may offer features for roosting bats, which are also likely to forage locally.

Given the nature and phasing of the works, avoidance of root protection areas, and the limited change in vegetated ground, the project can proceed under a Precautionary Ecological Method of Works, with oversight from a suitably experienced Ecological Clerk of Works.

Considering the ecological baseline, integrated mitigation and enhancement, and the findings in Section 7 of this Ecological Impact Assessment (EclA, refer to separate document for details), it is reasonable to conclude that no significant negative effects will occur to important biodiversity receptors. Positive effects on biodiversity are likely. There are no known developments nearby that would lead to cumulative effects.

The proposals comply with local and national planning policy and best practice, and the use of the Defra Biodiversity Metric 4.0 demonstrates a 12.27% Biodiversity Net Gain, in line with statutory requirements (refer to separate BNG Assessment for further details).

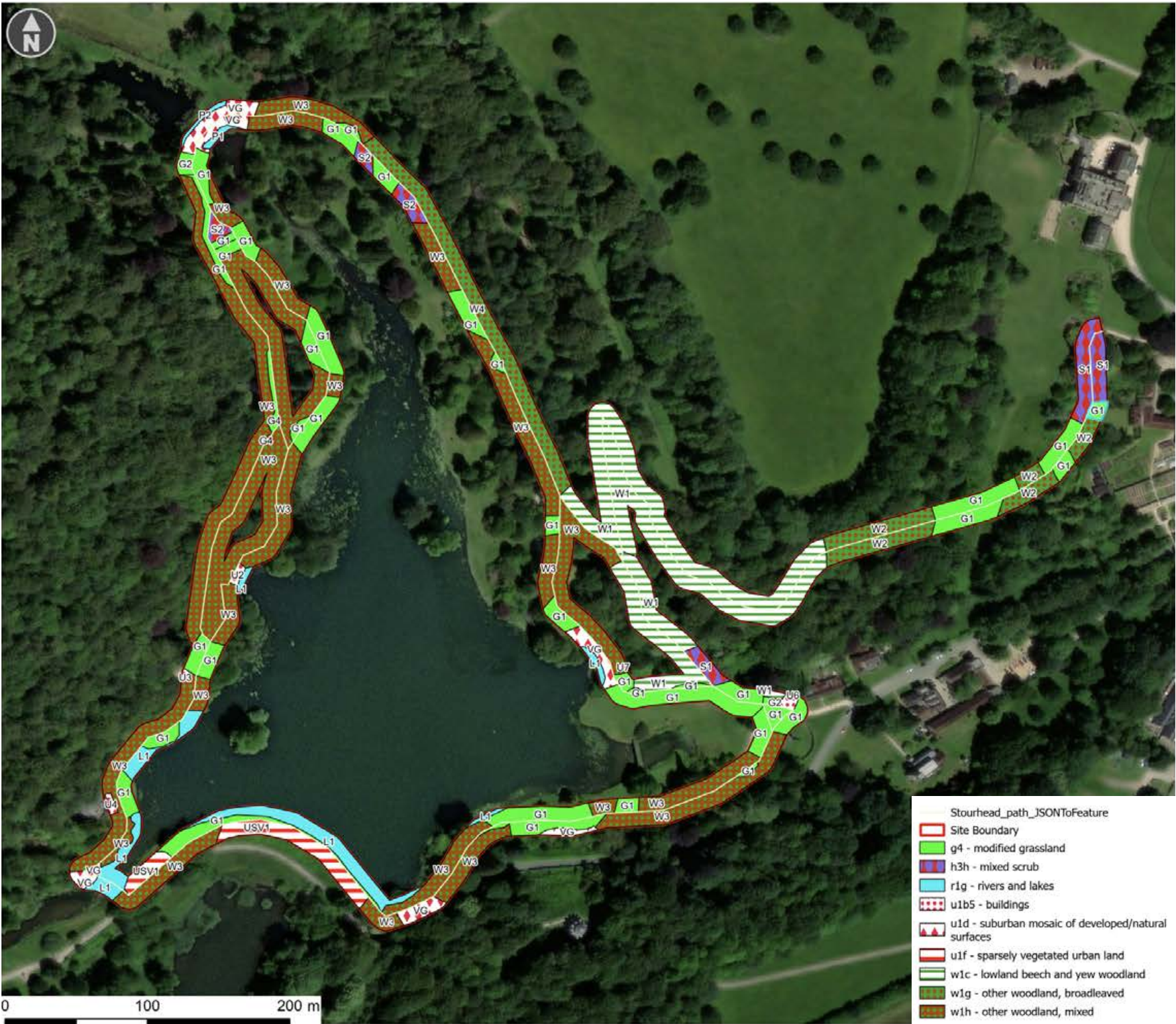


Figure 12. Phase 1 Ecological Habitat Survey

Site Analysis

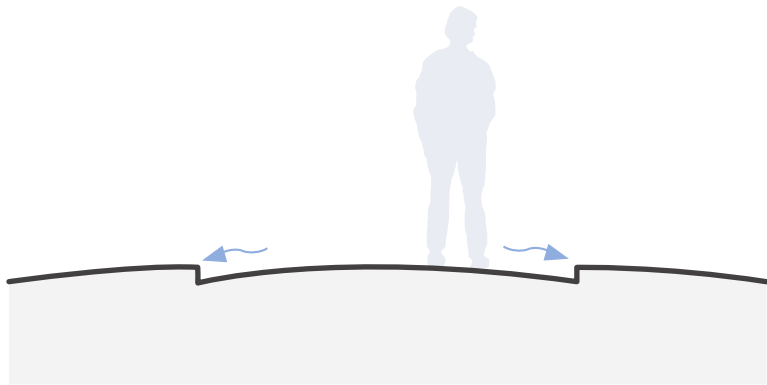
Existing Path Profile Sections

In July 2024, the design team completed a condition survey of the existing paths. The team identified six differing profiles along the length of the path. The vignettes on this page illustrate each of those profiles.

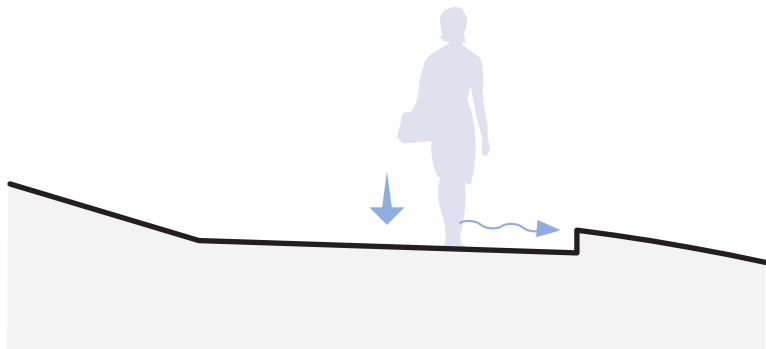
- A Flat cambered
- B Valley longitudinal fall
- C Flat cross fall with lip
- D Longitudinal & cross fall with lip
- E Longitudinal fall & recessed path
- F Flat recessed path

The diagram on the following page illustrates where each of these profiles lies along the path.

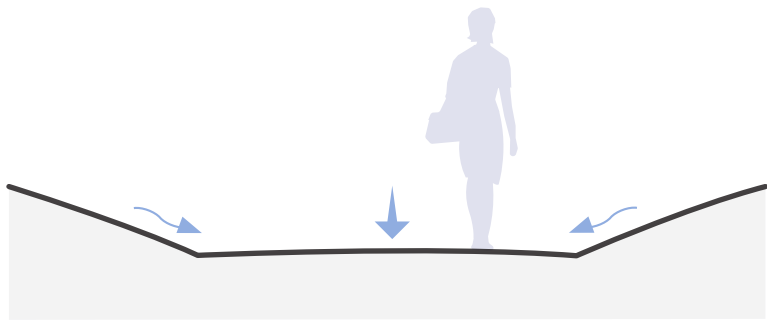
The path profiles are a crucial consideration in the development of the strategic options and proposed path profiles presented later in this report. The raised edges, caused by the erosion of the wearing course due to poor drainage and pedestrian and vehicular use, are responsible for the large amounts of water retained on the paths during and after wet weather.



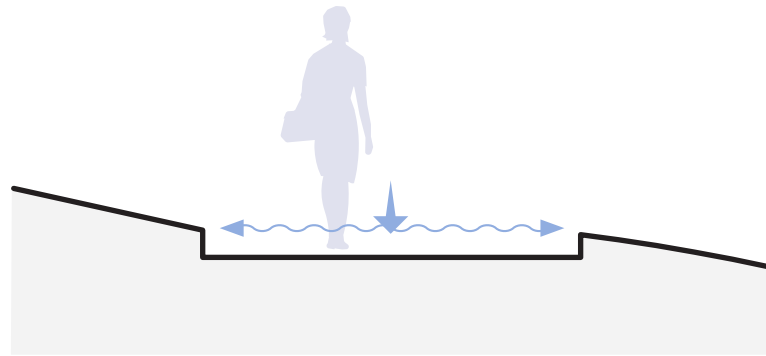
A Flat cambered



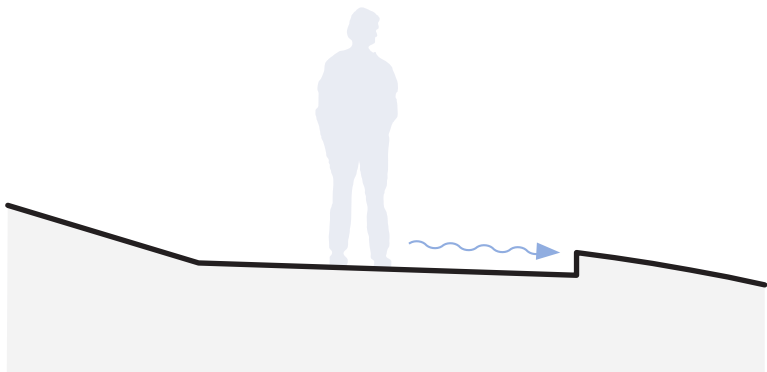
D Longitudinal & cross fall with lip



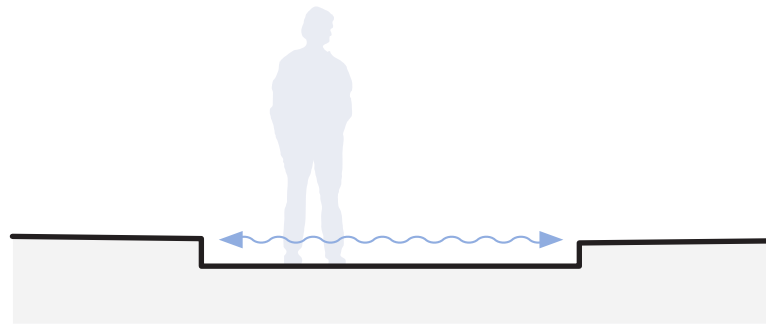
B Valley longitudinal fall



E Longitudinal fall & recessed path



C Flat cross fall with lip



F Flat recessed path

Figure 13. Existing Path Profile Sections

Site Analysis Existing Path Profiles

This diagram identifies where the existing profiles are present. Profile D, longitudinal & crossfall with lip, predominates, resulting in run-off water ponding against the lakeside edge of the path. The remaining profiles are evenly distributed along the remainder of the path.

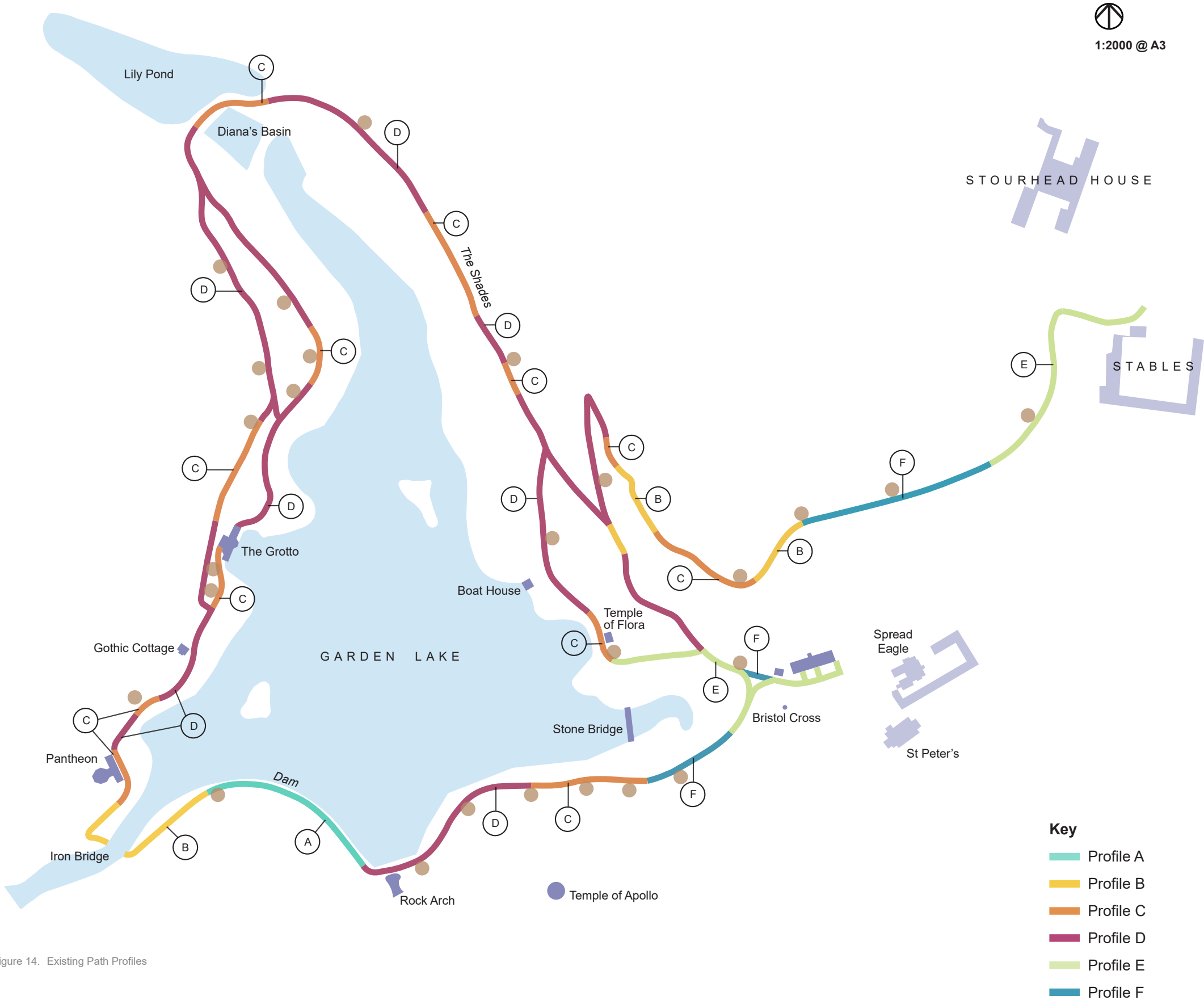
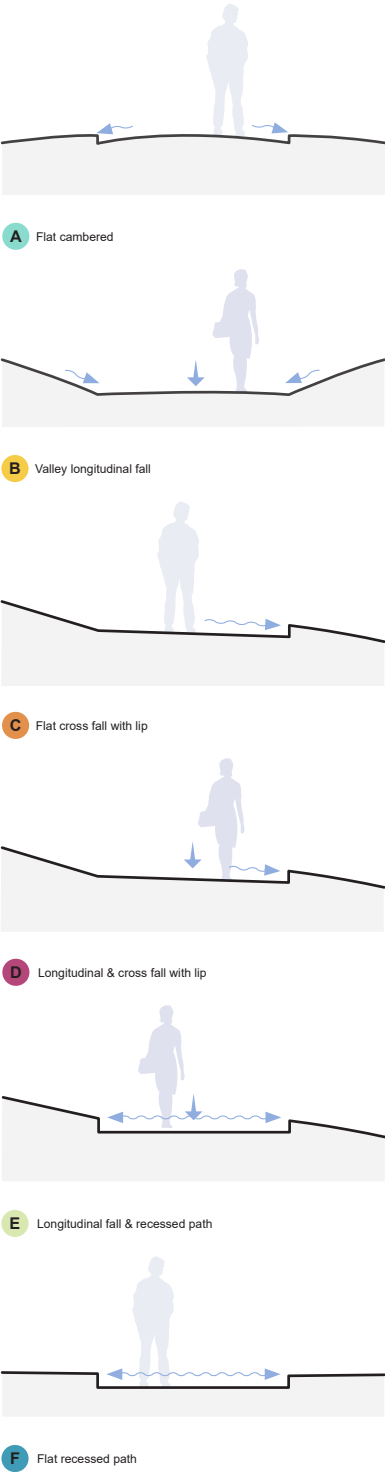


Figure 14. Existing Path Profiles

Site Analysis

Existing Path Widths

Using topographic data from 2022, the team carried out a desk-based review of the existing path widths. These widths were then verified on-site to ensure accuracy. During the Project Inception Meeting, Judith Teasdale, the landscape historian appointed by the National Trust and author of *Stourhead Garden Paths Historic Development and Significance*, suggested that the paths were likely originally 1.8 metres wide, but after years of use and adjustments, they have become much wider.

The majority of the current path is between 2.0 and 3.0 metres wide, and any adjustments to its width will need to take into account the extensive tree constraints and complex topography.

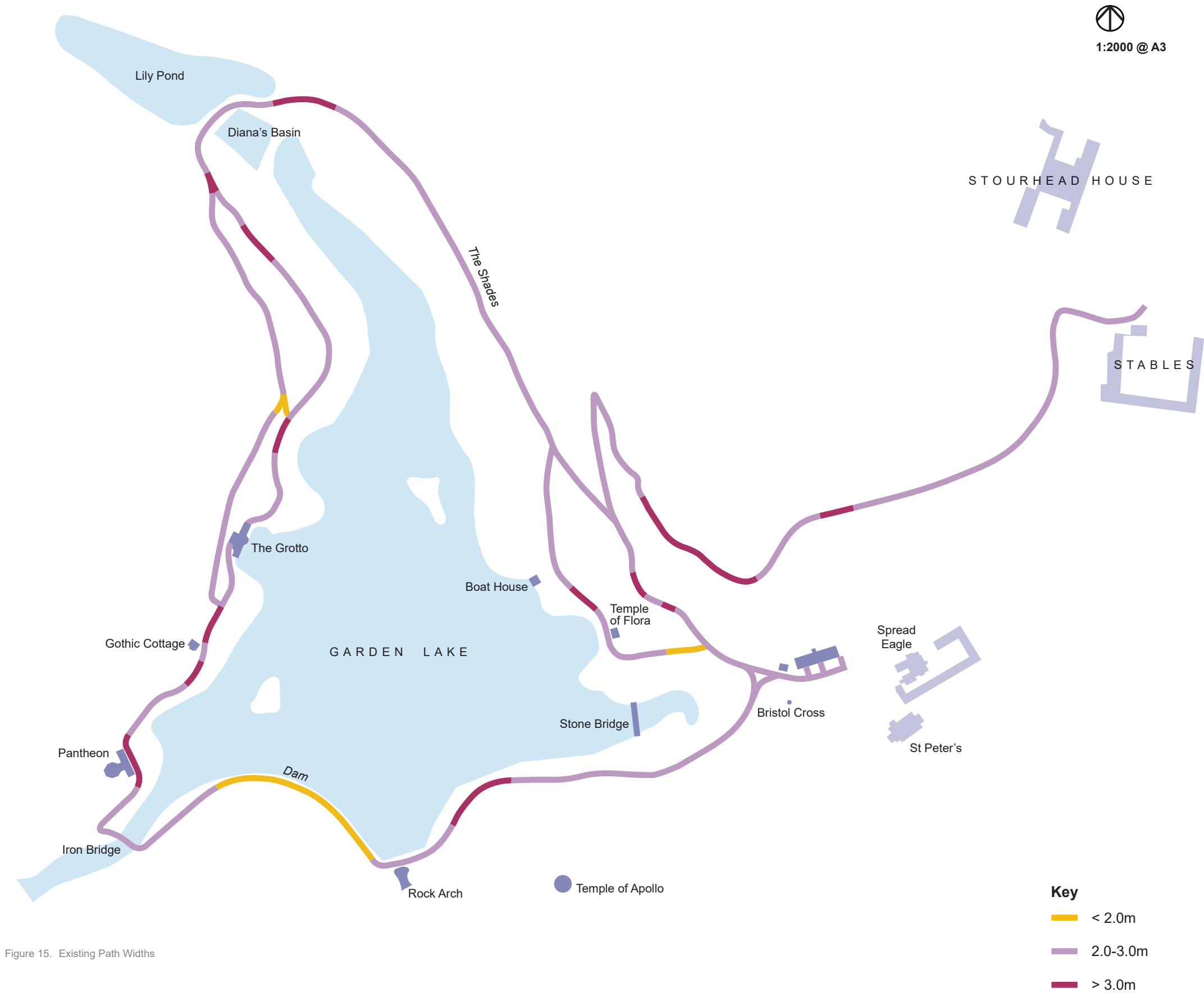


Figure 15. Existing Path Widths

Site Analysis

Existing Path Gradients

Using topographic data from 2022, the team conducted a desk-based review of the existing path gradients.

Accessibility for all is a key aspiration for the National Trust, and with this in mind, this project where appropriate, will look to reduce gradients to maximise access without compromising the unique character of the garden.

Most unbound materials do not perform well beyond a gradient of 1:15; therefore, more durable sealed surfaces would be more suitable for steeper gradients to ensure that the current issues are appropriately mitigated.

The inner orbital route, identified as ‘accessible’ in the Trust’s wayfinding information, is highlighted on the plan below. Along this route, it is proposed to install fixed bench pads incorporating the new National Trust signature benches, including models with adjacent clear space for wheelchair users. These fixed benches are intended to appear on visitor maps and are included in this application. Bench positions elsewhere (off the accessible route) are assumed to be more flexible, unmarked on maps, and managed by the estate team to suit seasonal needs.

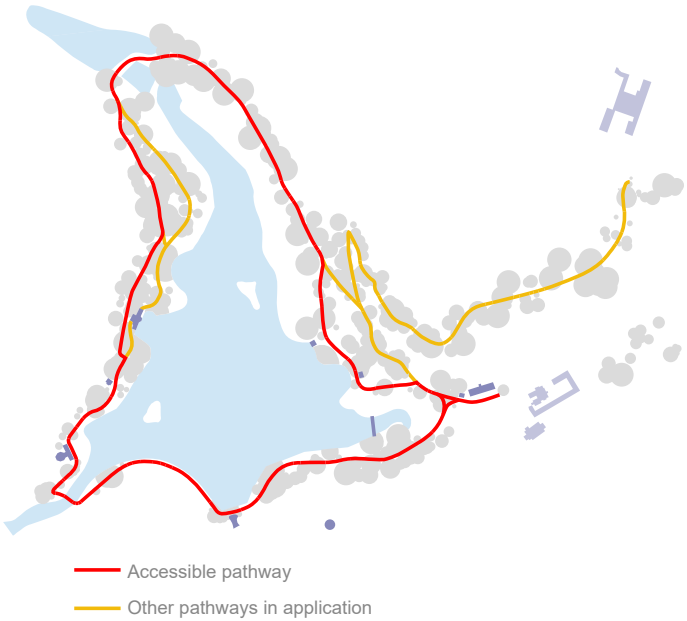


Figure 16. Plan indicating accessible pathway

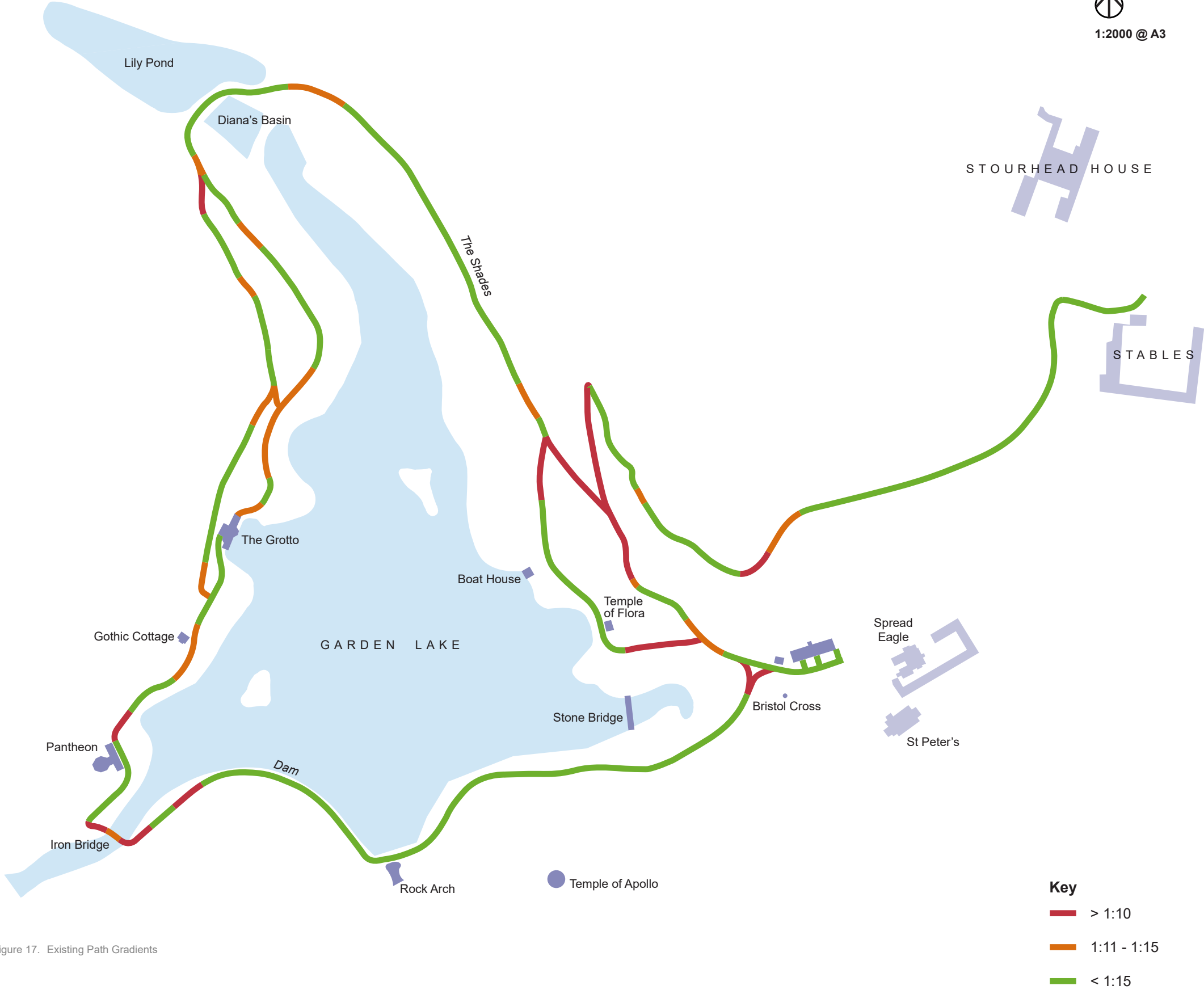
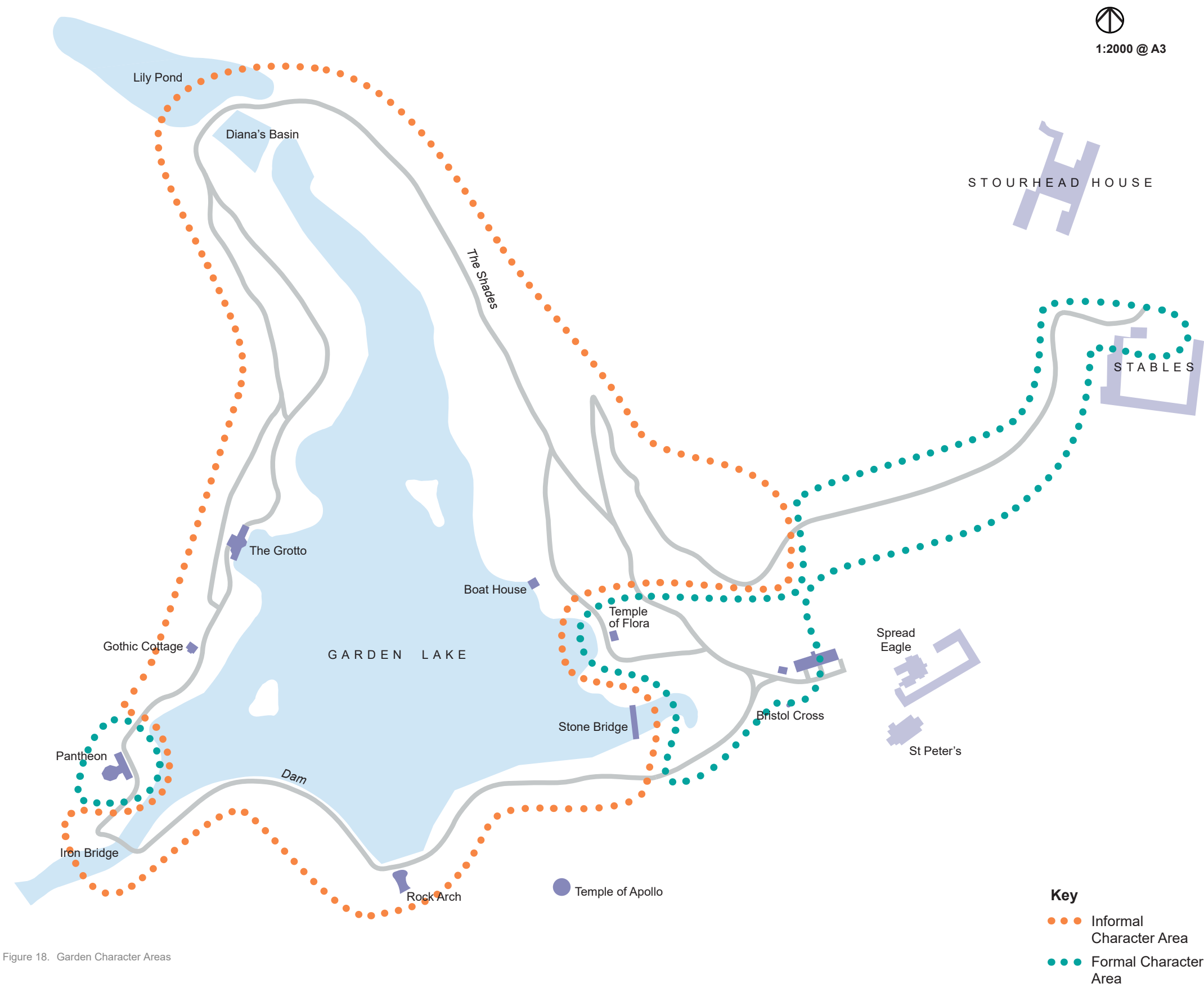


Figure 17. Existing Path Gradients

Site Analysis

Garden Character Areas

For the purposes of this project and taking guidance from Judith Teasdale, the landscape historian appointed by the National Trust and author of *Stourhead Garden Paths Historic Development and Significance*, the garden is split into two broad character types, informal and formal. The Informal Character Area includes most of the Georgian Circuit Walk and Lake. The Formal Character Areas include the Pantheon, Temple of Flora, the Garden Entrance and the section of path adjacent to the South Lawn. These broad character types will be used to guide material selection for edging types in particular.



Site Analysis

Existing Drainage

Several surface water gullies and Aco drainage channels are located across the entire path network. Their locations appear to be in response to drainage problems that have been experienced over time rather than an overall strategic approach, for example, where erosion of the unbound surface is evident, or at low points in the path where there is clear evidence of ponding.

Aco channels installed along low lying paths with slack gradients are generally blocked or discharge to soakaways no longer functioning. Most gullies are now raised above the surface as runoff continues to erode the unbound materials and therefore are ineffective and present a trip hazard for pedestrians.

Outfalls and discharges for existing drainage are unclear. No direct outfalls into the lake have been observed, nor is there any evidence of chambers nearby that would indicate a downstream drainage network or soakaways.

A CCTV survey has confirmed an ineffective surface water drainage strategy with most pipes and gullies non-functioning.

Surface water, generally, simply flows across and along paths to a convenient place where it continues downhill overland. Some areas exhibit further erosion or ponding.

In summary, no formal drainage strategy is currently in place.

Three areas where surface water drainage problems have been reported have been identified as “hot spots”: Bristol Cross, the Pantheon; the Stables; and the Grotto.

Further surveys have been undertaken (noting that the Stables is outside of the scope of this project) to establish whether existing drainage exists so that a solution can be developed.

Bristol Cross

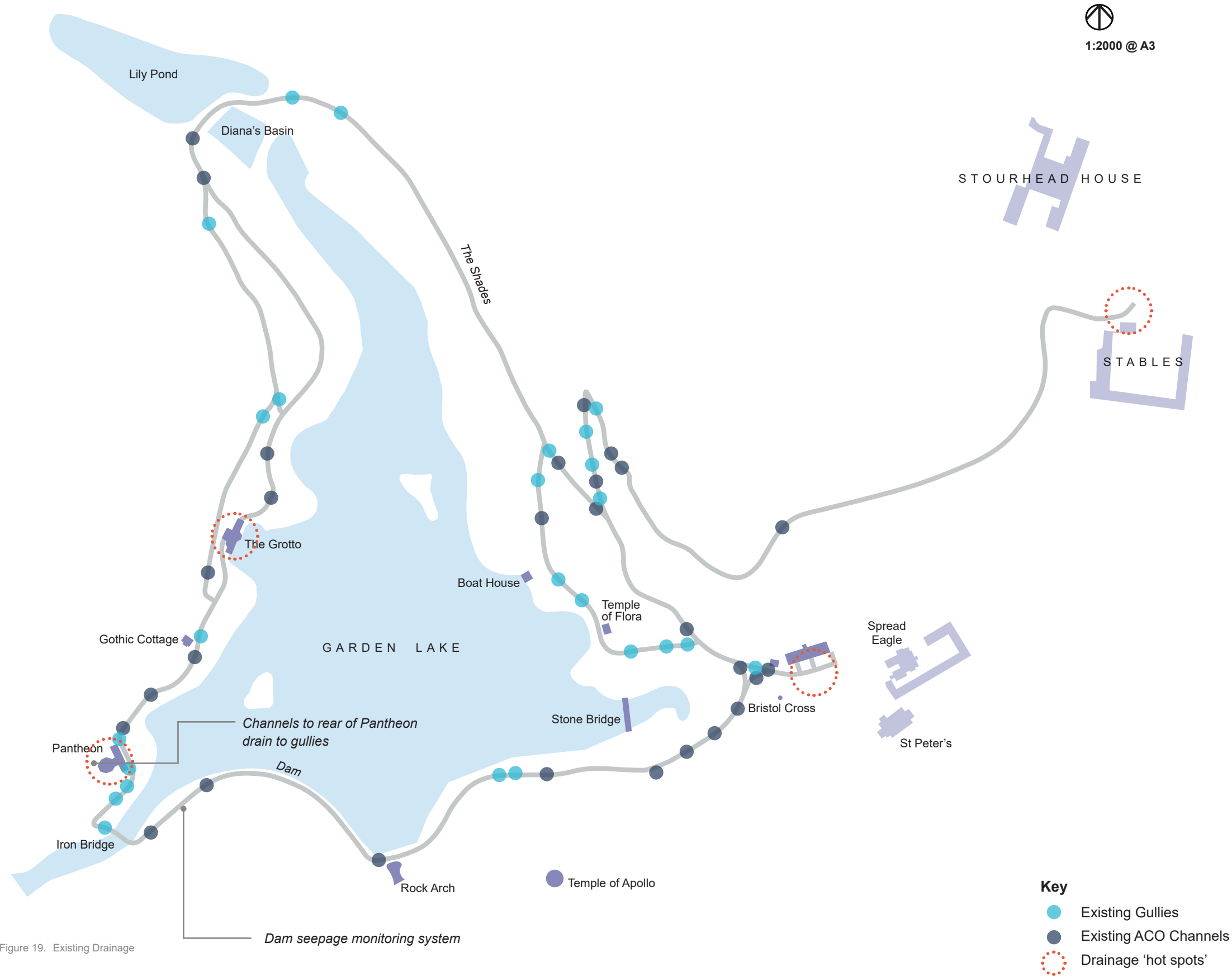
Although there are existing gullies within the road, the paths in this area do experience localised surface water flooding. The gullies and manholes in this area have been located, cleared and surveyed. The survey indicates surface water discharges to an open ditch adjacent to the Bristol Cross Monument.

Pantheon

No rainwater goods are present on the building with runoff discharging to a channel around the perimeter of the building. Water enters a gully and is presumed to flow via a pipe and culvert into the lake. The pipe and culvert have not been located and are assumed to be blocked or collapsed. Photographs have been discovered indicating a culvert does discharge into the lake south of the Pantheon.

The Grotto

A number of springs emerge up-gradient of the Grotto to the north. Water then flows toward the Grotto with high flows impacting the Grotto itself. Dry weather flows appear to be constant and there is evidence of erosion adjacent and on the path, as well as causing some inconvenience to visitors.



Site Analysis

Existing Path Ground Investigation

As already observed, The footpaths have been progressively deteriorating due to both natural and physical factors. Runoff of surface water is clearly having a significant impact, assisted by the absence of a suitable drainage strategy with evidence of erosion and scour throughout. In several areas, surface layers have been completely lost, exposing underlying subbase materials or natural ground. Tree roots also impact the construction layers and are visible in several locations.

Paths are predominantly unbound, including the use of Breedon gravel in some areas. Whilst repairs have been carried out, it is understood that they may not have been carried out in compliance with an appropriate specification or manufacturer's guidelines and therefore have deteriorated rapidly.

Mass concrete has been applied to a steep section of footpath leading down to the Shades from the Main House. This is the only bound section of footpath within the scope of this project.

Whilst the surface materials have largely disappeared, there is little evidence of settlement or deformation of the underlying materials. This is likely due to significant compaction having occurred over many years of use. However, it is also potentially indicative of a firm sub grade and a compacted granular subbase.

To confirm construction of the existing paths and establish whether existing subbase materials could be re-used, trial pits were excavated across the footpath network. The excavated pits were positioned to avoid impact upon potential archaeology and tree roots but to give a reasonable understanding of construction across the network. CBR tests were also undertaken which indicate the strength of the subbase and subgrade which enable design.

The investigation identified the footpaths as "slightly cemented granular material" between 50 to 100mm depth, comprising, very sandy silty gravel or very gravely silty sand, indicative of a Breedon type gravel. Beneath the surfacing (where present), material comprised a mixture of Made Ground/ reworked material, granular Head Deposits and the underlying Upper Greensand Formation. A subbase material comprising granular sandy silty gravel was only located in two locations, along the southern section of the path network.

In all but one location, granular material was encountered in the underlying layers to depth.

California Bearing Ration (CBR) test results indicate a good formation, with a recommended value for design purposes of 7%.

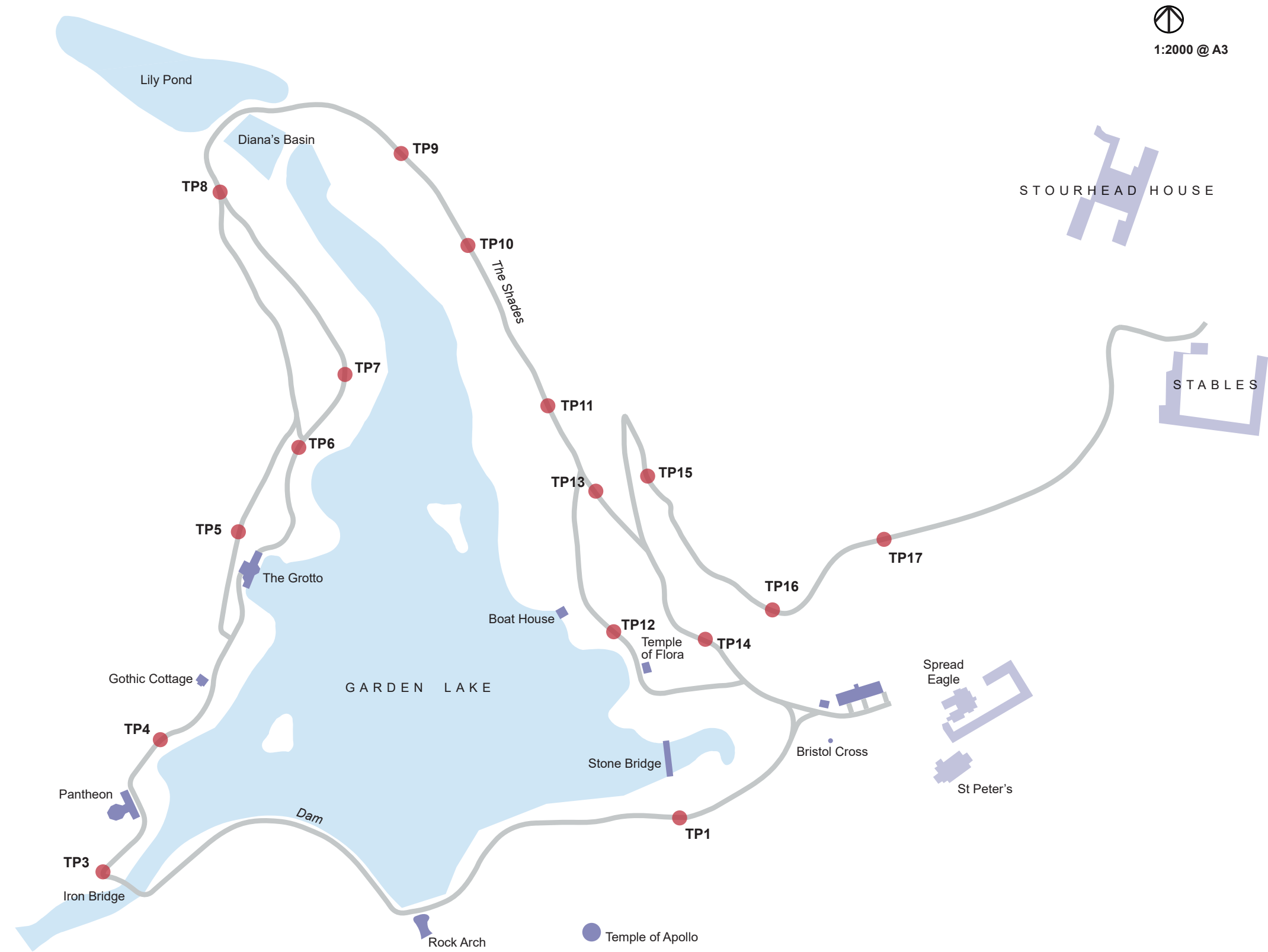
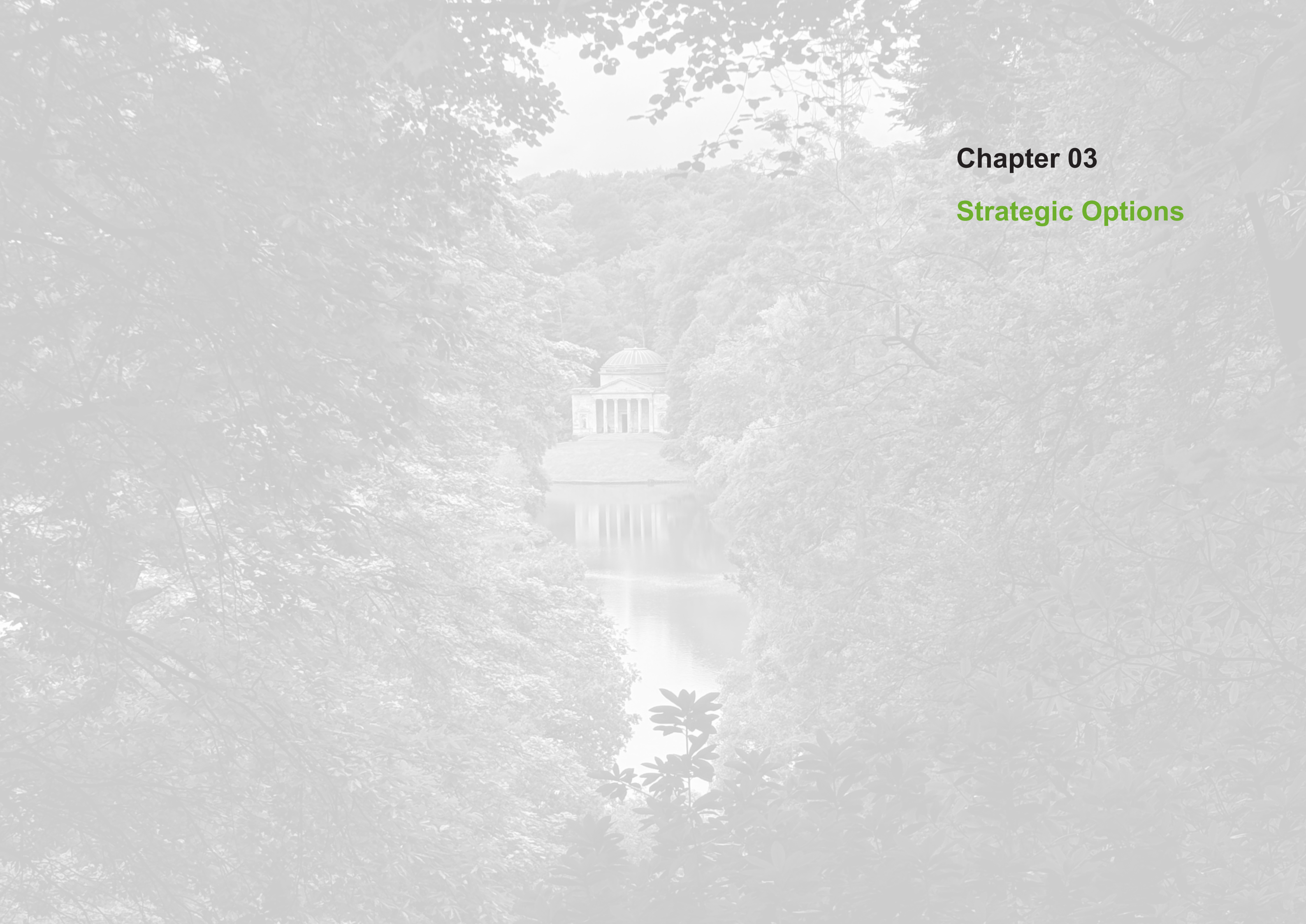


Figure 20. Ground Investigation



Chapter 03

Strategic Options

Strategic Options Proposed Path Profiles

The following diagrams illustrate how the existing path profiles will be adjusted to optimise drainage and minimise future erosion. The overarching strategy being to raise the level of the existing path to allow water to discharge passively from its surface. This aligns with arboricultural guidance as excavation within root protection areas is minimised and the additional build-up will be well below the maximum recommendations.

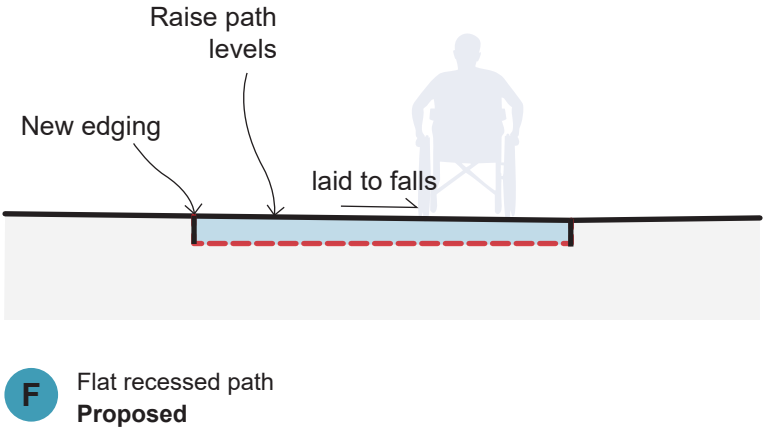
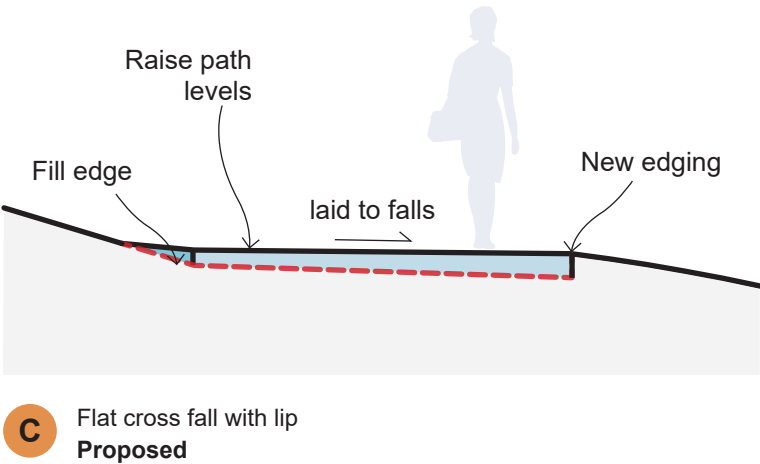
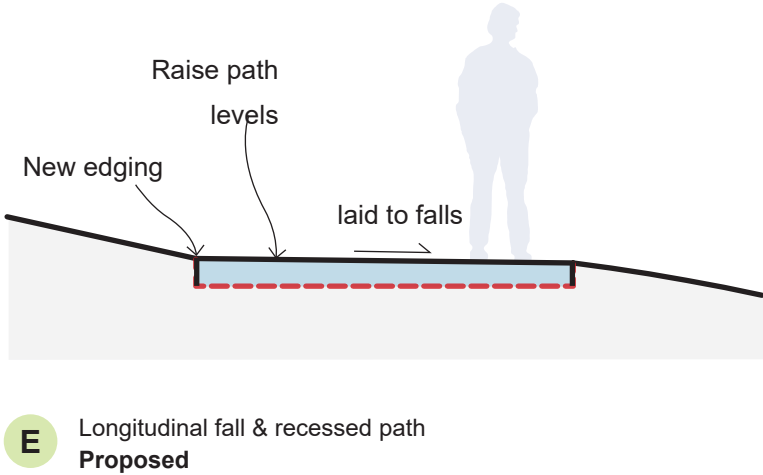
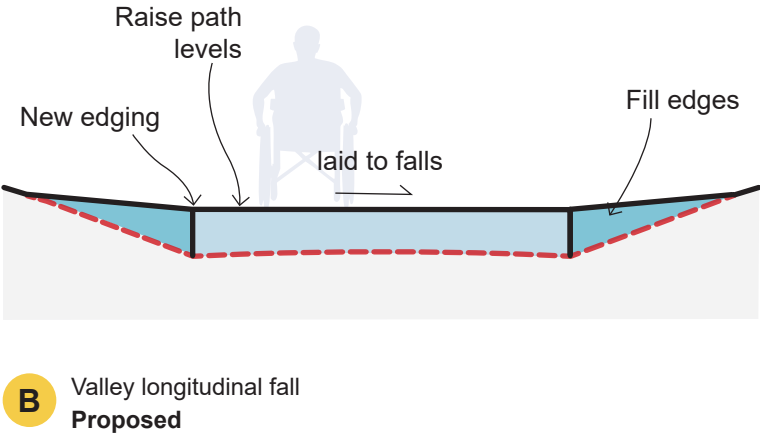
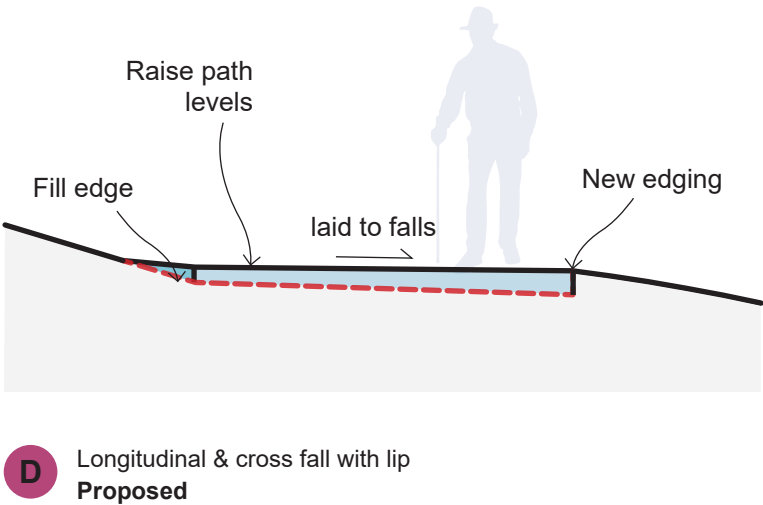
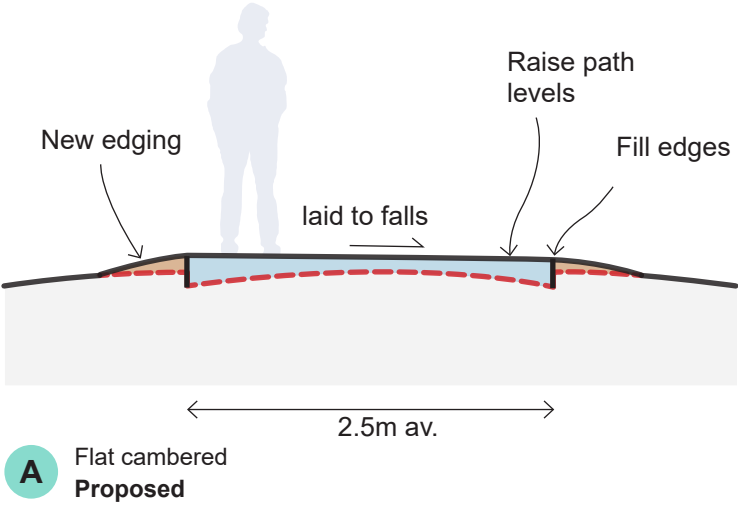


Figure 21. Proposed Path Profiles

Strategic Options
Materiality

A key aspect of this project is selecting the most appropriate materials for the new path. A range of hard surface materials has therefore been explored, starting with a review of those used in comparable projects across the country. The adjacent images present a selection of the options considered, including examples from other National Trust properties in the UK.



Breedon gravel at RHS Bridgewater



Breedon gravel at Stanmer Park



Crushed aggregate at Lewes Castle



Hoggin at Hampstead Heath



Gravel-filled cellular confinement system at Leonardslee



Loose gravel at Wormsley Estate



Somerset Buff SelfBinda at The Newt



Tar Spray & Chip surfacing at The Royal Parks



Breedon gravel at RHS Bridgewater

Figure 22. Precedent Projects

Strategic Options
Materiality

To determine the most suitable surface finish for the path, it was important to table and discuss all potential options with property team and stakeholders. This led to the completion of a materials matrix (shown on the subsequent page), which was created to assist in comparing each material against agreed criteria. Physical samples were presented to the property team and stakeholders at the project inception meeting to guide discussions and help to fill in the matrix. A number of principles were set out in the meeting, the chosen material(s) should:

- Be respectful of Stourhead’s unique ‘spirit of place’
- Have a tactile element, informally known as a “crunch factor”
- Require minimal maintenance
- Have minimal wash-off/ transfer of material
- Be easy to repair in the event of failure
- Be compatible with drainage features
- Respond well to tree root uplift
- Be a sustainable choice, ideally containing no plastic
- Provenance of gravel selection

Keeping the above principles in mind, as well as considering the buildability of each option, the matrix was used to discount materials deemed to be inappropriate.

The process highlighted two materials as being suitable for use at Stourhead. One bound surface, Tar Spray & Chip, and one unbound surface, Breedon **Amber Gold**.

					SEALED
Macadam	Coloured Macadam Buff	Cobbles/Setts	Tar Spray & Chip	Resin Bound Surfacing (Semi-porous)	
					SEALED
Resin Bound Surfacing (Porous)	Resin Bound Rubber & Aggregate	Resin Bonded Gravel	Concrete	Fibredec	
					UNSEALED
Breedon Amber Gold	AllGreen SelfBinda	Cedec	MOT & Fines	Reinforced Gravel	

Figure 23. Materiality Options - selected options highlighted in green

Strategic Options
Path Material Matrix

Material		Spirit of Place & Appropriateness	Performance at Steep Gradients	Low Maintenance	Durability to Wear	Susceptibility to Scour /Erosion	Ease of Repair	Compatibility with drainage features	Permeability	Susceptibility to Tree Root Uplift	Sustainability	Rate £/sqm	Edge Required	Comments
Bound Surfaces	Macadam											55	Y	Not acceptable with regards to spirit of place
	Coloured Macadam Buff											65	Y	Monotonous colour, lack of tactile quality underfoot. Would require full reconstruction of path with significant arboricultural impacts, banding if repairs required.
	Cobbles/Setts											90	Y	Risk of slips and trips, uneven surface provides access issues, expensive and slow to lay. Potential use for thresholds/channels.
	Tar Spray & Chip											35	Y	Provides tactile quality underfoot and good slip resistance, shallow construction profile and can be laid/repared by non specialist contractors. Will require resurfacing - depending on usage, loose gravel when first laid, tar can bleed in warm weather (hot applied more stable than cold applied).
	Resin Bound Surfacing (Semi-Porous)											75	Y	Plastic/ resin does not align with NT sustainability credentials. Would require full reconstruction of path with significant arboricultural impacts, expensive to lay. Anticipated lifespan of 15-25 years depending on usage. Eco resins are available.
	Resin Bound Surfacing (Porous)											80	Y	Plastic/ resin does not align with NT sustainability credentials. Would require full reconstruction of path with significant arboricultural impacts, expensive to lay. Anticipated lifespan of 15-25 years depending on usage. Eco resins are available.
	Resin Bound Rubber & Aggregate											85	Y	Not acceptable with regards to spirit of place. Up to 50% recycled rubber content. Pedestrian only, expected lifespan of up to 10 years depending on surface use.
	Resin Bonded Gravel											95	Y	Plastic/ resin does not align with NT sustainability credentials. Potential to delaminate should movement occur on hillsides, expensive to lay.. Life span of up to 5-15 years depending on use.
	Concrete											60	N	Good slip resistance. Concerns over tree root cracking and fracturing surface, concerns with regards to spirit of place.
	Fibredec											50	Y	Provides tactile quality underfoot and good slip resistance, shallow construction profile however must be laid/repared by a single specialist contractor who does not appear to want to engage. Lasts 5-10 years.
Unbound	Breedon Amber Gold											55	N	Fits with Spirit of Place. Must be laid to suppliers details not loose laid. Should not be laid on a slope greater than 1:15, more likely 1:20. pH value circa 8.5. Single source not local.
	AllGreen SelfBinda											50	N	Fits with Spirit of Place. Must be laid to suppliers details not loose laid. Should not be laid on a slope greater than 1:15, more likely 1:20. Impermeable. but inclusion of white cement (1:6 parts) can allow for greater durability/ use on steeper slopes. Sourced from Somerset. National trust have prior experience with product failing after frost/freezing.
	Cedec											55	Y	Should not normally be laid on a slope greater than 1:25. Chemically inert and will not affect the pH of surroundings. Permeable and prone to rutting/surface movement which may provide access issues.
	MOT & Fines											50	Y	Not acceptable with regards to spirit of place, too agricultural for historically sensitive landscape
	Reinforced Gravel											45	Y	Concerns with regards to spirit of place. Plastic retention system may pose a tripping hazard. Loose stone & gravel will likely move.

Figure 24. Path Material Matrix

Key

Optimal/ preferred

Good/ suitable

Moderate/ acceptable

Poor/ unacceptable

Strategic Options

Selected Surface Types

Breedon Gravel

Breedon Golden Amber gravel is extracted from Breedon Quarry in Breedon on the Hill, Derbyshire. It is a natural material quarried from selected limestone and graded from approximately 12mm to fines; the fines content being naturally occurring marl which acts as the self-setting agent when the material is watered and rolled to fullest compaction.

Breedon Golden Amber Gravel should be installed to a camber (to shed surface water) levelled at 75mm thick giving a finished compacted thickness of 50mm. Where edgings are used it is recommended that the Breedon Gravel is laid flush with the top of the edgings to assist the draining of surface water.

Breedon is already used by the National Trust at Stourhead and prolifically across it's portfolio of properties.

Maintenance Overview

Breedon provide extensive maintenance advice on their website. The general premise is to ensure any deterioration in the surface is remedied as soon a practicable.

Tar Spray & Chip

Tar spray & chip is a system where the bitumen emulsion is spread across the base, and the aggregate is scattered into it. Most of the aggregate will adhere to the emulsion, while some will remain loose. This gives the appearance of loose gravel.

Tar Spray & Chip is a durable surface dressing and is a low-cost alternative to asphalt. It is ideal for producing a high quality, natural and aesthetically pleasing finish for footpaths. A hot applied or a cold applied surface dressing binder is applied to asphalt or concrete and dressed with a range of decorative aggregates. Local aggregates can be used to reflect the surrounding geology.

Maintenance

As with Breedon, maintenance advice for Tar Spray & Chip is to ensure any deterioration in the surface is remedied as soon a practicable. Additionally, any debris should be swept/removed regularly and the surface should be resealed every two to three years to maximise longevity.

Pros	Cons
Breedon Amber Gold has a warm, golden hue that blends well with natural landscapes, creating a rustic and attractive finish.	Breedon Amber Gold can be difficult to keep clean as leaf litter and other organic materials can merge with the surface.
Self-binding gravel is simple to install as it is laid directly on top of a prepared MOT Type 1 sub-base.	Breedon cannot be laid on slopes steeper than 1:15.
When properly compacted, it forms a smooth, uniform surface that looks neat and well-maintained	The initial cost of Breedon Amber Gold can be higher than other types of gravel or simple aggregates.
Breedon Amber Gold requires minimal upkeep, with occasional raking and re-compacting to maintain its appearance.	Proper installation requires careful preparation of the sub-base and precise compaction, which can be labour-intensive.
	Will require topping up and maintenance over time.

Pros	Cons
Low upfront cost (than many alternative bounda surfaces) with good longevity.	High-traffic areas may experience aggregate loss over time, requiring periodic maintenance.
Can be simply fixed and resurfaced as required, patch repairs are less visible as new aggregate blends well with the existing.	Some loose stones can create minor dust or become dislodged, particularly in the early stages after installation.
The textured surface enhances safety by providing good grip.	Typically needs reapplication every 10 years, depending on usage and environmental conditions.
Available in various aggregate colours to match the surrounding landscape.	Installation requires dry weather; wet conditions can affect the adhesion of the binder and aggregate.
Faster to install than some other surfacing methods.	Hot laying requires additional laying equipment but cold laying may result in a less durable surface.

Strategic Options
Tar Spray & Chip Gravel Selection

The preferred unbound path surface is Breedon (Amber Gold) compacted gravel, already in widespread use at Stourhead, so no additional sampling was considered necessary. For the bound surfacing (tar spray and chip), we evaluated a range of double-washed gravel mixes in the 2–5 mm and 3–6 mm size ranges.

An initial long-list of ten mixes was tabled and pared back to five for detailed assessment. These were trialled by the design team alongside the existing Breedon gravel on the lake path—tested in both sunlit and shaded sections, and under wet and dry conditions—to ensure a thorough comparison. From this physical testing, three mixes emerged as potentially suitable:

- Dorset Gold
- Daltex Yellow
- Dobbsweir

A further selection matrix (included on the subsequent page) then compared available data including hardness, abrasion and crushing values. Where numerical data was largely unavailable for sustainability, provenance became the decisive factor: any mix containing non-UK aggregates was excluded. **Daltex Yellow** was selected as the optimum aggregate, being sourced from Bournemouth/Dorset quarries, and being a tried-and-tested aggregate mix for tar spray and chip.

To confirm both aesthetic quality and performance under real-world conditions, a sample section of path was proposed to be surfaced in Daltex Yellow, due to be implemented in June 2025, and opened to visitor footfall for final review.

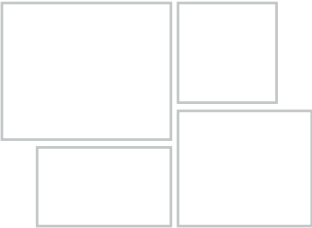


Figure 25. Site Photos (captions below)

1. On-site testing of shortlisted aggregate mixes
2. Longlist aggregate mix stakeholder review
3. Selected tar spray & chip aggregate - Daltex Yellow
4. Shortlisted gravels comparison review

Strategic Options

Tar Spray & Chip Gravel Selection

The following gravel matrix was produced to assist with selection of the preferred mix. As the analysis shows, the provenance of the gravel has been the key criteria for selection.

Aggregate	Sample swatch	Size range	Roundness (<i>angular aggregate assumed more durable than rounded, therefore preferable</i>)	Hardness (Mohs scale)	Polished Stone Value (PSV)	Aggregate Abrasion Value (AAV)	Aggregate Crushing Value (ACV)	Aggregate Impact Value (AIV)	Availability (<i>future maintenance</i>)	Provenance of aggregate
Dorset Gold		2-5mm	semi-rounded	7	35-40	4	12	18	Widely available	UK aggregates, blend of 2 sources
Rhinegold		2-5mm	semi-rounded	7	35-40	4	11	18	Widely available	Belgium canal dredgings
Golden Quartz		3-6mm	semi-rounded	7	35-40	4	12	18	Widely available	Belgium canal dredgings
Devon Yellow		2-5mm	semi-rounded	7.5	66	6	11	16	Widely available	Blend of German and Shropshire aggregates
Dobbsweir		3-6mm	partially-rounded	7	30-40	2	12	18	Widely available	Essex quarries
Daltex Yellow		3-6mm	partially-rounded	7	38-40	4	11	17	Widely available	Bournemouth/ Dorset quarries - most favourable



Mohs Hardness Scale

Measure of hardness of aggregate (1-10), 1 being Talc, through to 10 being Diamond.

PSV - Polished Stone Value

The PSV of an aggregate is a measure of the resistance of an aggregate to polishing and the value is established by subjecting the aggregate to a standard polishing process and then testing the aggregate with a portable skid resistance tester. Aggregate that has a PSV over 60 is regarded as a High Skid Resistant Aggregate. The higher the PSV figure the greater resistance the aggregate has to polishing.

AAV - Aggregate Abrasion Value

A known mass of aggregate chippings are set in resin in a small test panel and subject to abrasion on a grinding apparatus. The loss in weight of the aggregate after a specified time as a percentage of the original weight is the AAV. Lower the number, the more resistant to abrasion.

AIV - Aggregate Impact Value

The aggregate impact value is a strength value of an aggregate that is determined by performing the Aggregate Impact Test on a sample. The AIV is the percentage of fines produced from the aggregate after subjecting it to a standard amount of impact. Below 10 would be regarded as strong, above 35 would normally be regarded as too weak to be used in road surfaces.

ACV - Aggregate Crushing Value

The aggregate crushing value is a value which indicates the ability of an aggregate to resist crushing. The lower the figure, the stronger the aggregate ie the greater its ability to resist crushing.

Key

- Optimal/ preferred
- Good/ suitable
- Moderate/ acceptable
- Poor/ unacceptable

Figure 26. Tar Spray & Chip Gravel Matrix

Strategic Options
Surfacing Options

With the unbound and bound surfacing materials chosen, three layout options were developed for their spatial distribution. Evaluation criteria included path gradients (noting Breedon gravel is unsuitable on slopes steeper than 1:15), character zones/ (formal vs. informal), material-change logic and wayfinding clarity, and cost. Against these factors, Option 2 emerged as the most appropriate.

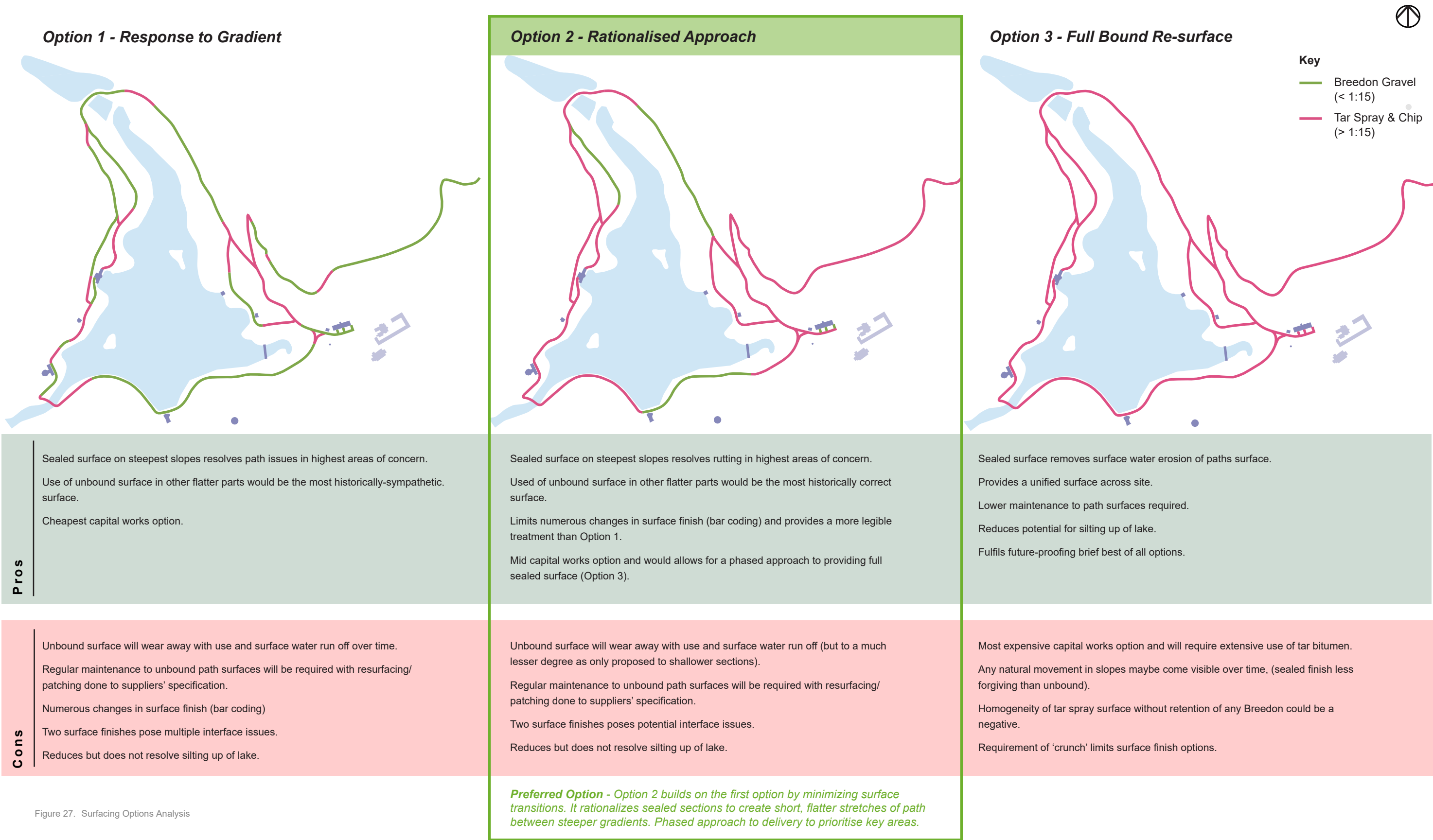


Figure 27. Surfacing Options Analysis

Strategic Options
Drainage Strategy

The proposed surface water drainage strategy is based on Sustainable Drainage, or Natural Land Management principles in that overland flows are, where achievable, “slowed” down as they progress down gradient, held and slowly released to a discharge point based on the Surface Water Discharge Hierarchy;

- i) Infiltration
- ii) Open Surface Water
- iii) Surface Water Sewer
- iv) Combined Sewer

Options iii) and iv) are not available and therefore are not considered further.

Discharging directly to the Lake (option ii) is feasible, however most paths are distant from the Lake which would require a reasonably extensive surface water drainage network. This would also require significant silt interception measures to prevent fine sediments entering the Lake. As observed during surveys, no direct discharges are evident.

Infiltration techniques are therefore preferred and in compliance with the Hierarchy. Such techniques include soakaways, infiltration trenches, swales and basins; the latter two with the ability to allow infiltration. However, the underlying strata has been identified as “Head Deposits” overlying the “Upper Greensand Formation”. The Head Deposits are also described as “Hillwash”, and it is common in such conditions that the Greensand could also be defined as Hillwash; meaning the slopes are susceptible to slow creep, or solifluction. This means the soils are susceptible to movement with the increase in moisture content. Consequently, it is concluded that soakaways are not feasible.

However, although other more diffuse means of disposal may be technically feasible (i.e. long trenches/basins/swales), the impact upon tree root protection zones precludes excavation to the depths that would be required.

Six options have been developed for further consideration, taking into account the location and context of the proposed path and in conjunction with potential opportunities for detention/infiltration areas. Options that require excavation, albeit relatively shallow, will have a potential impact upon tree roots within RPA’s. The extensive coverage of trees and their RPA’s in the area of study severely limit the options for drainage. Consequently, a summary of options available is described below and shown on two figures; i) Drainage Strategy without Tree Constraints and ii) Drainage Strategy with Tree Constraints.

Option	Discharge	Parameters	Method
Option 1	Dispersal to adjacent areas	Where ground levels are relatively level Ideally, ground should gradually slope away from path For both surfacing options not impacted by RPA's	Runoff from cambered path allowed to flow to adjacent permeable areas
Option 2	Intercept runoff from higher ground and infiltrate	For paths west of Lake Not within areas of cut or valleys For both surfacing options impacted by RPA's	Runoff from higher levels intercepted by granular filled trench located on “higher” side of path and infiltrates to subsoil. Runoff from cambered path allowed to flow to adjacent permeable areas
Option 3	Intercept runoff from higher ground and conveyed down gradient	For paths east of Lake (i.e. The Shades) For paths located within areas of cut or valleys For both surfacing options impacted by RPA's	Runoff from higher levels intercepted by granular filled trench with perforated pipe located on “higher” side of path and conveyed down gradient to suitable dispersal point
Option 4	Dispersal to filter drain and infiltrate	For paths west and south of Lake Not within areas of cut or valleys For both surfacing options impacted by RPA's	Runoff from cambered path flows into a granular filled trench located on the “lower” side of path and infiltrates to subsoils
Option 5	Dispersal to filter drain and convey down gradient	For paths east of Lake For both surfacing options impacted by RPA's	Runoff from cambered path flows to granular filled trench with perforated pipe located on “lower” side of path and conveyed to suitable dispersal point
Option 6	Dispersal to Lake	On dam only Not impacted by RPA's	Direct runoff from cambered path into soft landscaping away from the Lake

Figure 28. Drainage Strategy Options

Strategic Options

Drainage Approach

The proposed drainage strategy for the Stourhead path resurfacing project adopts a simple, sustainable, and low-impact approach. It responds sensitively to tree constraints, ground conditions, and topography, while avoiding traditional ‘active’ drainage infrastructure such as gullies, open channels and pipework. These features have contributed to current issues including:

- Blocked systems that are difficult to inspect and maintain.
- Erosion around drainage features, creating trip hazards and exposed edges.
- Visual intrusion within the historic garden setting.

In place of these, a passive drainage system is proposed, working with natural topography and vegetation to manage surface water more effectively. Key components include:

- **Gentle cross-fall and natural drainage:** Paths will generally be constructed with a consistent mono-pitch fall (1:40) towards the lake, allowing water to run off evenly. Flush edges on both sides will enable surface water to dissipate gradually into adjacent vegetation and towards the lake.
- **Subtly reprofiled verges and no-dig construction:** Where needed, path verges will be gently shaped to support smooth runoff, while a no-dig construction method will protect existing tree roots and address the heavily eroded existing path surfacing.
- **Durable surfacing:** Paths will be resurfaced using robust, best-practice techniques to create a hardwearing finish, reduce erosion, and limit the movement of silt, gravel or aggregate into the lake.

The overall drainage design aims to slow surface water movement across the site. On steeper slopes, the garden team will also be trialling low-impact natural additions such as brash baffles to further reduce overland flow and surface erosion. Together, these measures will improve drainage performance, enhance accessibility, and support the long-term resilience of the path network in this historically sensitive landscape.

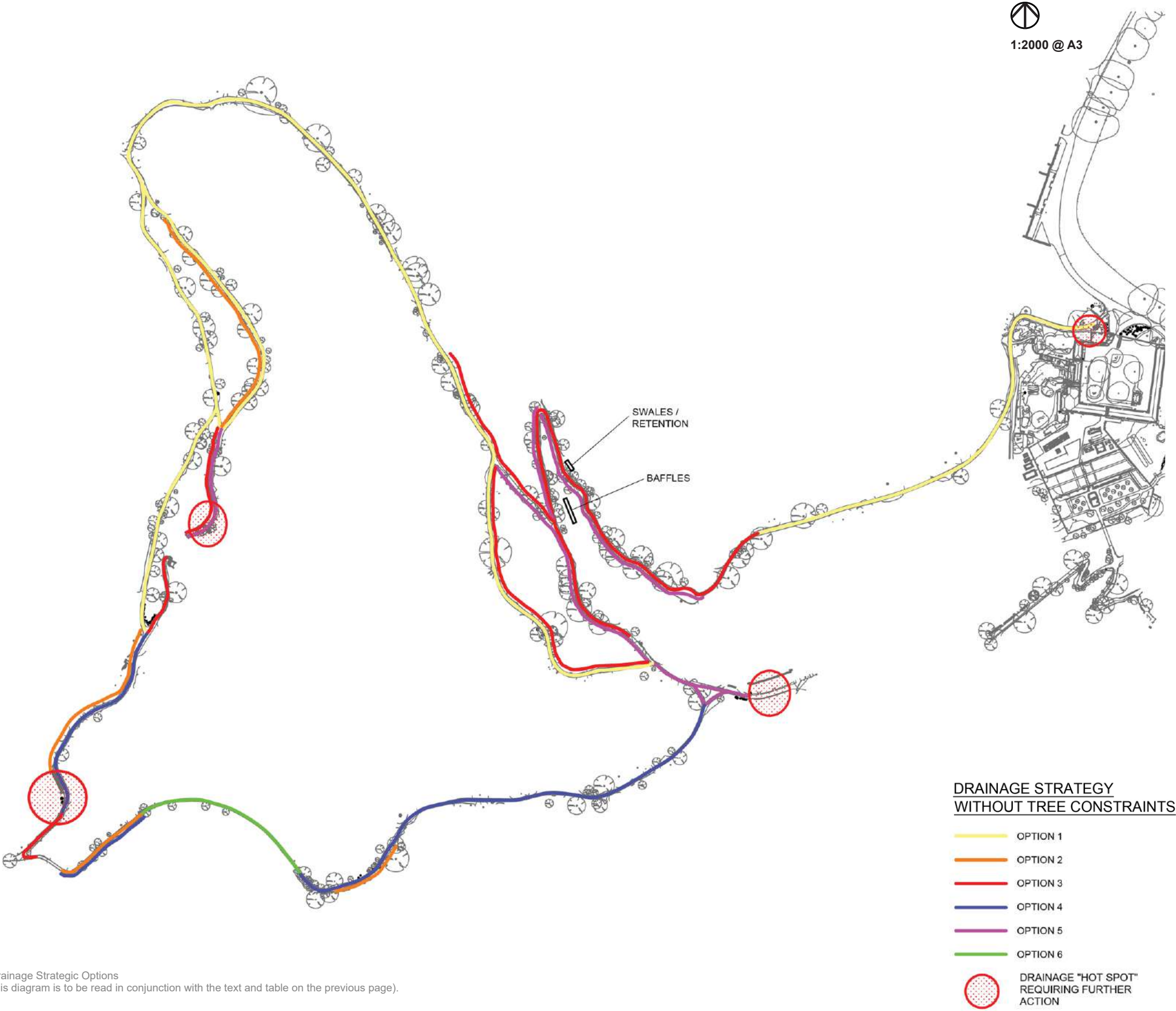


Figure 29. Drainage Strategic Options
(this diagram is to be read in conjunction with the text and table on the previous page).

Strategic Options

Drainage Strategy

The extensive Root Protection Areas across the footpath network essentially prohibits and solution that requires excavation (i.e. trenches for pipes/filter drains). Consequently, the strategy is simple; creating longitudinal gradients and crossfalls that discharge runoff evenly to adjacent areas. Generally, path levels will be raised to utilise existing subbase materials and avoid impact upon tree roots. This allows runoff to disperse naturally.

Drainage ‘Hot Spots’

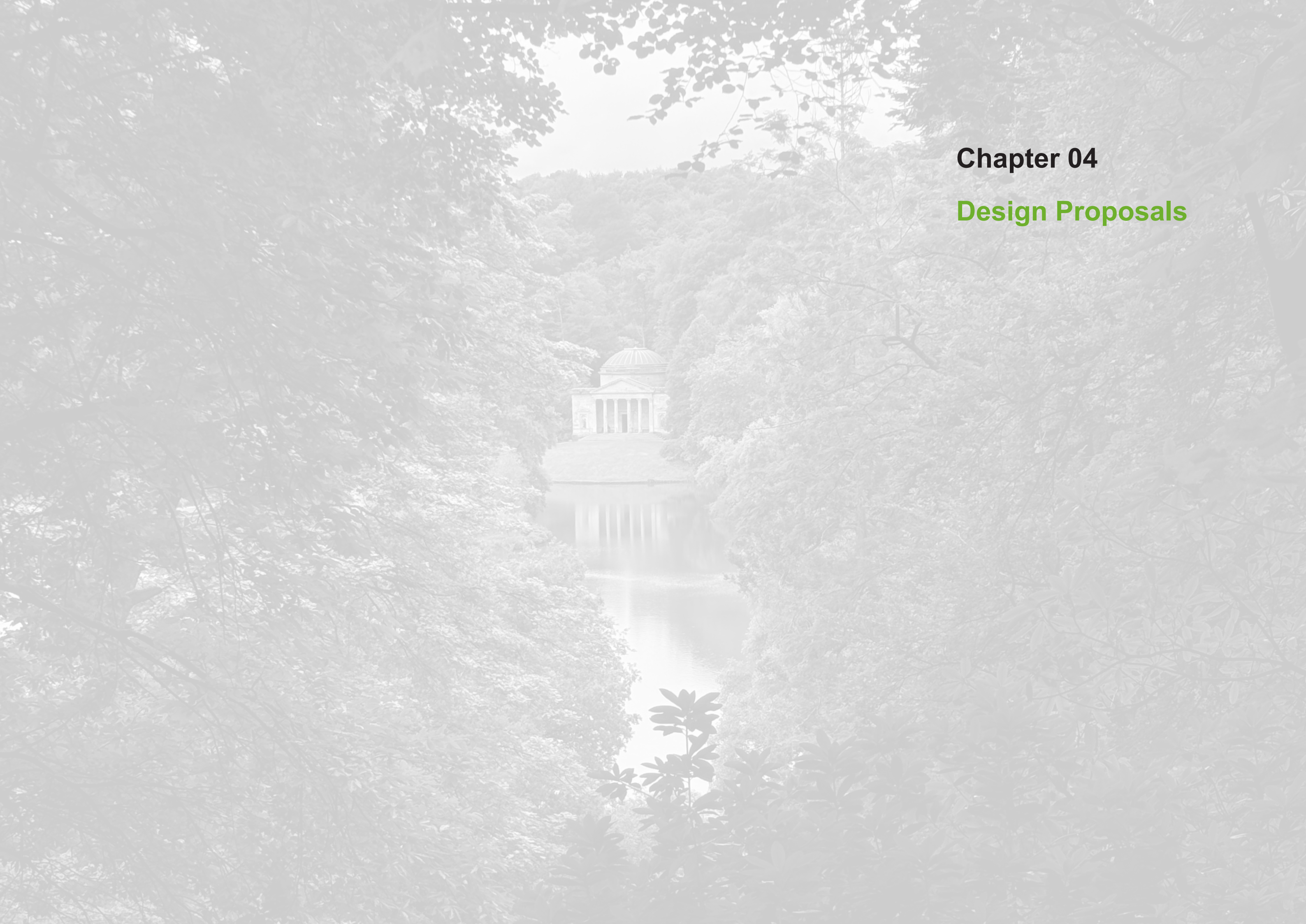
- **Bristol Cross** - New gullies and/or Aco drainage channels will be provided where gradients are shallow and there is evidence of surface water flooding. The new features will connect to the existing drainage that discharges to the open ditch to the south.
- **Pantheon** - Further investigations to confirm the routes of existing drains and culverts downstream of the Pantheon will be undertaken. This may involve discrete trial trenches to identify the location and enable access to undertake repairs and / or jetting. It is recommended that the existing channel around the Pantheon is repaired and consideration of waterproofing against the walls is given.
- **The Grotto** - The provision of a sealed surface will assist in preventing ongoing erosion to the path, however, some consideration of conveying seasonal and dry weather spring flows should be given to divert water away from The Grotto entrance. This may comprise a shallow channel with grating across the new path, discharging into a shallow swale toward the lake.



Figure 30. Drainage ‘Hot Spots’

Chapter 04

Design Proposals



Design Proposals

Proposed Path Widths

It was unanimously agreed following discussion with the wider project team that the optimal width for the paths would be 2.5m. With this in mind the team considered the constraints listed below to inform where the path could or could not be widened.

- Tree Root Protection Areas & Veteran Buffer Zones
- Gradient of paths
- Gradient of the adjacent landscape
- Physical constraints (i.e. the Dam)
- Contemporary maintenance requirements
- Access needs

Generally, the paths will maintain a consistent 2.5 m width, with adjustments only where constraints intervene or where a narrowed section or broader viewpoint is intentional.

One area where the existing path width appears inadequate for is the section directly in front of the Pantheon Temple - arguably the most popular stopping point on the lake circuit and therefore most prone to congestion. Here, it is proposed that a locally widened, sensitively hard-surfaced apron is added to alleviate congestion and improve visitor flow.

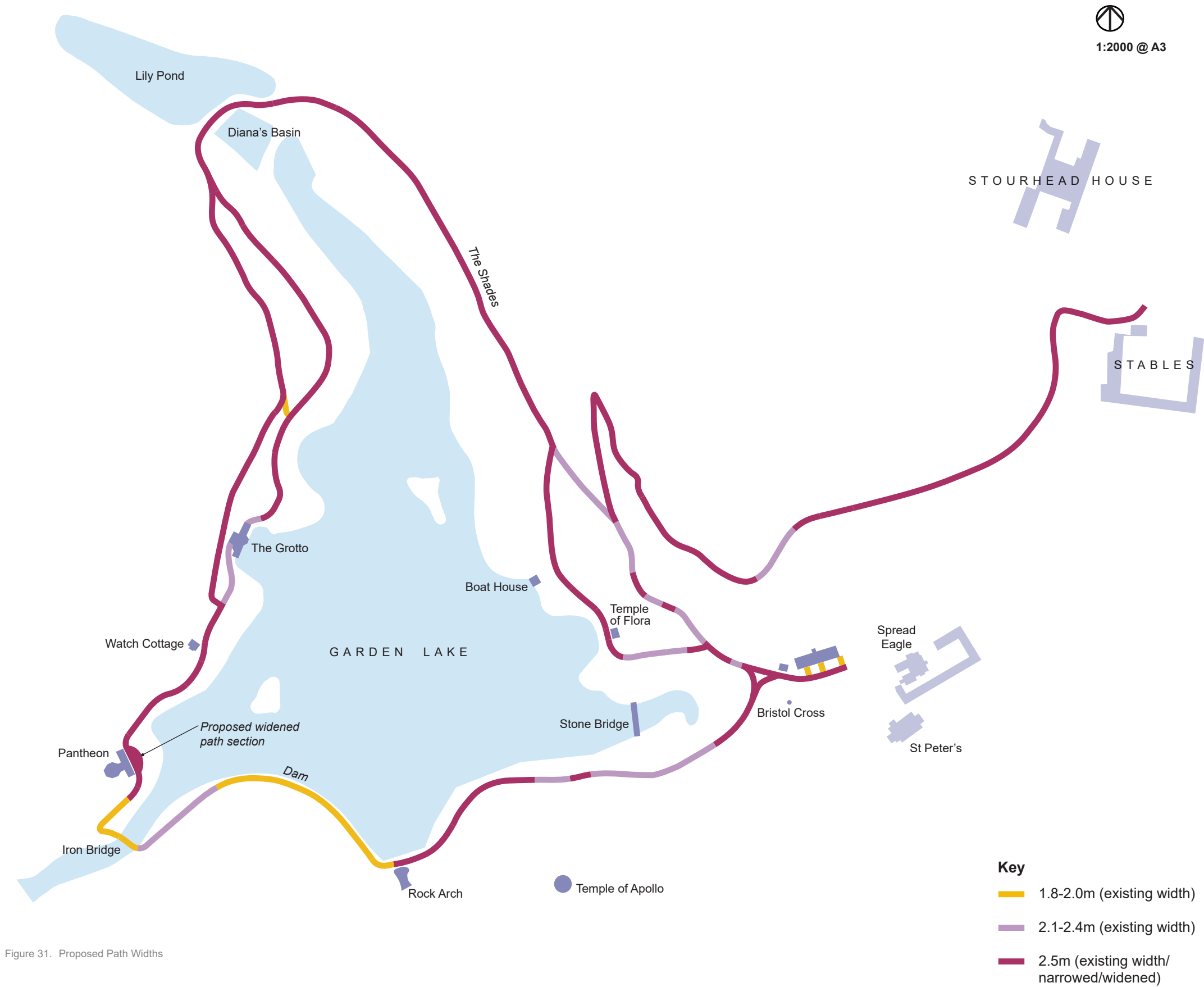


Figure 31. Proposed Path Widths

Design Proposals

Proposed Path Edging

The proposed path edging is guided by the Garden character areas. Two edging types are proposed - timber and metal. Both types will be installed flush to ensure optimal drainage of the path. Metal edging is proposed nearer the house and the entrances (in the more formal areas of the garden) along with the area to the front of the Pantheon and Temple of Flora. It is proposed that the rest of the path be edged using timber.

Existing path edging no longer required as part of the proposals including timber logs etc will be carefully removed. Elsewhere isolated instances of irregular 'rustic' stone edgings will be retained and stabilised with new lime mortar along with the addition of a discreet metal edge to provide a consistent restraint with which to install new path surfacing against.

Flush natural stone sett interfaces will form junctions between unbound and bound surfacing types, as detailed on subsequent pages.

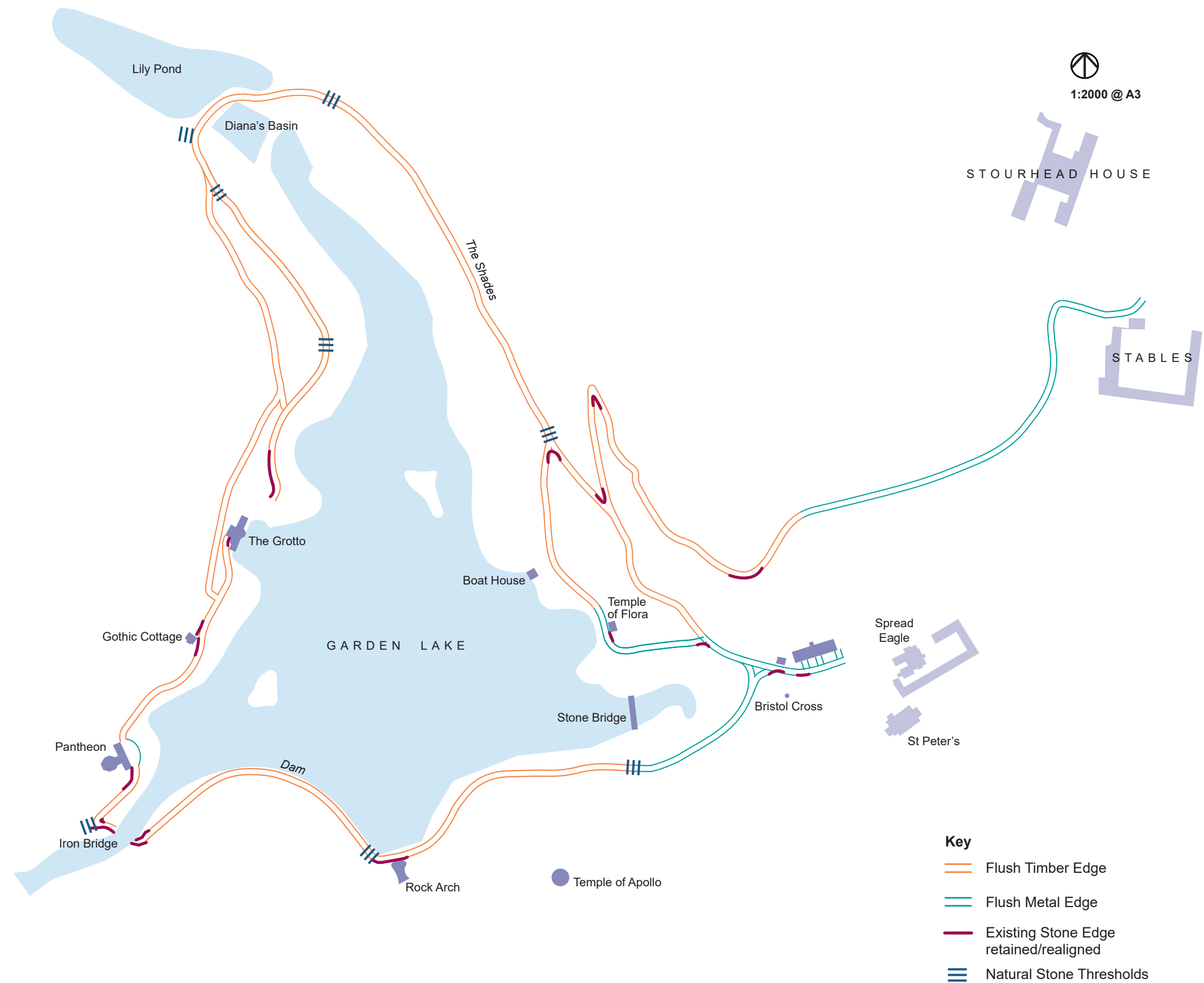


Figure 32. Proposed Path Edging

Design Proposals

Path Detail

As described previously, the proposed surfacing will predominantly feature tar spray and chip (bound) surfacing, with sections of breedon compacted gravel (unbound) used for isolated flatter sections of path.

At each transition between these materials, a flush threshold detail is proposed. The project team reviewed various options (including as part of the first sample section) - flush metal edging; courses of flush stone setts, and a triple course of staggered blocks - and selected the latter: 100x200x100mm split-top Chilmark limestone. This detail offers a clear visual and tactile cue for material changes (and in places oncoming changes of gradient), honours Stourhead's heritage by using locally associated stone, and provides a robust restraint for both surfacing types.

The adjacent visuals are provided to illustrate the indicative arrangement of hard materials associated with the proposed pathway including surfacing, edging and interfaces.

Tar spray and chip surfacing will be applied to a new asphalt base, 60mm thick. The existing subbase materials are generally acceptable as a subbase to receive the asphalt base however some localised reducing of levels and rolling will be required. Where path widening is required, i.e. for benches, a full depth construction comprising a Type 1 subbase will be provided. The pavement may be strengthened using a reinforcing grid should soft spots be encountered, thus reducing the need for further excavation.

Breedon gravel can only be laid on a new Type 1 subbase. Therefore, a 75mm minimum thick subbase will be provided beneath a 50mm depth of Breedon, however levels will be set to avoid excavation other than to prepare a suitable formation.

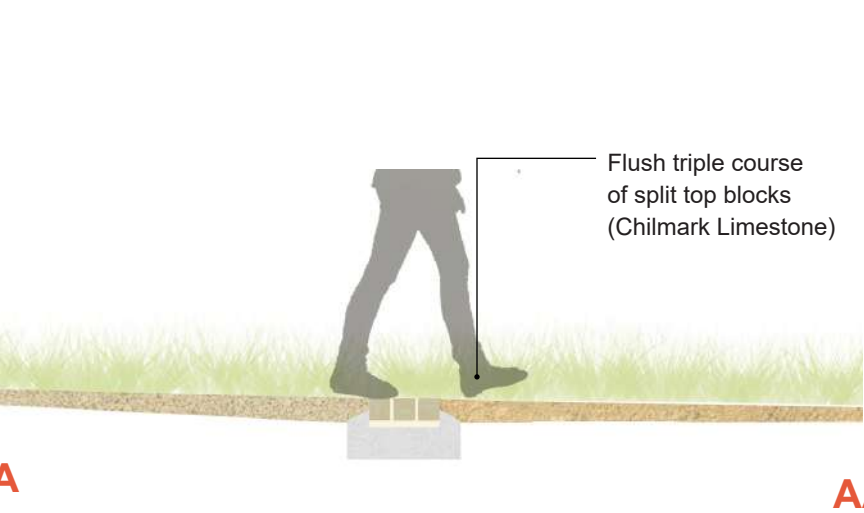


Figure 33. Typical Path Detail - Section A-AA

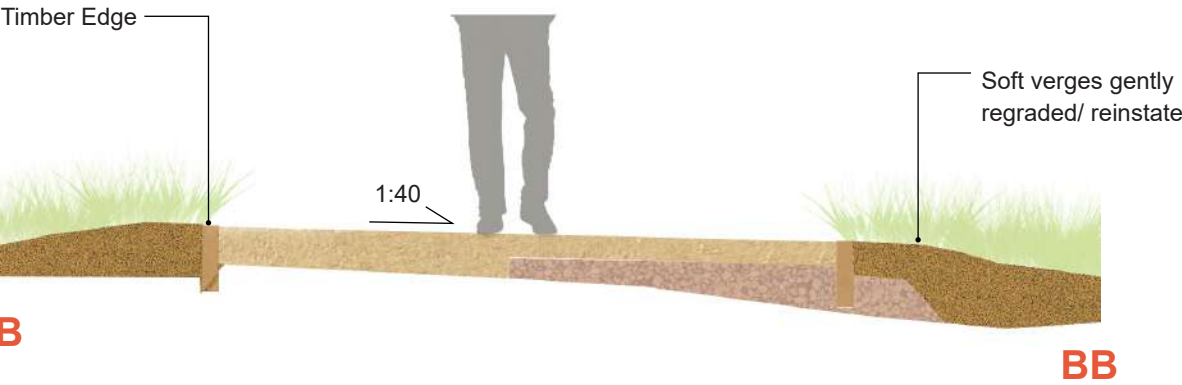


Figure 34. Typical Path Detail - Section B-BB

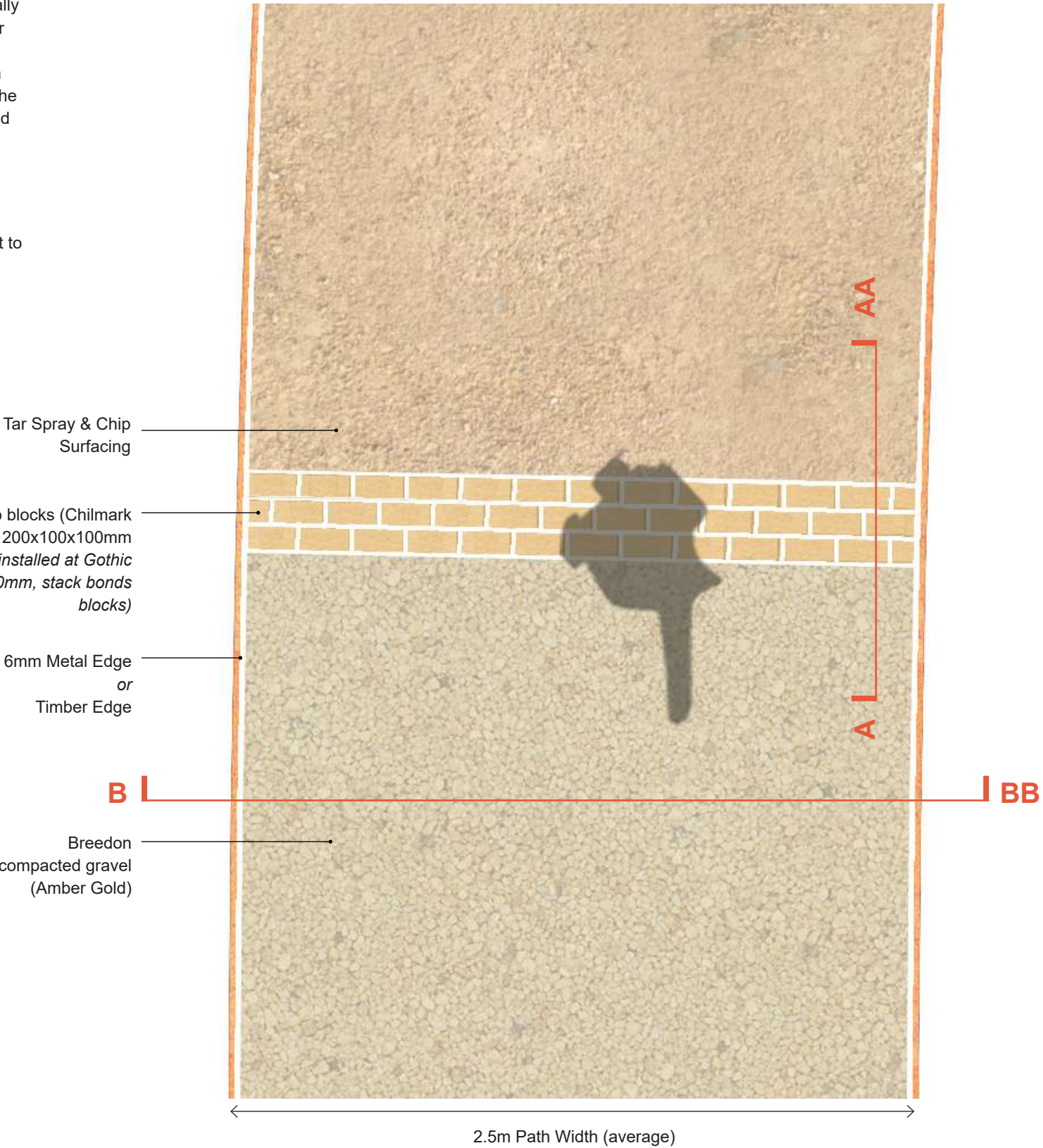


Figure 35. Typical Path Detail - Plan

Design Proposals
Pantheon Frontage

The existing forecourt of the Pantheon is often inadequately sized for visitors to pause, gather, photograph, or allow groups and tramper vehicles to pass. To address this, an expanded hardstanding apron is proposed surfaced with tar spray and chip and a simple flush metal edge. Its simple arched form, sensitively aligned with the Temple's width, spans 7.5m at its widest: the 2.5m standard path plus a 5.0m allowance for tramper turning and small gatherings. A gentle gradient will ensure surface runoff, while existing moveable metal hoops will be repositioned around the perimeter to deter access onto the adjacent lakeside grassed bank.

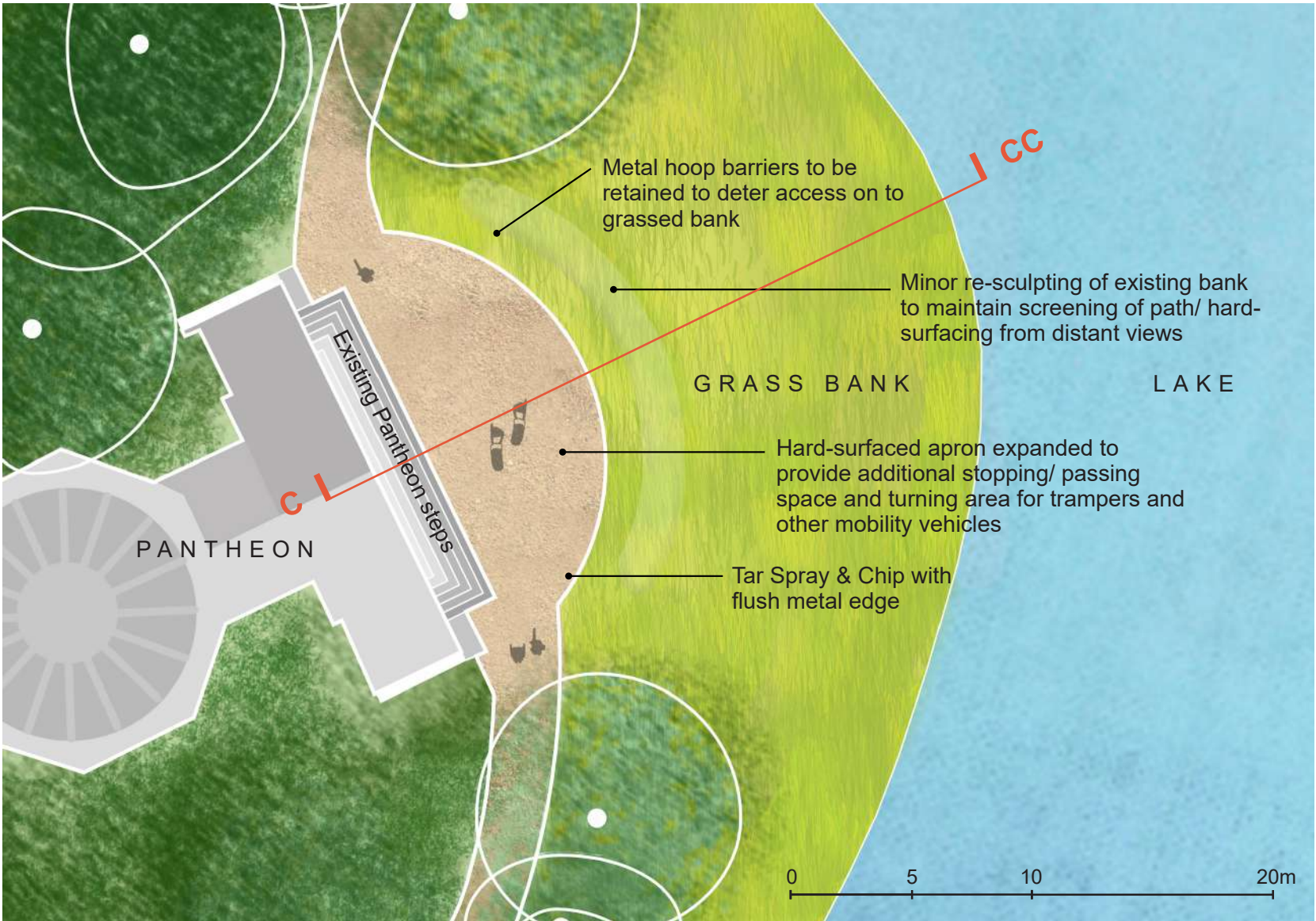


Figure 36. Pantheon Frontage - Plan

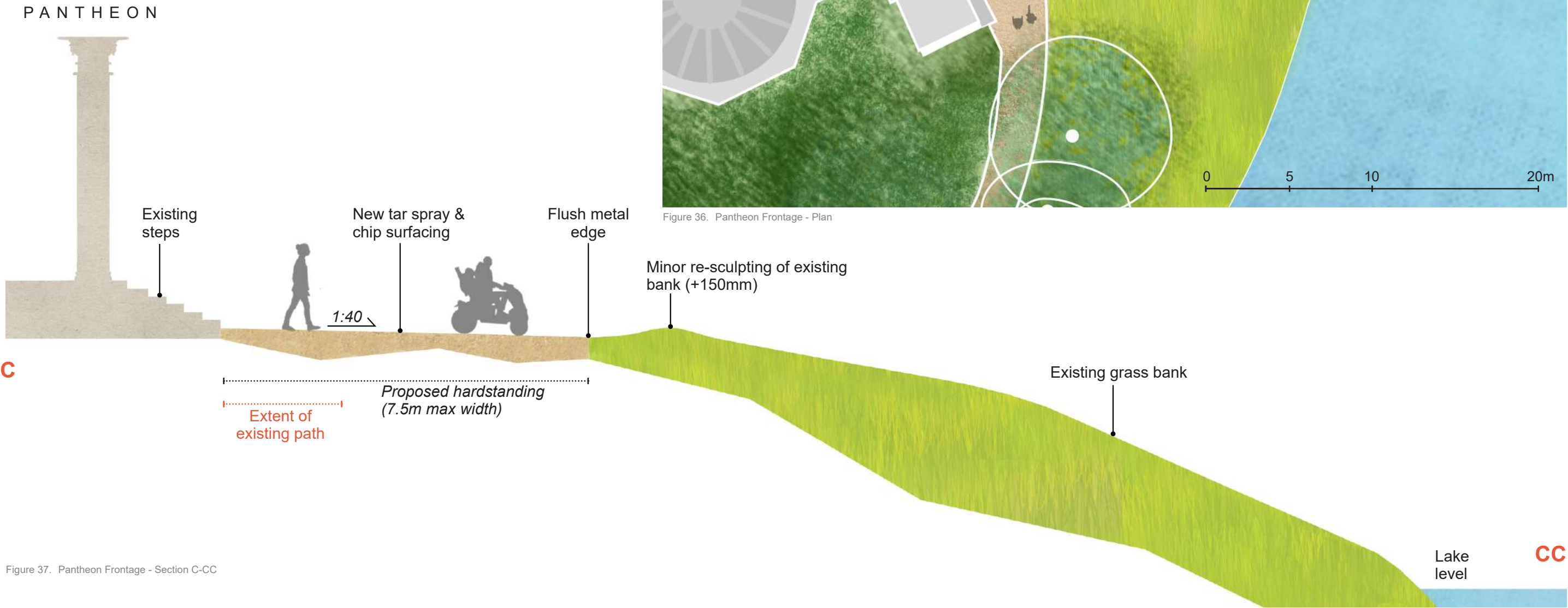


Figure 37. Pantheon Frontage - Section C-CC

Design Proposals
Pantheon Frontage

As described, proposals at the Grade I listed Pantheon temple involve extending the existing gravel path to form a semi-circular hardstanding area in front of the building. The Pantheon is a key feature within the landscape, set on a raised mound in the southwest corner of the Garden Lake. Historically designed to be both a focal point and a viewpoint, it offers long-established framed views of the Stone Bridge, the Temple of Flora, the Temple of Apollo, and Stourton village. These views remain as important to the visitor experience today. The structure itself is most visible from the south bank of the lake; the Bristol Cross; and from longer distance locations to the east, as identified on the adjacent diagram. Photos showing these views are provided on the subsequent page.

To preserve the Pantheon's historic setting, the extended viewing area has been carefully designed to follow the natural curve of the grassed mound. The bank will be subtly re-sculpted so that the new surfacing is screened in long-range views, and all closer views are from lower elevations (below eye-line) where the hardstanding will not be visible. As such, any visual change in the key views is expected to be minimal.

Ultimately, the intervention will deliver clear public benefit by improving access and enhancing the ability of visitors to enjoy the landscape. The project respects the aesthetic and historic significance of the Pantheon and is considered to result in no meaningful harm to its setting or the heritage values of the wider landscape, as described in the accompanying Historic Impact Assessment (HIA), provided separately.

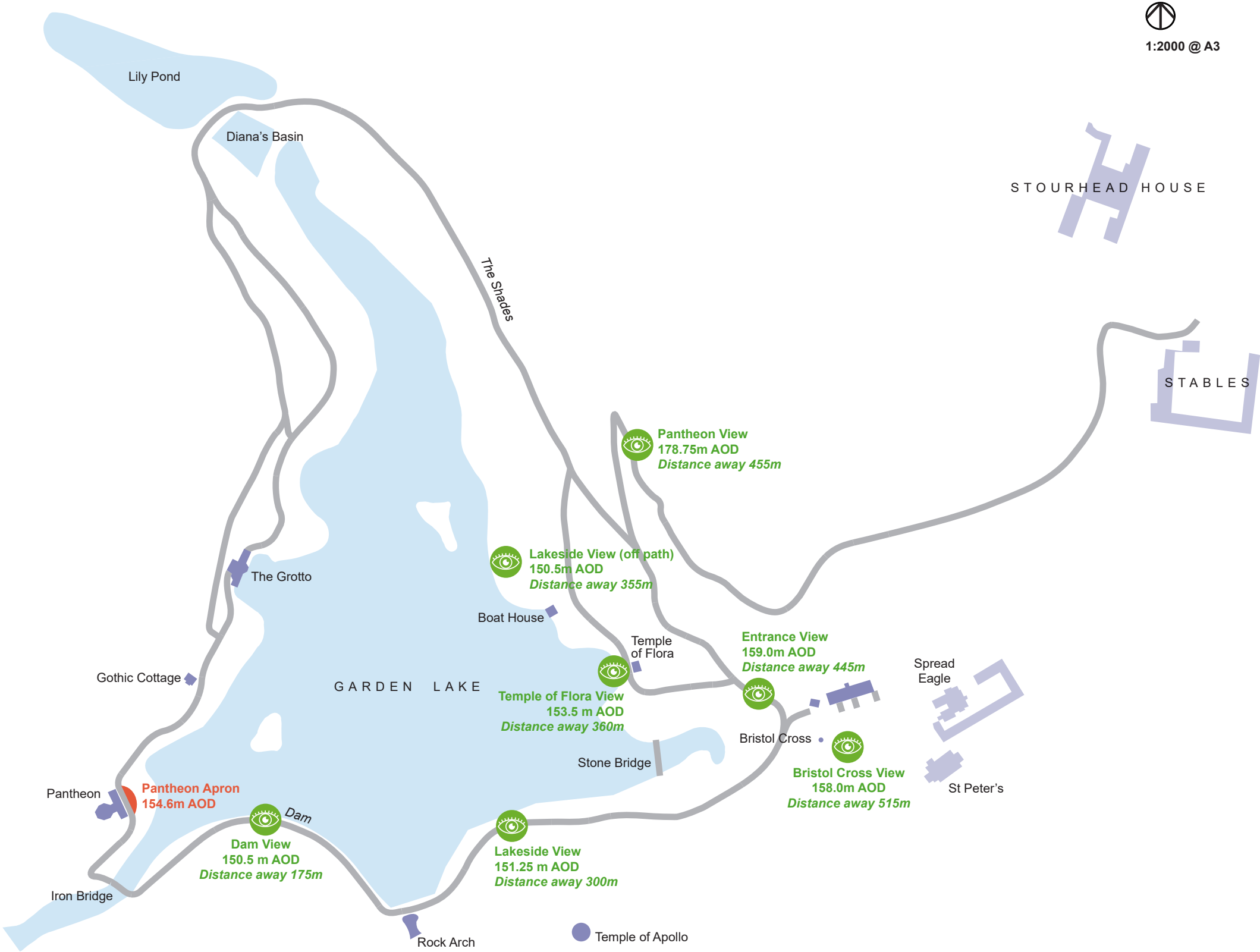


Figure 38. Key views of the Pantheon, including path elevation information

Design Proposals
Pantheon Frontage

The adjacent images show all of the primary views of the Pantheon temple from the orbital path around the Lake. Note that the more distant views range from 350-515m away, whilst the closer views including from the Dam are all significantly lower in elevation than the Pantheon itself.

Note that these photos are from a variety of sources and have been taken with different camera lens/ zoom, which impacts on the perceived distance of the Pantheon from the view point. They are provided for context only, and should not be used for direct comparison.



'Pantheon View' from the Shades



View across Lake from grassed area (off Path)



View from Temple of Flora



Entrance view



View from Bristol Cross



Lakeside view from southern shoreline



View from Dam

Figure 39. Primary views of Pantheon temple

Design Proposals

Temple of Flora Frontage

The Grade I listed Temple of Flora is a prominent heritage asset located on the south-eastern edge of the garden lake, positioned immediately adjacent to the accessible path loop. This location offers exceptional views across the lake, while the temple itself forms an important visual focus when viewed from the west bank.

The proposed path works in this sensitive location are deliberately simple and respectful of the historic setting. A new flush metal edge will be introduced on the lake side of the path to create a subtle yet formalised restraint, enhancing definition without distracting from the surrounding landscape.

The existing Breedon gravel surface will be upgraded with a tar spray and chip finish, retaining the current width and the established interface with the temple's step surround. A consistent 1:40 crossfall will be introduced to direct surface water away from the temple towards the vegetated bank, which naturally slopes down to the lake, ensuring effective drainage while preserving the character and integrity of the site.



Figure 40. Temple of Flora frontage viewed from the south, with details of the proposals highlighted

Design Proposals
Benches

This project includes the installation of hard-surfaced pads for fixed benches along the accessible path circuit. Two pad details are proposed: one for a standard bench, and a wider version with an adjacent clear space to accommodate wheelchairs and buggies alongside the timber seating - ensuring unobstructed path flow.

Benches will be spaced at regular intervals along the accessible route, featuring the new National Trust signature design (shown here) and marked on visitor maps.



Figure 41. New signature National Trust bench from Gaze Burvill (to be installed around Accessible path circuit)

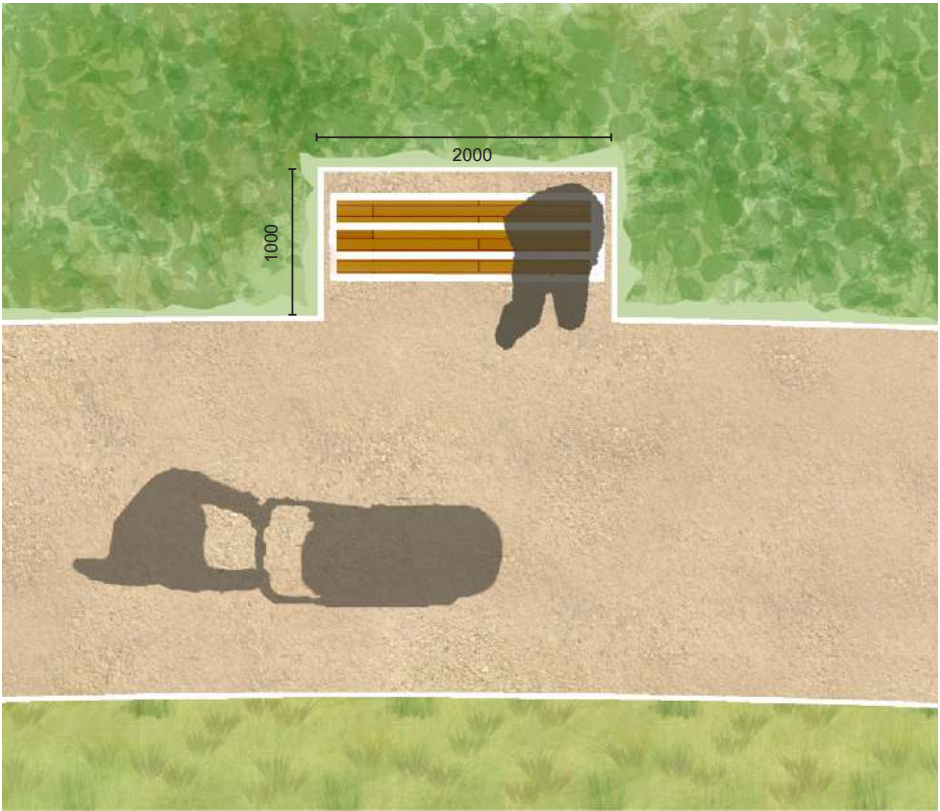


Figure 42. Standard Bench - Plan

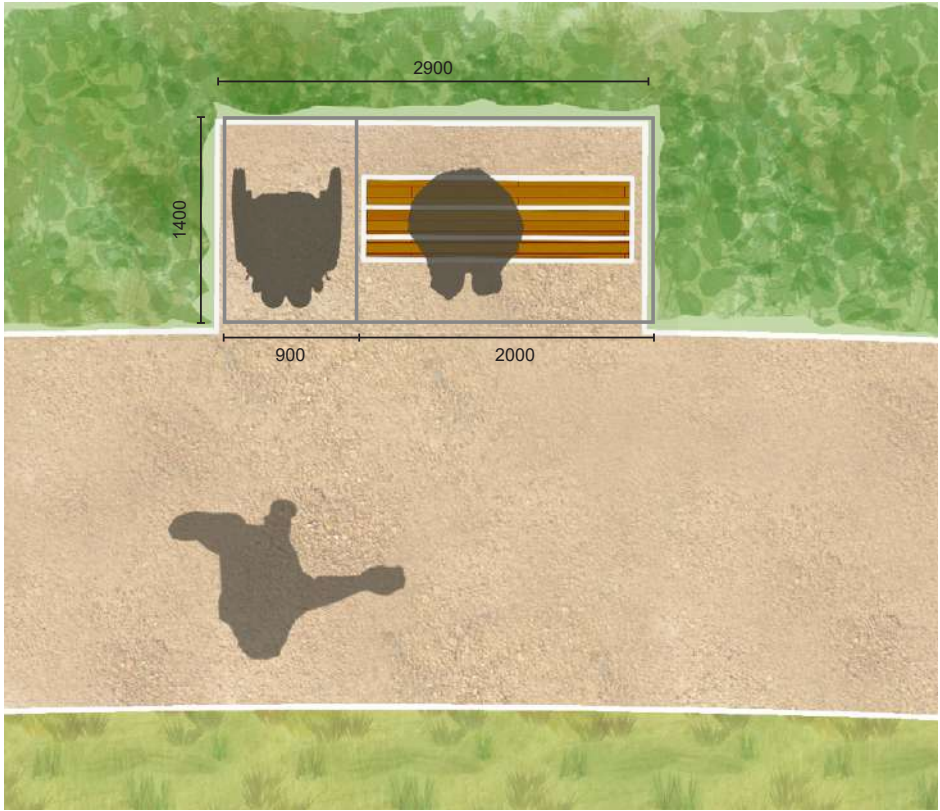


Figure 43. Standard Bench - Accessible

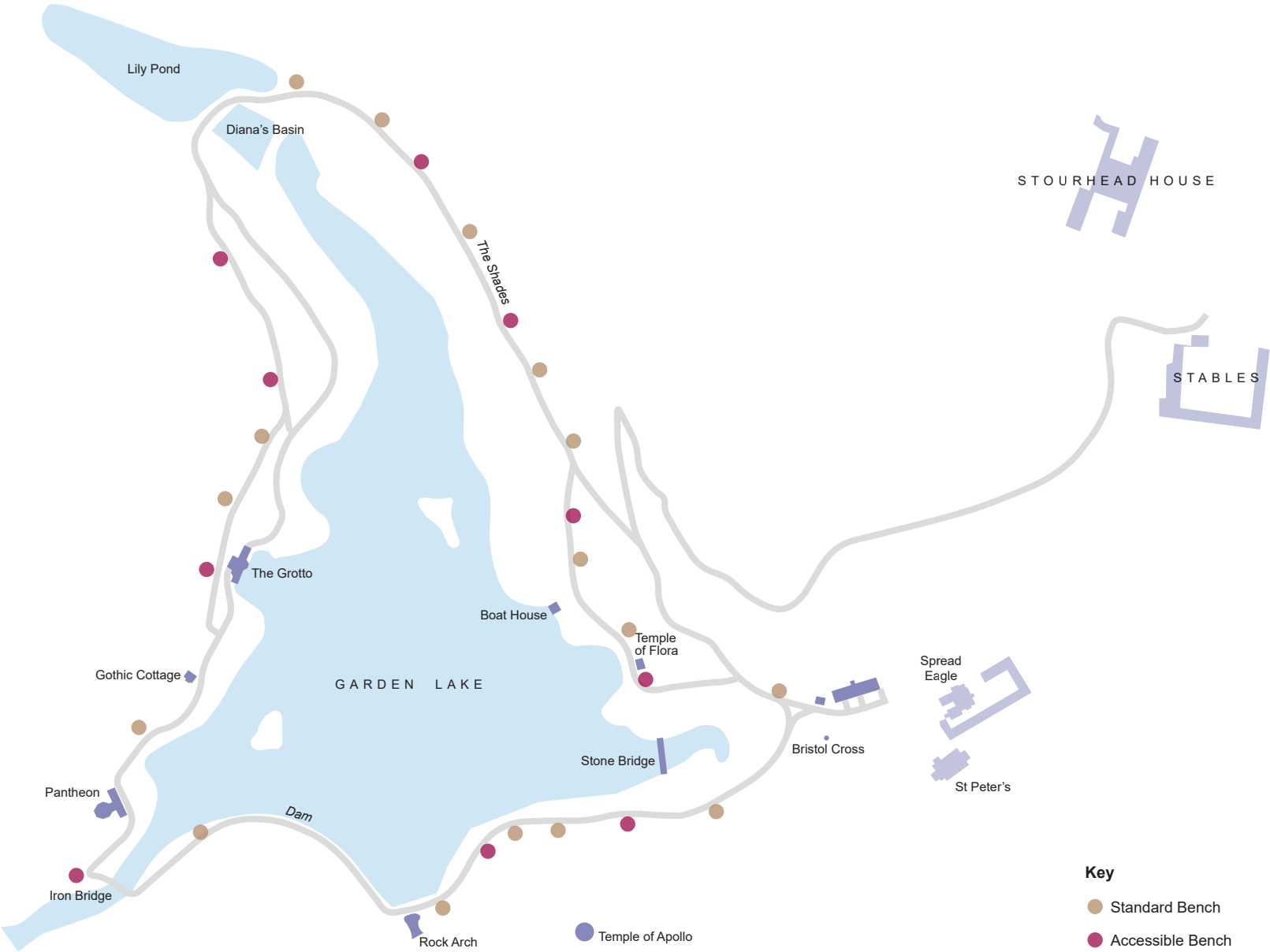


Figure 44. Proposed fixed bench locations around accessible path circuit

Design Proposals

Hard Materials Palette

The adjacent images offer an overview of the proposed hard materials for this project. As described earlier, the team has refined these selections against multiple criteria. Most materials can be examined in situ within the sample path section completed in June 2025 adjacent to the Gothic Cottage. Following testing post-implementation, the tar spray and chip aggregate blend and edging details - such as the natural stone setts - can be critically reviewed to reflect any specific observations.



Breedon Amber Gold



Tar Spray & Chip - Daltex Yellow



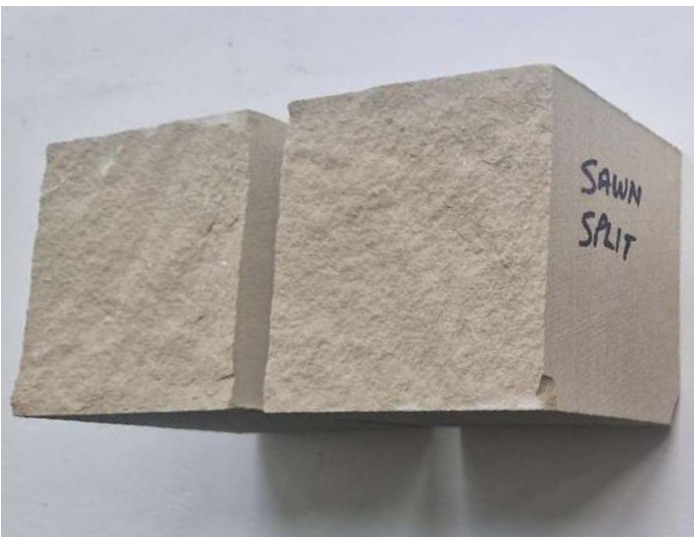
Metal Edge (untreated steel)



Existing random stone edge



Timber Edge



Chilmark Stone Setts/ Blocks

Figure 45. Hard Materials Palette

Design Proposals

Soft Landscape

Soft-landscape works will be straightforward, comprising only the reinstatement of soft verges adjacent to re-levelled and resurfaced path sections.

Along the lake path there are two existing verge types:

- Open grassed areas, edged with either regularly managed mown turf, or longer more diverse grassland mixes.
- Shaded sections beneath tree canopy, where evergreen groundcover predominates.

Where verges have been locally disturbed - or where the path is narrowed - existing soil will be decompacted, gently graded, and supplemented with either on-site (preferable not least to make use of the existing seed bank) or imported topsoil to create a smooth rolling profile. Verges will then be seeded with a suitable Parkland grassland mix developed in coordination with the project ecologists; shadier areas will be additionally planted with containerised evergreen groundcovers such as native ivy (*Hedera helix*).

Based on the engineer’s ground model and a typical 1:6 verge gradient, the reinstatement works will generally extend approximately 750mm on either side of the renewed path. Existing vegetation along the path verges is generally of low ecological distinctiveness and can be restored to an equal—or even higher—value state soon after construction. Verges will be temporarily protected by the on site garden team where required to assist with establishment.



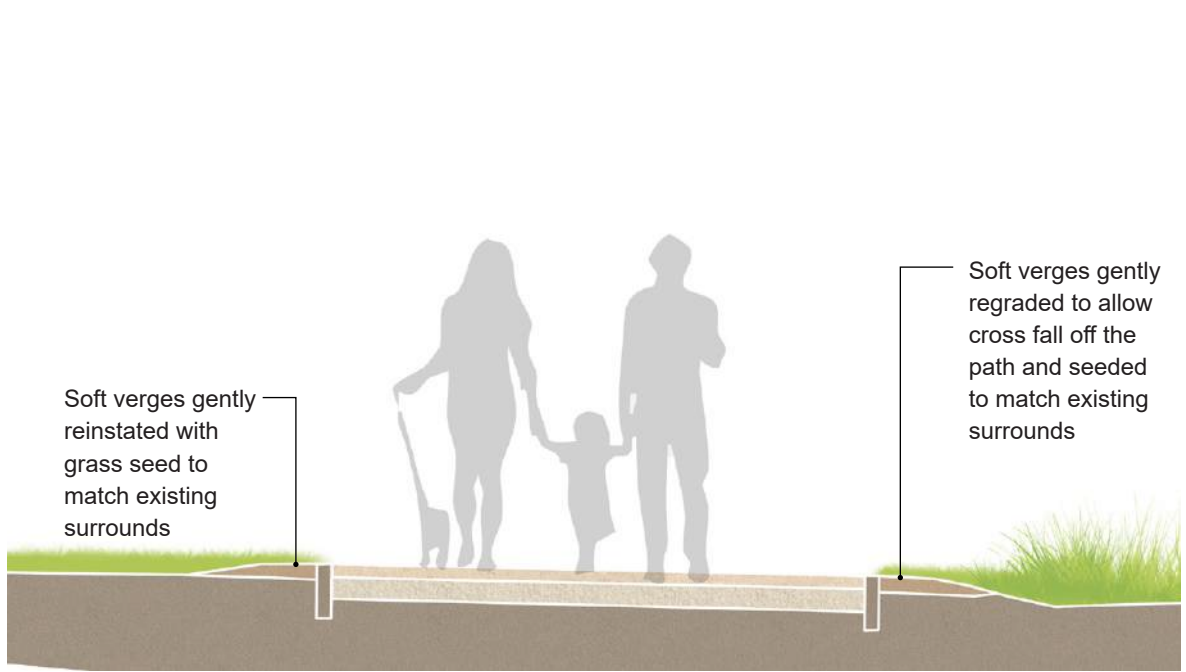
Site photo - typical shaded section of path, with evergreen planting to either side



Site photo - typical open section of path, with grass verge to either side



Typical section of path - showing 0.75-1.5m verge reinstatement - seeded/ planted with shade-tolerant/ evergreen groundcover



Typical section of path - showing 0.75-1.5m verge reinstatement - seeded with parkland grass mix

Figure 46. Soft Landscape Approach

Chapter 05

Engagement



Introduction Engagement

In addition to a multidisciplinary design team and a wider project group affiliated with the National Trust - including archaeologists, visitor experience leads, the gardening team, accessibility consultants, regional advisors, and project managers - a series of engagement sessions has been held with numerous external stakeholders. These sessions have enabled detailed discussions around on-site issues, the design process, site constraints, potential concept options, and the emerging proposals.

The Stakeholder consultations included:

- Access Audit April 2024
- Internal National Trust Stakeholder Meeting 08.07.24
- Pre Application Meeting with Wiltshire Council Planning and Conservation Officers 10.10.24
- National Trust Specialist Volunteer Advice Network 14.10.24
- Stakeholder Consultation with Gardens Trust and Historic England 07.11.24
- Access Focus Group 06.03.25
- Local Community 08.04.25

All consultations have been extremely constructive, with a good collective understanding of the issues found on site and the challenging constraints. Generally all responses to the process undertaken have been extremely positive. The emerging design proposals have been supported, but a repeated comment has been that ultimately the *'devil is in the detail'* - this has ultimately led to much thought and deliberation with regards to development of the proposals. Summary of the various events is provided on the following pages (reports will be provided separately for further details).

Pre-app Wiltshire Council Comments Overview (Oct 2024):

- There is no objection to the principle of the proposals, which are seen as necessary to address current and future site issues.
- The proposals are justified, particularly in light of visitor pressure, unpredictable weather, and site-specific challenges observed during the site visit.
- The works are expected to bring significant benefit to visitors.
- The proposals are not considered harmful to the distinctive landscape qualities of the national landscape.
- Planning permission is required, but listed building consent is not deemed necessary.

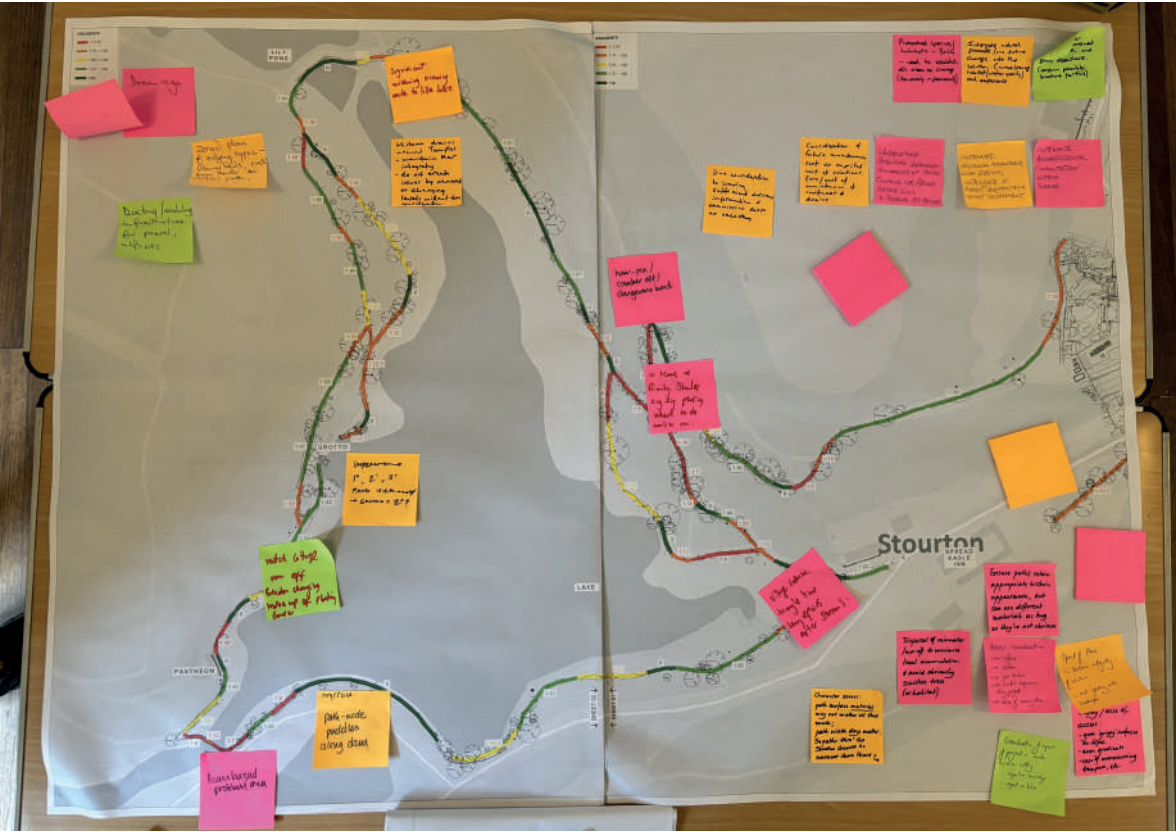


Figure 47. Images from External Advisory Consultation Day (October 2024)



Introduction

Engagement

Access Audit (April 2024):

An Access Audit was undertaken by Access Matters in Spring 2024, the findings are summarised below:

- Width: A 2m width (Zone A standard) is achieved in many areas; where limited by slopes or banks, paths should be widened where feasible and edges made more visually distinct to aid accessibility.
- Gradient: Some paths exceed recommended gradients due to topography and views. Paths should be regraded where possible, or mitigated with rest areas, seating, and discreet handrails—especially at bends. A fully wheelchair-accessible shuttle bus is recommended for those unable to transfer.
- Crossfalls: Steep cambers pose challenges for mobility and balance. Restructuring should be undertaken where feasible to reduce crossfalls.
- Edging: Edges must be visually and tactilely distinct for visually impaired users. A range of treatments is used; feedback from cane users should guide final choices.
- Resting Points: Essential for accessibility and enjoyment. Current seating is accessible in design but often poorly located. New seats should be set back on level ground with adjacent space for companions. More seating than the minimum is recommended, considering views, shelter, and tour stops.
- Height Clearance: Generally sufficient; British Standard (2.5m) may be excessive here. Minor adjustments may be needed for blind or partially sighted users.
- Gates: One gate meets accessibility standards but needs clearer signage.
- Hazards: Prioritised (H1/H2), including steep gradients, sharp cambers, and surface-level risks like raised gullies.

Pre-app Conservation Officer Comments Summary (October 2024):

- Appreciation of the pressures relating to: visitor numbers (500,000 per annum); cost (£25,000) and volume of gravel (50 tonnes) used to maintain paths per year, much of which ultimately transfers into the lake; and current piecemeal approach to repair.
- The NPPF states that significant weight must be given to conserving designated heritage assets; the more important the asset, the greater the weight.
- Any harm to a designated heritage asset must be clearly and convincingly justified.
- The proposals are expected to have a positive impact on heritage assets.
- The proposals are considered compliant with current conservation legislation, policy, and guidance. The plans are well researched and carefully developed, reflecting a high level of attention to detail.



Figure 48. Images from Access Consultation Event (March 2025)

Introduction Engagement

Placemaking and Design team (October 2024)

This advice collates thoughts following the Specialist Advice Network meeting on site.

- The project’s methodology is considered exemplary, with strong technical foundations and thorough analysis supported by the CMP and LUC’s work.
- The integration of path upgrades with wider landscape considerations—like tree management, views, and seating—shows a commendably holistic approach
- Improving path presentation, including consistent widths and high-quality surfacing, is seen as the top priority for enhancing visitor experience and reducing long-term maintenance.
- Tar Spray & Chip and Breedon Gravel are appropriate materials, but careful design of transitions, colour matching, and thresholds is essential to avoid a disjointed appearance.
- Surfacing should respond to gradients, with TSC for slopes over 1:15, and drainage strategies like timber baffles and gravel backfill should continue to be explored.
- Construction quality, phasing, and detailing such as timber edging and integration with planting are critical to success in this sensitive landscape.
- Ongoing maintenance access needs to be managed, with potential restrictions on heavy vehicles to protect surfaces and edges.
- Trial areas of proposed surfaces are recommended to refine choices and help engage visitors and stakeholders
- Temporary features during construction, such as a pontoon bridge, offer an opportunity to positively engage visitors and enhance their experience.
- The project should pursue wider funding opportunities and ensure coordination with related initiatives like the Reservoir Project, highlighting climate resilience as a funding lever.

Follow-up External Advisory Consultation Day (November 2024)

Following a site walkover with the External Advisory team (including members of the National Trust; Gardens Trust; and Historic England), the following summary of comments were received:

- There was general agreement and strong support for the project’s progress and approach, but fine details of implementation (like transitions and path treatments) remain critical. ‘The devil is in the detail’.
- Detail needed over the proposed transition areas (from self-bound to tar, spray and chip).
- The group discussed the balance of engagement timing, with some feeling that the process was well-timed, as it allowed for a solid understanding before solidifying the project scope.
- Durability and water shedding are critical, material choice must be functional and capable of withstanding weather.
- Visual impact and aesthetic alignment with the spirit of place are essential.
- The paths should not detract from the landscape but should blend in seamlessly while offering durability and accessibility.
- The importance of balance between maintaining historical integrity and meeting modern accessibility needs was emphasized.
- Maintenance costs/ future upkeep are key challenges under current financial models.

Historic England Pre-app advice summary (January 2025)

- Breedon Amber Gold is the most visually appropriate unsealed surface; tar spray and chip is the most sympathetic sealed surface, pending final specification.
- Raising path levels is a pragmatic solution for improved drainage and tree root protection.
- Three strategic surface options are under review; key considerations include surface transitions, interfaces with natural features, and edge treatments.
- A fourth option should be considered:
‘It would be prudent for the study to assess the viability of a fourth option, which is implementing the drainage and environmental enhancement strategies prior to an alternative surface being introduced. That is, maintaining the self-binding Breedon gravel as the principal surface. This would enable the mitigating impact of the drainage and environmental enhancements to be assessed prior to an alternative, sealed surface being introduced.’

In response to this comment, the project team notes that surfacing all paths with unbound material has effectively been the National Trust’s approach to date. The garden team annually tops-up gravel (~50 tonnes per annum) with additional ad hoc drainage features (including cast concrete channels) in problem areas. However, technical advice confirms that unbound Breedon is unsuitable for gradients steeper than 1:15 - which aligns with the key problem areas. We therefore do not support continuing with the current material and approach, as it has proven ineffective.

- Constructing sample areas of the preferred surfaces is recommended to assess visual impact.
- Further data on increased rainfall, visitor numbers, and maintenance demands would strengthen project justification.
- The overall approach is well-researched and supports the Conservation Statement’s aims in addressing visitor pressure and climate resilience.

Access Consultation Event Feedback Summary (March 2025)

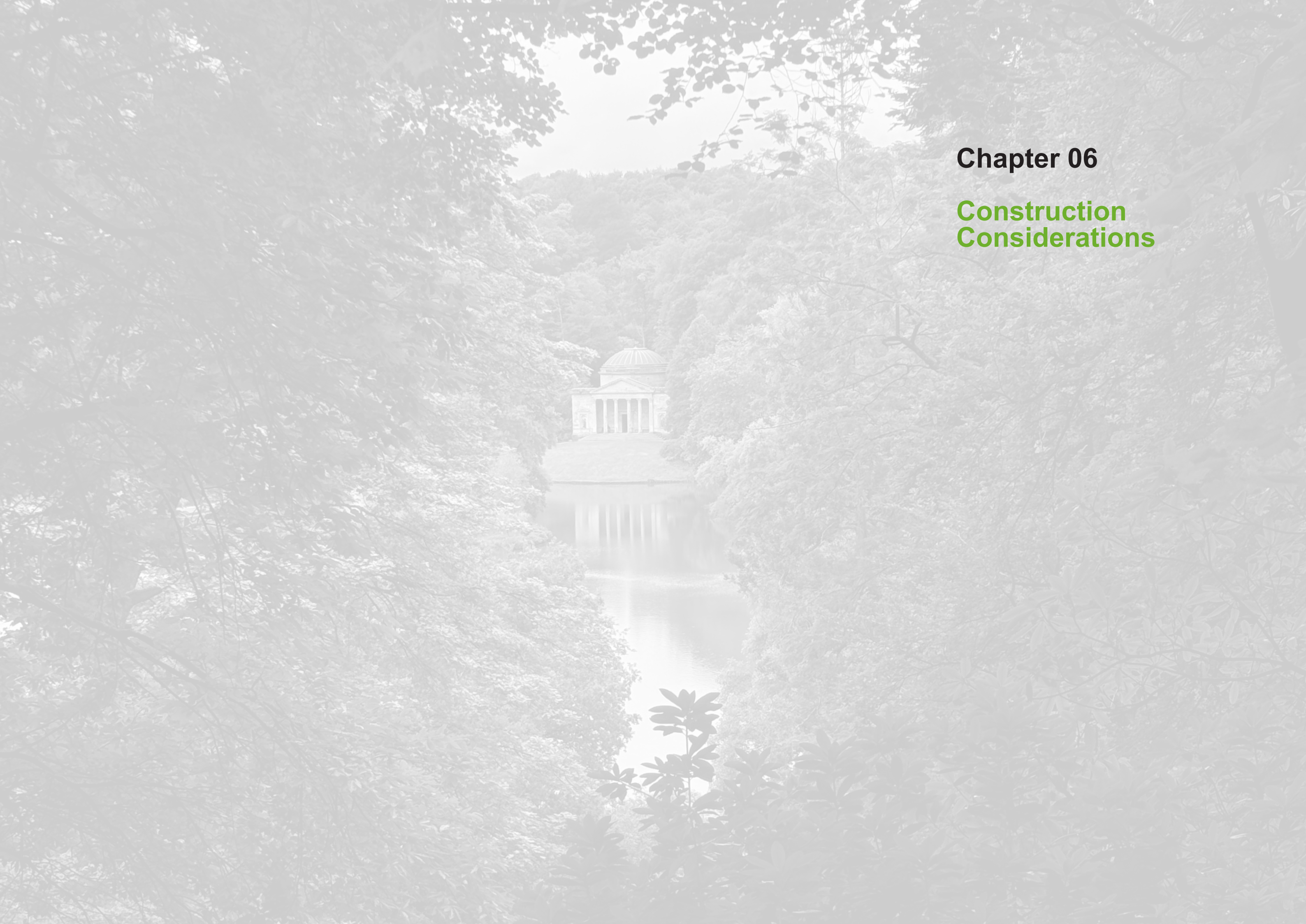
- Understanding that National Trust will be aiming to: design the paths to be as accessible as possible; employ management solutions where required when physical access cannot be changed; and provide good information about the access, so that people can be well prepared.
- As expected, attendees at the event who had a range of disabilities had different opinions about path edging and what would work best for them. Some of these were considered impractical given the setting and others might work for some people with access requirements but not others. Consistency of edging, where feasible, or perhaps for long stretches, came up as being a helpful feature. The importance of good pre-visit information in a variety of formats was re-iterated.
- Raised edgings can aid cane users but may pose trip hazards and are not always preferred by wheelchair users. Navigation aids like raised upstands must be consistent and easy to locate
- Irregular edges (e.g. logs, random stone blocks) and gullies across paths create hazards and are difficult for cane users.
- Temporary metal hoops improve safety but could be enhanced with crossbars for better cane detection.
- Some proposed features (e.g. artificial grass, raised edges, handrails, sensory shrub edging) were considered unsuitable for the site.
- Resting places are important, especially along accessible routes.

Local community, business partners, residents & tenants (April 2025)

- Local event held in the Memorial Hall, with around 15 attendees including briefing on the nature of the project and why they are taking place.
- Also hosted questions for the audience and address concerns.
- Focus of the meeting was on the what, why, who and how.
- Those present were provided print-outs of further background information for the project.

Chapter 06

Construction Considerations



Construction Considerations
Seasonal & Time Constraints

Trust Events

The Trust has a busy year round events schedule. The phasing of works will need to be programmed to best avoid the property’s busiest periods, namely: Autumn Colour and the Christmas Lights.

Breedon Amber Gold

Breedon state that it is important to ensure that their Amber Gold Gravel is fully dry prior to trafficking. The length of time required is dependant on weather conditions, but this can be two weeks or more before it is dry. It is also suggested that the gravel should never be laid in frozen conditions.

Tar Spray & Chip

The project team have reached out to specialist surface dressing contractors who have carried out similar works. It has been noted that work in locations such as this can be undertaken using specialist equipment for small paths, as found at Stourhead, rather than the large lorries to spray and apply chippings to roads.

The preference is for hot lay tar spray and chip which gives a much more durable product. The main constraint is laying times – the spray cannot be laid in cold temperatures (<10 deg) or wet weather. The Seasonal Risk Chart below limits laying from May to August/September.

Preferred stone application is 2.8-6mm pea shingle chippings. The surfacing can be walked and driven over the next day.

With the above in mind the works should ideally be programmed between April and July, to ensure the laying requirements of both products are met.

Size & Type of Surface Dressing	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
8/14 mm single S14												
6.3/10 mm single S10												
8/14 & 2.8/6.3 mm racked-in R14			Early							Late		
2.8/6.3 mm single S6			Season							Season		
6.3/10 & 2.8/6.3 or 2/4 mm racked-in R10												
8/14 & 2.8/6.3 mm double D14												
6.3/10 & 2.8/6.3 double D10												

High risk

Surface dressing should not be undertaken because of the probability of failure.

Significant risk

There is some risk of failure (higher in late season) so extra care in the design and execution of the system is required. There is a good possibility of success in favourable weather conditions.

Low risk

Normally successful provided the weather conditions are appropriate for the product.

Figure 49. Tar Spray & Chip Seasonal Constraints

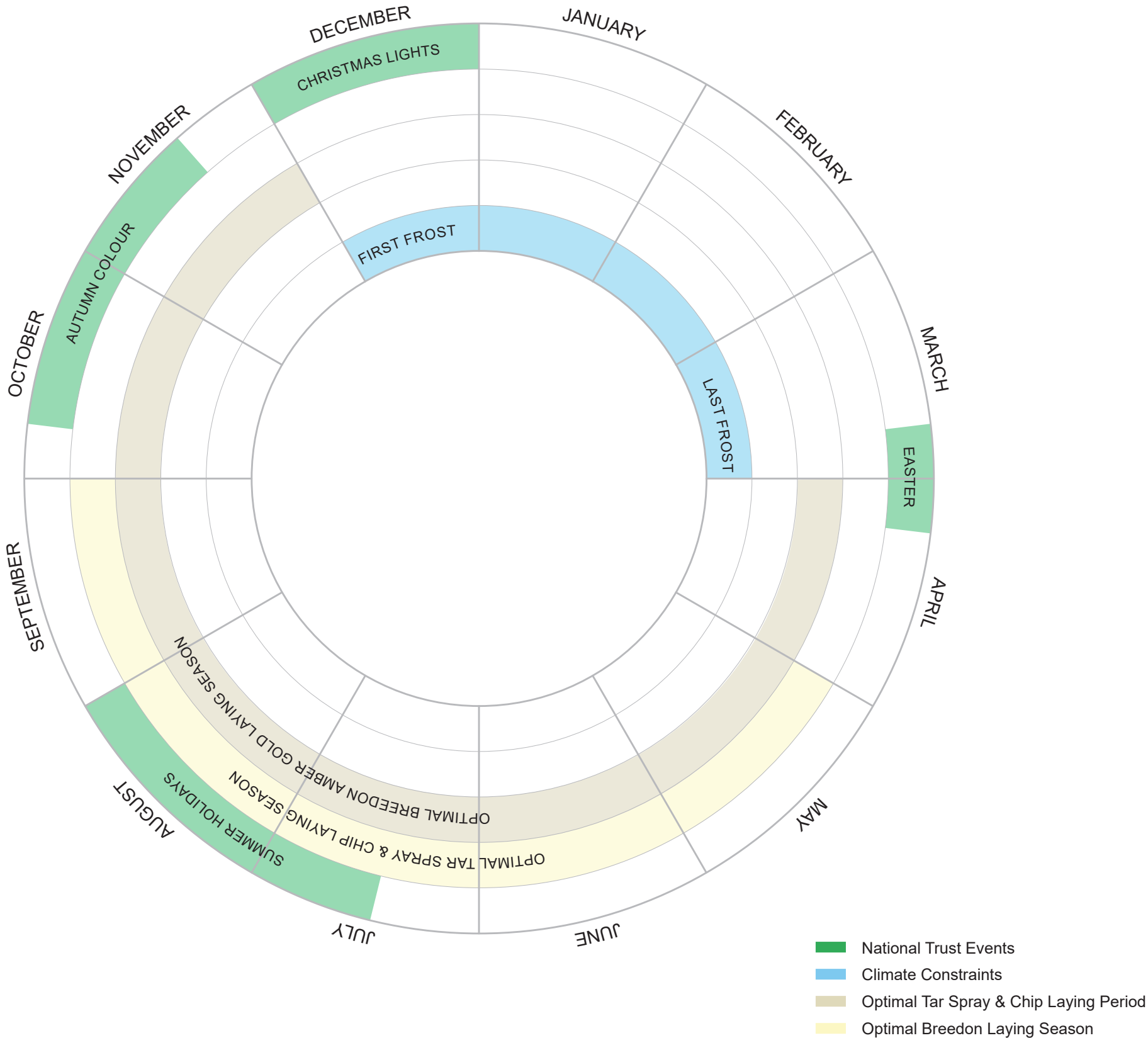


Figure 50. Stourhead Seasonal Constraints

Construction Considerations

Phase 1 & Future Phases

The following diagrams offer a strategic overview of the proposed phasing for the path construction. Phasing will improve operational and budgetary control while minimising disruption, ensuring the attraction remains open throughout.

Phase 1 targets the path sections most in need of intervention - those with the greatest drainage and surfacing defects and the highest maintenance demands year-round. This phase is costed to fit within the project budget.

Simultaneously, surfacing works on the path sections associated with the Dam will proceed under the upcoming Dam remedial works contract, scheduled for late spring/summer 2026.

A medium-term second phase of works is planned to include the majority of the remaining sections of tar spray and chip surfacing including the western extent from Diana's Basin down to Iron Bridge.

This approach would then commit the remaining Breedon-surfaced sections of pathway to a slightly long-term programme, the rationale being that they currently present the fewest issues due to their flat gradients and can be most readily maintained by the garden team.

This phasing remains somewhat indicative, intended to keep the council informed. We will continue to engage closely with all stakeholders to ensure efficient delivery and minimal disturbance to the gardens.

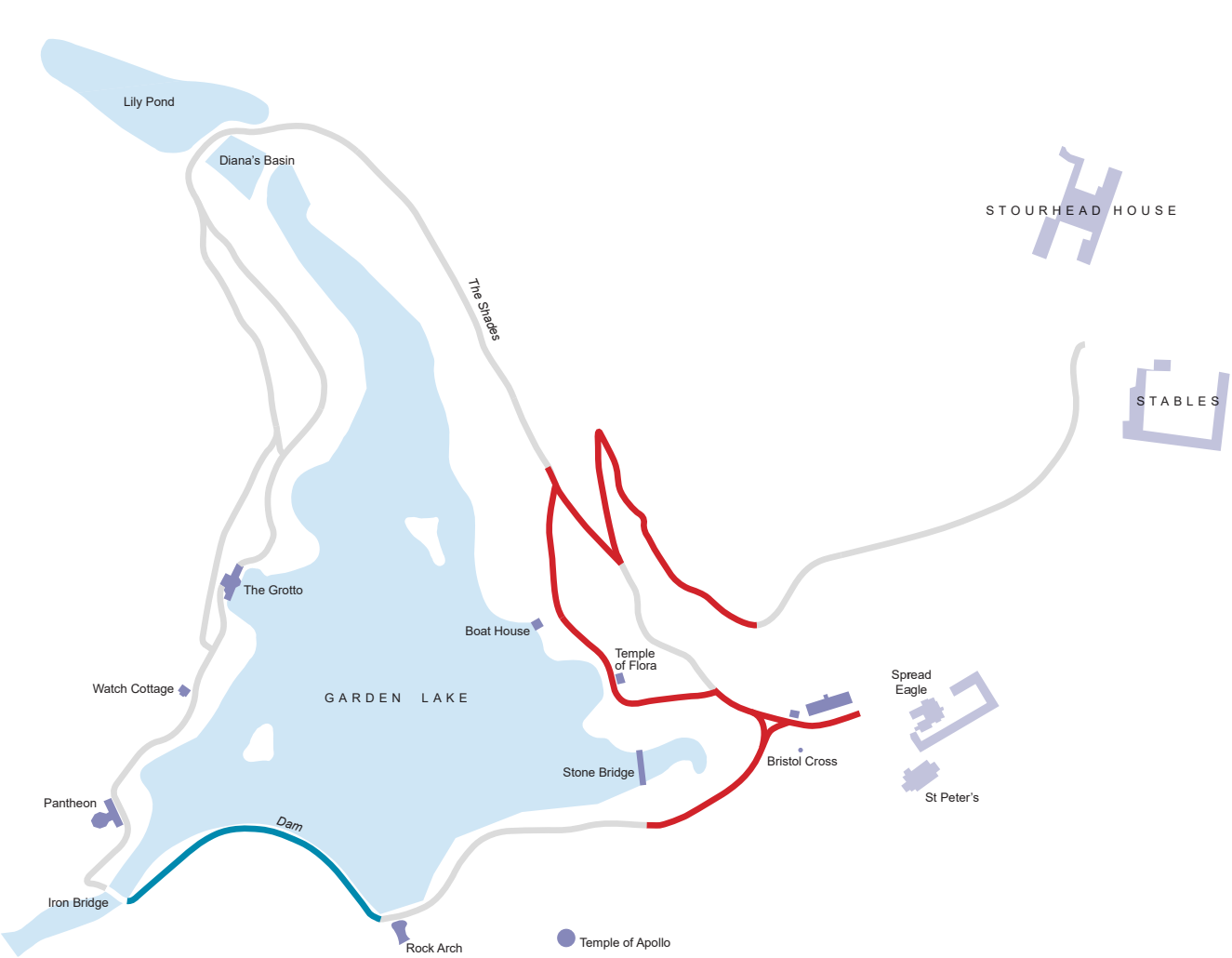


Figure 51. Dam Works and Proposed Phase 1

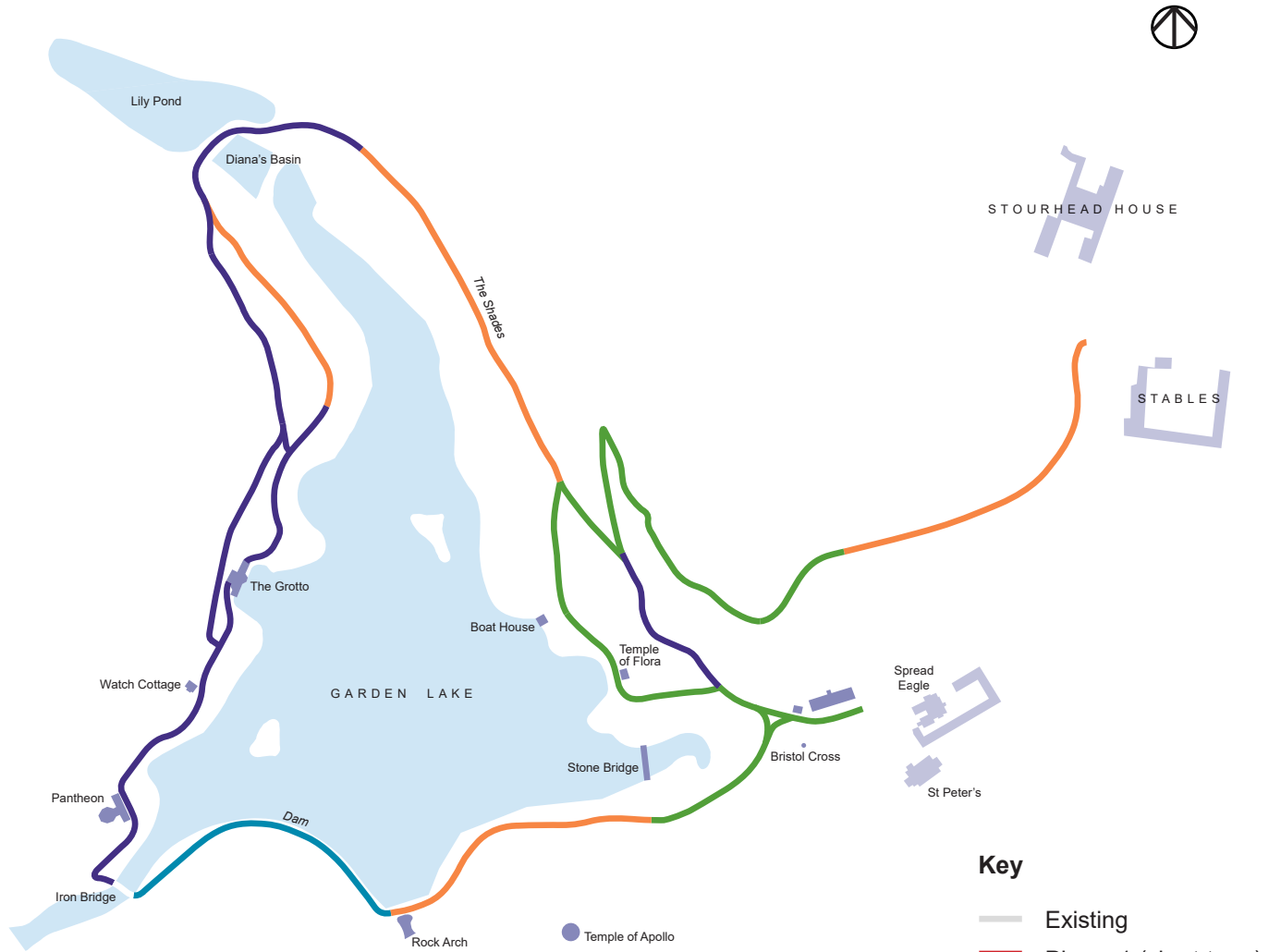


Figure 52. Potential Future Phases

Construction Considerations

Logistics & Compounds

As with the phasing strategy, the project team and National Trust stakeholders have started a process of collaboration to develop an approach that will enable the delivery of the path works sensitively within the historic landscape - keeping the property open, whilst preserving visitor experience throughout.

Contractor access and on-site storage will be critical to the scheme. The adjacent diagram - shaped following walkovers and team discussions - identifies viable compound locations and access routes, mindful of the following constraints:

- Height, width and weight restrictions
- Seasonal and weather limitations
- The property's events programme
- Public access and sightlines
- Topography
- Tree and ecological constraints

Against these parameters, several potential contractor compounds and storage areas have been identified. As each phase is refined with detailed contractor input, this strategy will be rigorously tested and developed to determine the most efficient, low-impact routes and locations.

Key

Extent of path to be resurfaced

Section to be completed as part of Dam Works

Vehicle Access (Hard surfaced)

Vehicle Access (Road)

Potential temporary access route created at Construction Phase

Height restriction

Potential Contractor's Compounds & Storage Areas to be agreed with in collaboration with Contractor

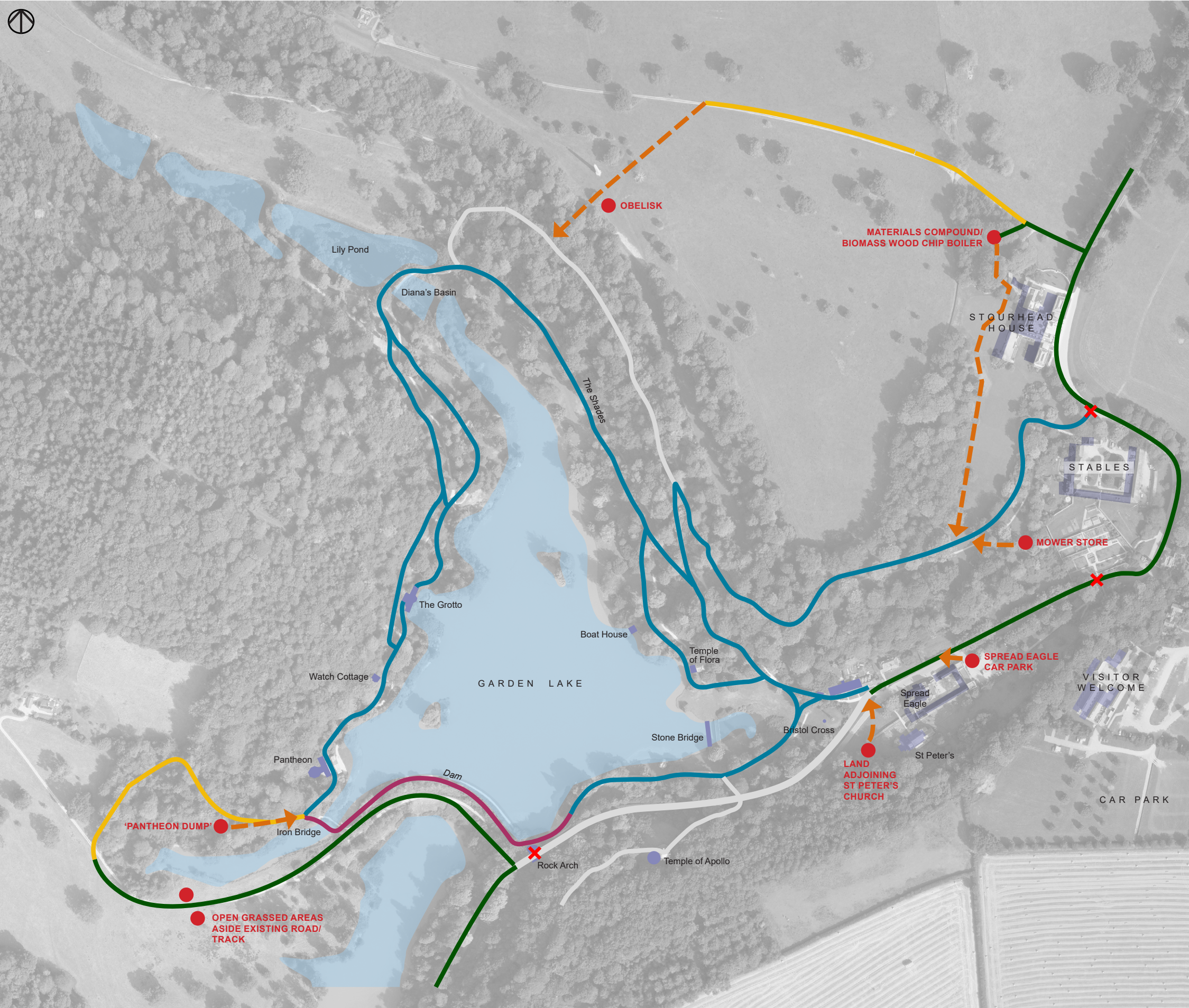
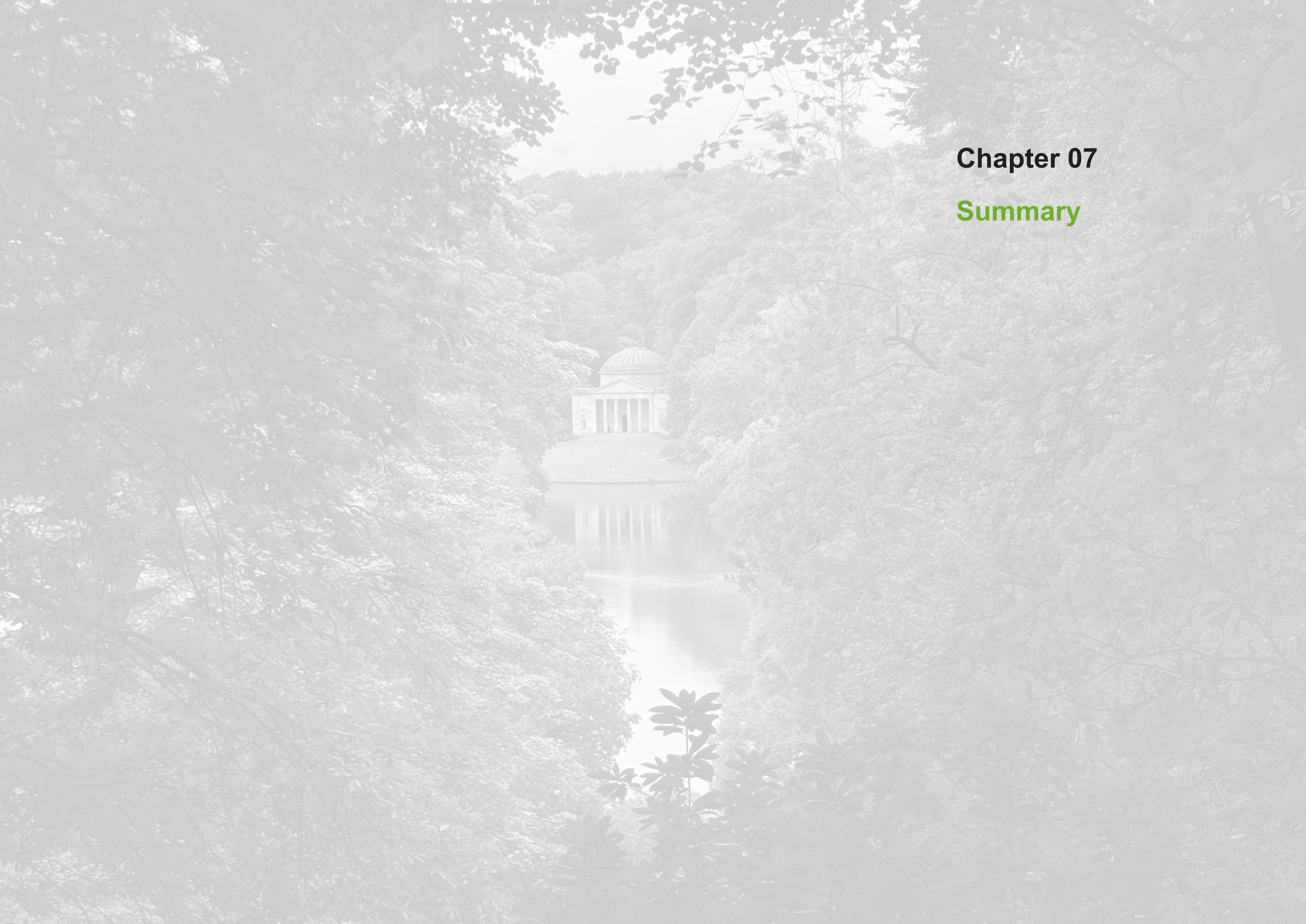


Figure 53. Logistics & Compounds Strategy

Chapter 07

Summary



Summary

Conclusion

The proposed path improvement works at Stourhead have been carefully developed to address the longstanding issues of drainage, surface wear, and ongoing maintenance issues across the well-used network of paths that surround the garden lake.

The project aims to deliver durable, high-quality surfaces that are visually appropriate to the historic landscape, while also improving accessibility for all visitors. Surfacing will use a combination of Breedon gravel on flatter sections and a tar spray and chip finish with locally sourced aggregate on steeper or more formal areas. Both materials have been carefully selected for their robustness and suitability within this unique Grade I registered park and garden.

To help inform and refine the proposals, one sample path section has been implemented on site, with a second due for completion in September 2025, following permission from Wiltshire Council. These trial areas have allowed the project team to review the proposed surfacing materials in situ, assess their visual impact, performance, and integration within the landscape, and make adjustments to the specification as required. This testing phase has ensured that the final approach is both sensitive to the site's character and practically robust.

The proposals have been carefully designed to respect and protect the site's ecological and arboricultural value, avoiding impact to mature trees and surrounding habitats. Equally, great care has been taken to ensure that key views across the lake and towards key structures - including the Pantheon remain uninterrupted. A simple and robust drainage strategy will allow water to naturally shed from the path edges towards the lake, avoiding the use of buried infrastructure such as pipes or gullies that are prone to long-term failure. The works will be delivered in carefully phased stages to align with annual budgets and to ensure that the site remains open and enjoyable throughout the year, with minimal disruption to visitors.

Ultimately, the project's success will be measured by its subtlety - paths that feel entirely in keeping with their setting, blending seamlessly into the landscape. The intention is that visitors will not be distracted by the interventions themselves, but instead able to fully focus on the exceptional views and the immersive experience of being in one of the country's most celebrated historic landscapes.

LUC 14.07.25



Figure 54. Site Photo - first sample section of path adjacent to the Gothic Cottage, June 2025

Summary

Supporting Information

This Design and Access Statement is to be read in conjunction with the following landscape information produced by LUC:

- **Site Location Plan**
13000-LUC-XX-XX-DR-L-01200
- **Existing topographical survey - *sheet 1 of 2***
13000-LUC-XX-XX-DR-L-01201
- **Existing topographical survey - *sheet 2 of 2***
13000-LUC-XX-XX-DR-L-01202
- **General Arrangement Plan - *sheet 1 of 2***
13000-LUC-XX-XX-DR-L-01203
- **General Arrangement Plan - *sheet 2 of 2***
13000-LUC-XX-XX-DR-L-01204
- **Landscape Sections - Pantheon and Temple of Flora**
13000-LUC-XX-XX-DR-L-01205

In addition to the following key supporting information produced by the wider project team:

- **Civil Engineering drawings** by SFK
- **Heritage Impact Assessment** by Purcell
- **Ecological Impact Assessment & BNG Report** by Johns Associates
- **Arboricultural Impact Assessment & Tree Protection Plan** by Bosky Trees.

