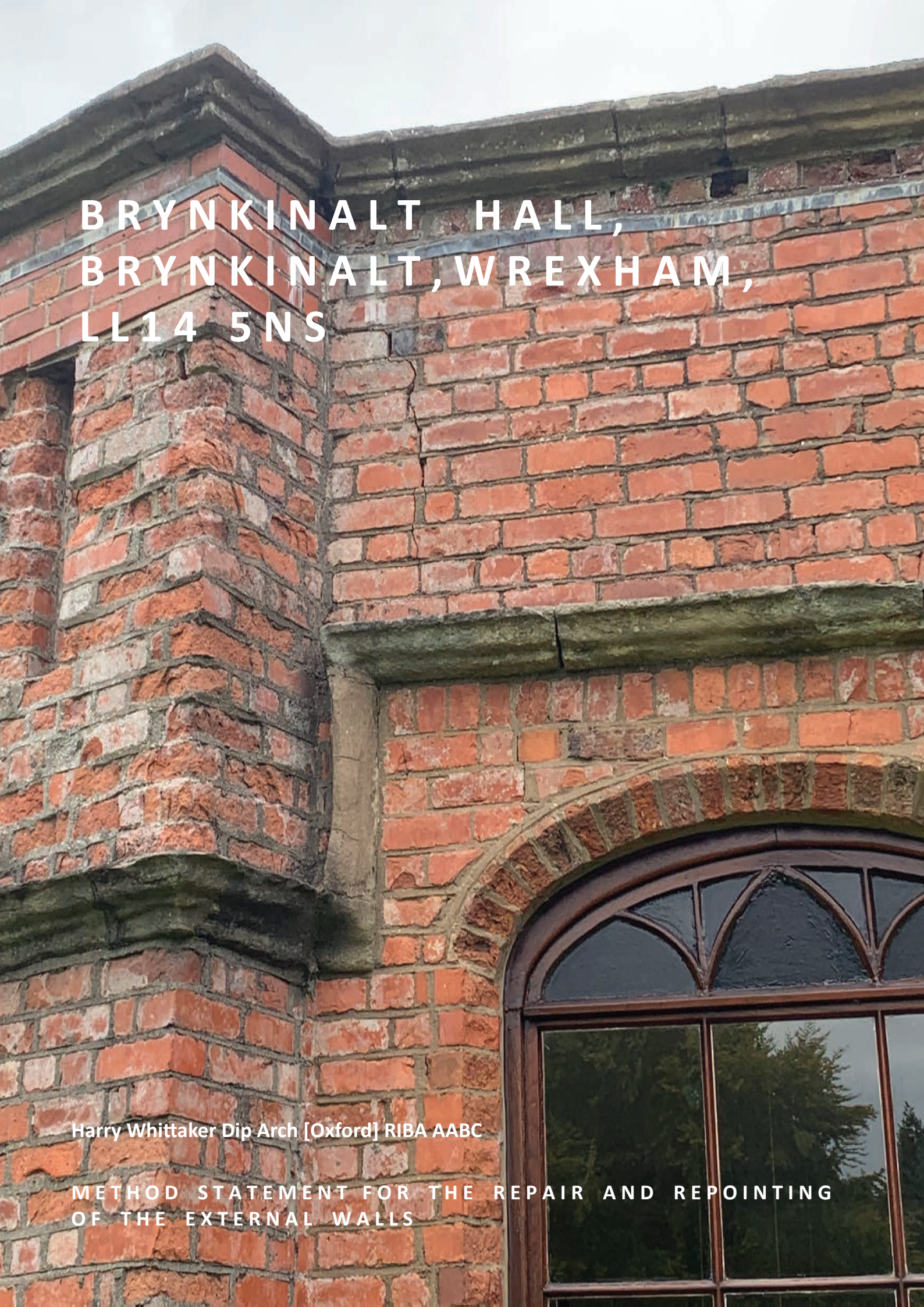


BRYNKINALT HALL, BRYNKINALT,WREXHAM, LL14 5NS

Harry Whittaker Dip Arch [Oxford] RIBA AABC

METHOD STATEMENT FOR THE REPAIR AND REPOINTING OF THE EXTERNAL WALLS

TABLE OF CONTENTS

1.0	Introduction	Page 03
1.2	Existing condition	Page 03
1.3	Masonry repairs	Page 03
1.4	Repointing	Page 03

BCA

BATH CONSERVATION ARCHITECTS

This report is for the sole use of the person / organisation to whom it is addressed. It may not be used or referred to in whole or in part by anyone else without the express agreement of Bath Conservation Architects Ltd. BCA does not accept liability or damage arising from any unauthorised use of this report.

1.1 INTRODUCTION

Following the request from Iain Hill Trevor of Brynkinalt Hall, we have carried out an inspection of the site and prepared the following specification/ method statement for the removal of the inappropriate hard cement mortar and its replacement with gauged lime mortar together with the proposed rebuilding of structurally insecure masonry.

This document describes the methodology behind the proposed repointing works and the need for further rebuilding works to the masonry.

1.2 EXISTING CONDITION

The house is built almost entirely of brick, although the quality of the brickwork varies from the differing phases of its construction. The principal 17th century front is an early use of brickwork in the area and was always meant to be exposed. Local sandstone was used as dressings around the door and window surrounds together with the continuous string course at each floor level. The quoins to each projecting wing and the decorative high-level Gable copings are also all in stone. Some sections of the stone string courses, drip moulds and cornices have been fitted with lead weathering. This will prolong the lifespan of the stonework and should be repeated elsewhere.

This brickwork was over rendered in the early 19th century to tie the masonry in with the new work of that period. This was subsequently removed in the 1920s and sometime later was re-pointed in a hard cement based mortar. It is this hard based cement mortar that has caused significant problems with the brick and stonework. As the early 19th century wings were always meant to be rendered they are built of a mixture of materials and methods of bonding.

The brickwork is generally a soft orangey red brick which has been affected with a frost attack, made considerably worse with the use of 20th century cement base mortar.

1.3 MASONRY REPAIRS

The detailed masonry repairs can be divided into the following categories of work.

- Repair works associated with the cement render removal to the east elevation and localised stabilisation and rebuilding of the brickwork beneath.
- Repair to areas of spalled brickwork. Repointing and patching in new replacement brickwork.
- Cutting out damaged stone window and door dressings, quoins and string-courses etc and bedding in new stonework to match.
- Lifting and rebedding coping stones and replacing damaged sections.
- Stabilisation of high level tower and turret stonework.
- Rebuilding sections of masonry which have suffered from structural movement.

This above is described in full detail in the accompanying schedule of repairs report.

1.4 REPOINTING

All areas of loose cement based pointing are to be repointed using the following as a guide -

Raking out the brick and stonework: Allow for raking out the existing joints to at least twice the depth of the joint width. This is to be carried out from the top down. All cement based or other non-original and inappropriate mortars should be carefully removed whilst avoiding damage to the soft brick and stonework. Hand tools such as plasterers' small tools, half hacksaw blades and specially made steel hooks are be used. Large chisels and any tools wider than the joint width itself are to be avoided. Power tools are not to be used for raking out. All loose and friable material is to be removed before repointing, All joints are to be brushed out and lightly sprayed with water (not under high pressure) to remove any remaining dust and debris

Mortar. All new mortar is to be a gauged lime mortar using moderately hydraulic powder lime (NHL 3.5).

Mortar mixing; allow for a provisional mix of 2.5 Sand: 1 NHL 3.5
Allow for a 50/ 50 mix of silver sand and coarse grit sand.

Repointing. As the existing stone is relatively porous, this will need to be wetted down to prevent water being drawn from the newly placed mortar into the masonry. In general, when mortar has stiffened up, it should be firmly compacted into the joints by beating with a stiff bristle brush. This will help eliminate any initial shrinkage cracking and ensure that the mortar is fully compacted into the joint with a good bond to the surrounding masonry. The surface should then

be lightly scraped back with the edge of the pointing tool or similar, to provide a rough, open-textured surface which is ideal for carbonation and curing, and for maximum evaporation of moisture from the joints once fully cured. Note the repointing should only be brushed back to just expose the edge of each brick and stone with a near flush finish. If the repointing is set too deep then this can cause water to sit on the surface and cause further damage to the masonry

Sample panel. Allow for providing a sample panel of pointing for approval by the Architect prior to the repointing works

In dry conditions avoid rapid drying by lightly spraying for at least 48 hours. Over-rapid drying will result in shrinkage cracking due to rapid loss of water and will inhibit curing. Provide protection to the new work using hessian and polythene sheeted panels placed against the face of the stonework.

Signed: .....

Harry Whittaker, Dip. Arch (Oxford) RIBA. AABC 26th April 2024





This page : Areas of early seventeenth century external wall which have been repointed in lime mortar





This page : Areas of early nineteenth century external walls which were originally rendered.