



CYFARTHFA CASTLE

LBC & PLANNING APPLICATION FOR NEW

SITE DRAINAGE STRATEGY

December 2024



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1.0 INTRODUCTION

1.1 THE APPLICATION

This submission has been prepared on behalf of Merthyr Tydfil Borough Council to support their plans to prepare the site for essential future repair works to Cyfarthfa Castle, aimed at preventing further deterioration. A detailed assessment of the existing drainage system has revealed it to be in poor condition, inadequate for the building's long-term needs, and incapable of supporting the surface water drainage required for the tented scaffold necessary in subsequent phases of the repair works.

The primary purpose of this application is to define the scope of a new site drainage strategy, aiming to enhance the current provision to meet the building's long-term drainage requirements, while also ensuring adequate drainage for the temporary roof necessary for the repair works.

The works will encompass the reuse and repair of existing drainage runs where possible, the addition of new surface water runs, and all necessary installations to ensure the functionality of the updated system.

Input to this application has been gathered from Mann Williams (structural engineers), Cadw, Abricon (ecology consultants), the Cyfarthfa Foundation, the Merthyr Tydfil Leisure Trust, and Merthyr Tydfil Borough Council.

2.0 UNDERSTANDING

2.1 SITE DESCRIPTION



Location plan showing Cyfarthfa Castle and Cyfarthfa Park, located in Merthyr Tydfil, CF47 8RE.

Cyfarthfa Castle is a Grade I listed building situated on a low rise overlooking the former site of the Cyfarthfa Ironworks, located on the north-western edge of Merthyr Tydfil. The Castle serves as the focal point of Cyfarthfa Park, a Grade II* registered historic landscape that spans 160 acres of mixed parkland. This landscape includes formal gardens surrounding the Castle, as well as lawned areas, landscaped play spaces, and woodland. Additional features of the park include the Canolfan visitor centre, café, and playground, located to the east of the Castle. Originally, the park served dual purposes: as the landscaped grounds for the Crawshay family and as a component of the water management system for the Ironworks. Following the sale of the Castle to the Council in the early 20th century, the park transitioned into municipal gardens for public enjoyment. Today, the site is also part of the Cyfarthfa Conservation Area.

More information on the site's history and significance can be found in the accompanying Heritage Impact Statement.

2.2 SUMMARY OF CONDITION

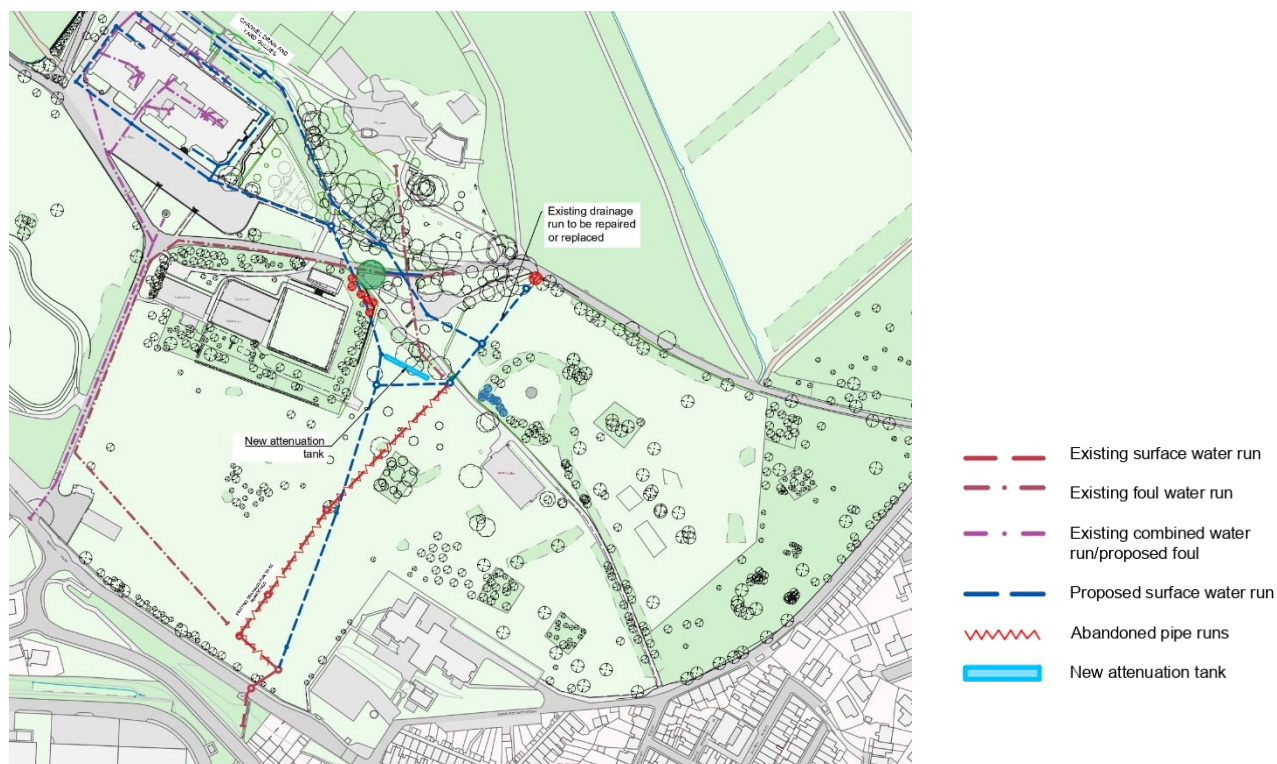
A significant factor contributing to damp within Cyfarthfa Castle is the poor performance of the local stormwater drainage system and the inadequate management of surface water runoff from the surrounding area. This includes a recurring issue with flooding in the former pitch-and-putt field near the bandstand and at the base of the adjacent hill close to the road.

CCTV drainage surveys conducted in February and March 2022 revealed that many drains were choked or blocked with debris. After clearing, the drains appeared functional, but numerous dislocated joints and fractures were identified, prompting recommendations to line many of the runs.

Given the poor drainage capacity of the local ground, works to these pipes is recommended to ensure efficient flow and water tightness.

3.0 PROPOSED WORKS

3.1 SUMMARY



Proposed drainage strategy (not to scale). Refer to accompanying documents for further details.

The proposal outlines a series of interventions aimed at improving drainage at Cyfarthfa Castle and Park. This project is critical to addressing ongoing water management issues, which have been causing significant deterioration to the Castle's fabric, particularly at basement level, due to heavy surface water runoff from the higher ground within the park. The proposed works are detailed in the accompanying documents and include the installation of new drainage connections and the repair of existing ones where necessary. Key interventions involve linking to the stormwater culvert at the southern site boundary to reduce system pressure, creating new connections to rainwater pipes on the Castle's east side, and directing water into a new below ground network comprising new pipework,

manholes and attenuation tanks prior to controlled discharge into the existing Dwr Cymru Welsh Water gravity sewer to the south of the development site.

The design of the drainage routes has been informed by collaborative discussions with Cadw, Merthyr Tydfil County Borough Council, Mann Williams (Structural Engineer), Abricon (ecology consultants), and Purcell (Conservation Architects). This collaboration ensured that the proposed routes avoid impacting key historic features, such as the formal gardens, bowling green, and areas of known lost structures like the early 20th-century lavatory block and a potential Edwardian teahouse.

More information about the proposal can be found in the accompanying Mann Williams report and proposed drawings.

3.2 SITE SPECIFIC CONSIDERATIONS

Archaeology

Cyfarthfa Castle and Park are located within Archaeologically Sensitive Area 1: Cyfarthfa Castle and Park.

The proposed drainage routes were determined on-site in collaboration with representatives from Cadw, Merthyr Tydfil County Borough Council, Mann Williams (Civil Engineers), and Purcell (Conservation Architects). The design prioritises the preservation of existing features, such as the formal gardens and bowling green, as well as lost historic features identified through mapping, such as the early 20th-century lavatory block and a possible Edwardian teahouse. Additionally, the proportions of the attenuation tank have been designed to align with the natural contours of the site's topography, thereby reducing the extent of excavation required.

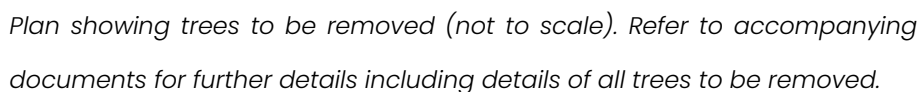
Further archaeological mitigation was undertaken in November 2024, with the excavation of four trial pits under a watching brief. No significant archaeological material was discovered, with the oldest finds consisting of domestic landfill from the early 20th century, including bottles and ceramics mixed with ash and cinder. These trial excavations have also

confirmed that the underlying bedrock is at a suitable depth, allowing excavation for below-ground tanks to proceed with conventional machinery.

It is anticipated that the Local Planning Authority will require an archaeological watching brief to accompany groundworks during the installation of new drainage systems, providing additional oversight.

If a small section of the historic wall between the south terrace and the Castle needs to be removed to facilitate the new perimeter drainage runs, it will be reinstated and restored to match its existing appearance. This will preserve the visual relationship between the historic boundary wall and the Castle's south elevation.

The construction of the new drainage runs and tanks will necessitate the removal of a number of trees.



Key considerations include:

- **Minimising Tree Removal:** The design avoids mature, significant trees wherever possible. Only lower-value trees. New trees will be planted elsewhere in the park to offset this loss.
- **Preserving Historic Landscape Integrity:** Hedging and vegetative screening behind the pavilion will be retained, ensuring the visual character of the area remains intact. The removal

of trees is limited to those that pose a risk or have minimal landscape value. The proposed drainage system also follows contours to minimise excavation and disruption.

- **Protecting Infrastructure:** The design ensures the castle's retaining walls and other structural elements are not undermined during excavation. In addition to this, the tree removal will target a young oak tree near the pavilion, which is too close to the same and could cause future structural issues.
- **Damage Mitigation:** The route has been chosen to address existing pipe damage caused by tree roots, including those to mature oak trees in certain areas.

The improvement of the drainage on site will also protect the integrity of the historic landscape into the future, helping to halt the loss of trees due to saturation and uprooting.