BAT DEROGATION LICENCE APPLICATION – BELVEDERE HOUSE & GARDENS HEAD GARDENER'S COTTAGE

Project Reference	220255-a
Date	11/08/2025
Subject	Belvedere House & Gardens Head Gardener's Cottage - Derogation License
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Introduction

MKO have been commissioned by Westmeath County Council c/o 7L Architects to carry out ecological surveys for conservation repair works to stabilise and conserve the Head Gardener's Cottage (IG Ref: N 42259 47911) at Belvedere House and Gardens, Mullingar, Westmeath.

MKO employs a dedicated bat unit within its Ecology team, experienced in scoping, carrying out, and reporting on bat surveys, as well as producing impact assessments in relation to bats. MKO ecologists have relevant academic qualifications, licences and are qualified in undertaking surveys to the levels required. The daytime inspection was carried out by licenced Bat Ecologist Aoife Joyce (BSc., MSc.) (DER-BAT-2025-117). The dusk emergence survey was carried out by licenced Bat Ecologist Ryan Connors (BSc., MSc.) (DER-BAT-2025-119) assisted by Cormac Roberts, an ecology intern at MKO.

This briefing note includes a brief description of the proposed conservation repair works, the survey works that have been undertaken by MKO and the proposed mitigation that is designed to ensure that there will be no adverse effects on protected fauna.

The bat surveys conducted in 2025 included an internal inspection of the cottage and adjacent shed on the 18th March 2025. Evidence of active bat use was identified externally, with small accumulations of droppings located above the first-floor northern and western windows of the cottage. No evidence of roosting bats was found within the interior of the cottage or the adjacent shed and no attic space exists.

A dusk emergence survey was conducted on the 3rd June 2025 and focused on the cottage with two surveyors and two night vision aids (thermal cameras) used. Five Soprano pipistrelles were observed emerging from three separate locations (3no. from one location and 1no. from the other two locations).

The proposed works have been carefully designed to minimise the potential for impacts on bats, their commuting corridors, or other ecological receptors. The works are funded under the BHIS25 Grant Scheme, which expires on 24th October 2025. This funding deadline imposes a strict time constraint, which will require bespoke mitigation measures and careful planning to ensure that bat protection measures are effectively implemented within the permitted timeframe.

Background

Proposed Activity

The proposed works involve roof repairs to the southern section of the Head Gardener's Cottage at Belvedere House, including one chimney, the dormer window, and the porch (See Appendix 2 – Reduced Scope Roof Plan). Works will require the erection of scaffolding, the removal and inspection of rainwater goods, fascia, soffits, clay capping stones, and existing roof slates. Lead linings, soakers, and flashings will be removed, along with associated timber battens, felt, and deteriorated slates. Four clay chimney pots will be removed and set aside for reuse. All works will be undertaken with care to protect existing ceilings and roof timbers, and the roof structure will be inspected in consultation with the conservation architect.

**Appendix 1 contains the original full-scope Method Statement, which has since been superseded; it is included for background on the building's context and condition, while the updated and agreed proposed works are set out in Appendix 2 – Reduced Scope Roof Works.*

Location

The site of the proposed works area is Belvedere House & Gardens Head Gardener's Cottage located close to Mullingar, Co. Louth. (IG Ref: N 42259 47911).

Ownership

The cottage is in the ownership of Westmeath County Council as part of Belvedere House & Gardens, a popular public amenity.

Reason for Activity

The Head Gardener's Cottage is a late nineteenth-century stone-built dwelling located within the Belvedere House and Gardens estate, a publicly accessible heritage amenity in Co. Westmeath. While the cottage itself is not a protected structure, it forms part of the historic Belvedere demesne, which contains a number of designated heritage assets, including Belvedere House (RPS 026-013). The building retains much of its original character, including rubble limestone walls with handmade brick detailing, Bangor blue slate roofing, and distinctive chimney stacks. Recent inspections by 7L Architects have identified deterioration to the southern roof section, including defective rainwater goods, decayed fascia and soffit boards, damaged roof slates, and degraded lead flashings and valleys. Localised timber decay and water ingress have also been noted.

The aim of the proposed works is:

- To safeguard the structural and architectural integrity of the building by addressing urgent maintenance issues affecting the southern roof section, including defective chimneys, roof coverings, and rainwater disposal systems.

- To allow for the careful removal, inspection, and reuse of original materials such as slates, capping stones, and chimney pots, in keeping with conservation best practice.

- To prevent further deterioration, ensure the roof remains weather-tight, and enable ongoing custodianship and potential future adaptive reuse by Westmeath County Council.

Planning History

No formal planning history is currently available for the Head Gardener's Cottage. The structure forms part of the Belvedere House & Gardens estate, a publicly owned amenity managed by Westmeath County Council.

Proposed Works

As outlined in the Reduced Scope Roof Plan (Appendix 2), the proposed works will address defects to the southern roof section of the Head Gardener's Cottage, including one chimney, the dormer window, and the porch. Works will involve the removal and inspection of all rainwater goods, fascia, and soffit boards; the careful lifting and reuse of clay capping stones; and the stripping of existing roof slates. Damaged or degraded slates will be disposed of, while reusable slates will be cleaned, sorted, and reinstated. Existing lead linings to pitched valleys, soakers, and flashings will be removed along with associated timber supports and battens, and replaced in line with conservation best practice. Four clay chimney pots will be removed and stored for reuse, with defective pointing to be raked out carefully to avoid masonry damage.

Protective measures will be implemented to safeguard ceilings and exposed areas before works commence, and temporary protection will be provided to roof timbers during the construction phase. All timberwork will be inspected in consultation with the conservation architect to identify any necessary repairs or replacement.

All works will be carried out in a manner sensitive to the building's historic fabric and in accordance with conservation best practice. The works are scheduled to take place outside the main bat activity period (May–August), following the granting of a derogation licence and the completion of a pre-commencement bat survey. It is anticipated that the project will be completed by the end of October 2025, in line with BHIS 2025 Grant Scheme timelines.

Ecological surveys and site assessment

Existing Information

National Biodiversity Data Centre

A review of the National Bat Database of Ireland on the 14th July 2025 yielded results of bats within a 10km hectad of the proposed works. The search yielded 8 bat species within 10km. Table 1 lists the bat species recorded within the hectad which pertains to the proposed works site (N44).

A review of the NBDC bat landscape map provided a habitat suitability index of 23.44 (yellow). This indicates that the proposed development area has low-moderate habitat suitability for bat species.

Table 1 NBDC Bat Records

Hectad	Species	Date	Database	Status
N44	*Brown Long-eared Bat (Plecotus auritus)*	06/12/2023	National Bat Database of Ireland	Annex IV

N44	*Common Pipistrelle (Pipistrellus pipistrellus sensu stricto)*	06/12/2023	National Bat Database of Ireland	Annex IV
N44	*Daubenton's Bat (Myotis daubentonii)*	06/07/2006	National Bat Database of Ireland	Annex IV
N44	*Leisler's bat (Nyctalus leisleri)*	09/06/2016	National Bat Database of Ireland	Annex IV
N44	*Nathusius' Pipistrelle (Pipistrellus nathusii)*	29/05/2009	National Bat Database of Ireland	Annex IV
N44	*Natterer's bat (Myotis nattereri)*	06/12/2023	National Bat Database of Ireland	Annex IV
N44	*Pipistrelle (Pipistrellus pipistrellus sensu lato)*	09/06/2016	National Bat Database of Ireland	Annex IV
N44	*Soprano pipistrelle (Pipistrellus pygmaeus)*	09/06/2016	National Bat Database of Ireland	Annex IV

Designated Sites

Within Ireland, the Lesser horseshoe bat is the only bat species requiring the designation of Special Areas of Conservation (SACs). The site is situated outside the current known range for this species and there are no SACs designated for its protection within 10km of the proposed works area.

No Natural Heritage Areas (NHAs), or proposed NHAs, designated for the protection of bats were identified within 10km of the proposed works area.

Status of species in local/regional area

Table 2 Irish Bat Species Conservation Status and Threats (NPWS, 2019). Pressures and Threats are ranked from medium importance (M) to high importance (H) in the 2019 Article 17 report.

Bat Species	Conservation Status	Principal Threats
Common pipistrelle *Pipistrellus pipistrellus*	Favourable	**A05** Removal of small landscape features for agricultural land parcel consolidation (M) **A14** Livestock farming (without grazing) [impact of anti-helminthic dosing on dung fauna] (M) **B09** Clear-–cutting, removal of all trees (M) **F01** Conversion from other land uses to housing, settlement or recreational areas (M) **F02** Construction or modification (e.g. of housing and settlements) in existing urban or recreational areas (M) **F24** Residential or recreational activities and structures generating noise, light, heat or other forms of pollution (M) **H08** Other human intrusions and disturbance not mentioned above (Dumping, accidental and deliberate disturbance of bat roosts (e.g. caving) (M) **L06** Interspecific relations (competition, predation, parasitism, pathogens) (M) **M08** Flooding (natural processes) **D01** Wind, wave and tidal power, including infrastructure (M)
Soprano pipistrelle *Pipistrellus pygmaeus*	Favourable	
Nathusius' pipistrelle *Pipistrellus nathusii*	Unknown	
Leisler's bat *Nyctalus leisleri*	Favourable	
Daubenton's bat *Myotis daubentoni*	Favourable	
Natterer's bat *Myotis nattereri*	Favourable	
Whiskered bat *Myotis mystacinus*	Favourable	
Brown long-eared bat *Plecotus auritus*	Favourable	

Survey Objective(s)

The main objective of the surveys was to gather information on roosting, commuting, and foraging bats using the site and to identify any important features for bats. The surveys were designed to determine the nature,

scale, and locations of potential bat activity in the cottage and to assess the need for further surveys or recommendations to safeguard bats.

Description of Survey Area

As described in Appendix 1 – Method Statement (Original Scope – Superseded), the survey area comprises the Head Gardener's Cottage and its immediate surroundings, located within the Belvedere demesne on the shores of Lough Ennell, Co. Westmeath. The building is roughly rectangular with a gable-fronted east end, covered by Bangor blue slate roofs with prominent brick chimneys and a small dormer to the front.

Adjacent to the cottage, but not part of the proposed works, is a small stable and outhouse with a monopitch roof, situated opposite the rear of the main house within a narrow courtyard secured by timber doors. The cottage walls consist of squared limestone rubble with handmade brickwork quoins and window surrounds, some of which have been replaced with modern double-glazed timber casement windows. The external fabric shows signs of age-related repairs, including patches of cement pointing and areas requiring redecoration and repointing.

The surrounding demesne features mature vegetation and habitats suitable for foraging and commuting bats, contributing to the ecological value of the site.

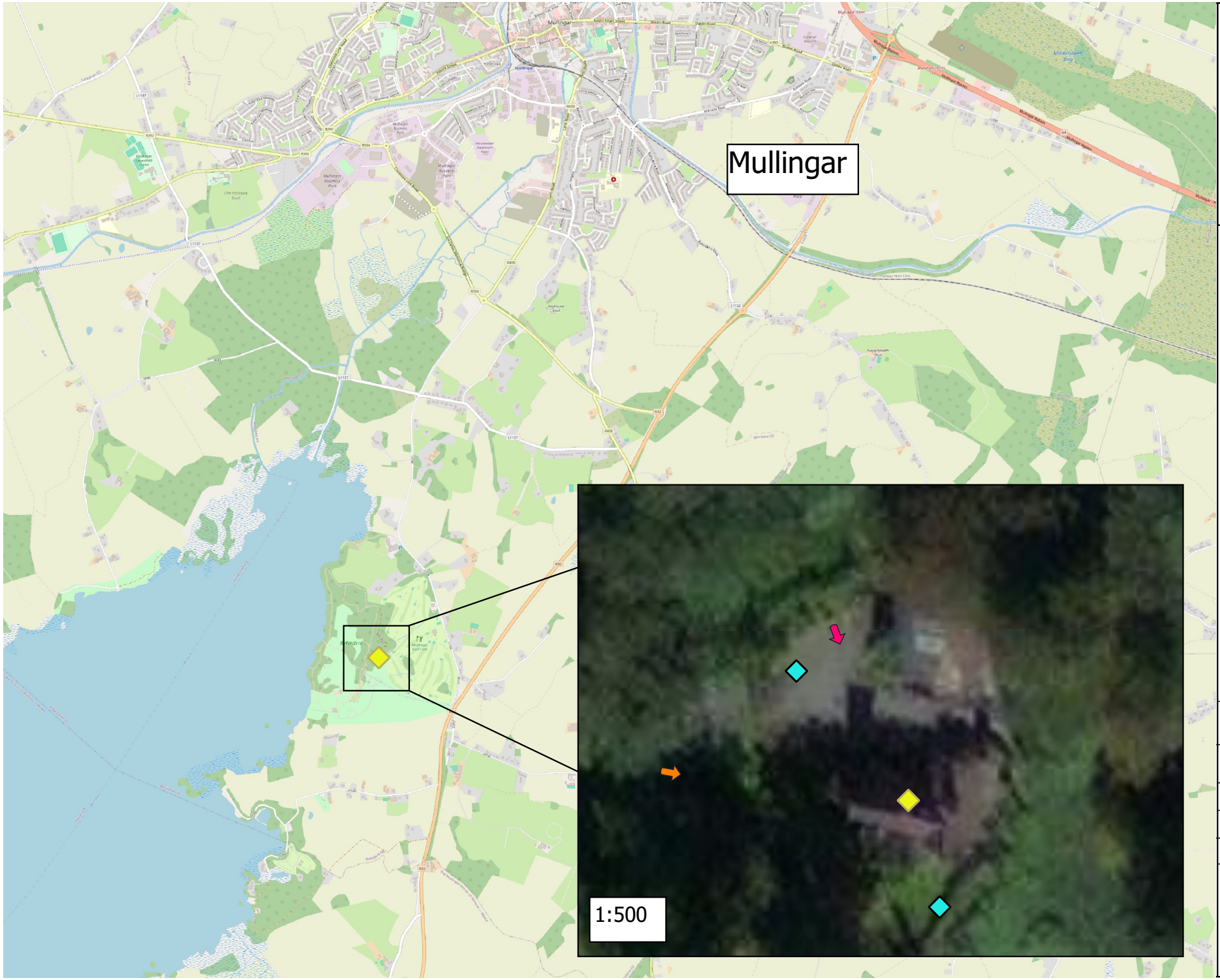
Survey Methodology

A daytime inspection was conducted on the 18th March 2025 followed by a dusk emergence survey on the 3rd June 2025 by two MKO bat ecologists to assess the Head Gardener's Cottage for its potential to support roosting bats. Full access to the building and associated outbuildings was provided. The inspection included a thorough examination of all accessible internal spaces, as well as an external inspection from ground level. Equipment used included torches, an endoscope, a thermal camera, and binoculars to search for evidence of bat activity such as live or dead bats, droppings, feeding remains, urine staining, fur oil marks, or vocalisations, as well as potential access points.

During the dusk emergence survey, one surveyor was positioned to the north of the cottage, where the main roof elevation and likely emergence points could be clearly observed. The second surveyor was located on the southern side, to ensure full coverage of the building. The survey aimed to record bat species, emergence locations, approximate numbers, and flight behaviour. Night vision aids (NVAs), including two thermal imaging cameras and two full-spectrum bat detectors, were used to support visual observations. The survey commenced 15 minutes before sunset and continued for approximately 1.5 hours after sunset. The survey effort is summarised in Table 3 and Figure 1 below.

Table 3 Bat Activity survey effort

Date	Surveyors (initials)	Survey Type	Sunrise/ Sunset	Start	End	Weather
3rd June 2025	Ryan Connors & Cormac Roberts	Dusk Emergence	21:50	21:35	23:20	12-10°C, Dry, Calm, Moon 50%, Cloud cover 100-80%



Map Legend

- Head Gardeners Cottage
- Surveyor Locations

NVA Locations

- Thermal Camera 1
- Thermal Camera 2

N

Drawing Title	Site Location & Survey Effort
Project Title	Belvedere Head Gardeners Cottage
Drawn By: RC	Checked By: AJ
Project No.: 220255-a	Drawing No.: Figure 1
Scale: 1:40,000	Date: 2025-07-18

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Survey Results

During the internal inspection of the cottage and adjacent shed on 18th March 2025, no evidence of active roosting (e.g. live or dead bats, staining, or accumulations of droppings) was recorded within the interior of either structure and no attic space exists within the structure. However, small accumulations of bat droppings were identified externally above the first-floor northern and western windows of the cottage, indicating likely use of the structure by roosting bats.

The dusk emergence survey confirmed emergence activity by soprano pipistrelles (*Pipistrellus pygmaeus*), with five individuals observed emerging from three separate locations along the north and south elevation of the cottage:

- One bat observed emerging from the soffit of the north-facing gable (Plate 1).
- Three bats were observed emerging from an access point in the fascia on the gable of the south-facing porch (Plate 2).
- One bat was observed emerging from the fascia/soffit of the south-facing first floor dormer window (Plate 2).

No evidence of a maternity roost or large aggregation was observed during the survey, and no other bat species were recorded emerging from the structure. However, occasional commuting and foraging passes by both soprano pipistrelle and Leisler's bats (*Nyctalus leisleri*) were recorded foraging in the surrounding habitat during the dusk emergence survey.

No roost of ecological significance (e.g. maternity roost) was identified within the site. However, the building does exhibit features with potential to support occasional or opportunistic use by bats for day or night roosting, particularly within areas of the roof. Small accumulations of droppings were noted internally (Plate 3), indicating low-level or intermittent usage. While the wider demesne offers suitable foraging and commuting habitat, the evidence does not suggest the presence of a significant or regularly used roost.

Plate 1: Head Gardener's Cottage roost entrance locations. North-facing gable (left circle) 1 no. soprano observed emerging from soffit. West-facing first-floor window (right circle) with small accumulations of droppings; while no emergence was recorded here, a potential emergence point above the window is circled (See Plate 3).

Plate 2: 1no. Soprano pipistrelle emerged from soffit of south facing dormer window (left circle). 3 no. soprano pipistrelles emerged from fascia at apex of porch gable (right circle).

Plate 3: Bat droppings on west-facing window

Population size and class assessment

Surveys carried out in 2025 confirmed the presence of a small soprano pipistrelle roost within the Head Gardener's Cottage. A total of five individuals were observed emerging from three separate locations on the north and south elevations with one additional location on the west elevation suspected as a potential emergence point during a dusk emergence survey conducted on 3rd June 2025.

No evidence of a maternity roost or larger aggregation was identified, and no other bat species were recorded emerging from the structure. The observed activity is consistent with a day or nights roost, likely used by a small number of individuals for short-term shelter. No evidence of roosting bats was recorded within the adjacent shed.

In line with current guidance, and based on the low number of bats recorded, the common species involved, and the lack of breeding activity, the roost is not considered to be of ecological significance (NRA, 2006). The soprano pipistrelle, which was the only species recorded roosting, is currently assessed as having a *favourable conservation status* in Ireland (NPWS, 2019, See Table 2 above). Nonetheless, as a legally protected roost, it must be fully accounted for in the planning and scheduling of any proposed works.

Evidence to support the Derogation Tests

The NPWS document, *Guidance on the Strict Protection of Certain Animal and Plant Species under the Habitats Directive in Ireland* - National Parks and Wildlife Service Guidance Series 1 (2021), was reviewed before undertaking this derogation application.

Article 16 of the Habitats Directive sets out three pre-conditions, all of which must be met before a derogation from the requirements of Article 12 or Article 13 of the Directive can be granted. These preconditions are also set out in Regulation 54 of the Regulations.

The preconditions are:

1. A reason(s) listed in Regulation 54 (a)-(e) applies
2. No satisfactory alternatives exist
3. Derogation would not be detrimental to the maintenance of a population(s) at a favourable conservation status.

It is believed that the pre-conditions for granting a derogation licence have been met, as follows:

Test 1 – Reasons for Seeking Derogation

Regulation 54(2) (a)–(e) states that a derogation licence may be granted for any of the reasons listed (a) to (e). We are of the opinion that the following reasons apply:

> (c) In the interests of public health and public safety, or for other imperative reasons of overriding public interest, including those of a social or economic nature and beneficial consequences of primary importance for the environment.

The original scope was to carry out full roof repairs to the Head Gardener's Cottage at Belvedere (see Appendix 1). However, this has been amended to a reduced scope focusing on the southern section of the building, including one chimney, the dormer window, and the porch (see Appendix 2). Works will include the removal and inspection of rainwater goods, fascia, soffits, clay capping stones, and roof slates; the replacement of lead linings, soakers, and flashings; and the removal and reinstatement of four clay chimney pots. Without timely intervention, these issues will likely lead to further water ingress, timber decay, and potential structural instability.

The cottage is of local architectural and historical value and lies within the grounds of Belvedere House and Gardens, a publicly accessible amenity. Members of the public have full access to the grounds surrounding the demesne, and the presence of an unstable, unoccupied building presents a health and safety risk.

The building remains unoccupied due to its current condition, but the intention is to restore it for future use. The proposed conservation-led interventions are therefore necessary not only to safeguard the structure but also to protect public health and safety and preserve this heritage asset for future community benefit.

Test 2 – There is no Satisfactory Alternative

There is no satisfactory alternative to the essential roof repairs proposed. The reduced scope, agreed following review of the original full building works, targets only the southern section of the roof. This approach minimises

the scale of intervention and reduces potential disturbance to bats while still addressing key structural and safety risks.

Avoiding or delaying the works would allow ongoing deterioration of defective rainwater goods, leadwork, and roof coverings, leading to increased water ingress, timber decay, and potential instability. In the long term, this would threaten both the building's integrity and the bat roosting features it currently supports.

To minimise disturbance, the works are scheduled outside the peak bat activity period (May–August), with completion before 24th October 2025 to meet funding deadlines and avoid the safety and conservation risks of winter work.

Do-nothing scenario: If repairs are not undertaken, the condition of the roof will continue to deteriorate, likely resulting in the loss of bat roosting opportunities, reduced ecological value, and more complex, invasive, and costly future conservation works.

Test 3 – Favourable Conservation Status

Annex IV species must be maintained at Favourable Conservation Status or restored to favourable status if this is not the case at present. The net result of granting a derogation licence must be neutral or positive for the species in question.

Surveys conducted in June 2025 identified a small number of Soprano pipistrelles within the aforementioned structure. These findings suggest that the structure is used opportunistically by a small number of bats which are common and widespread in Ireland. The structure does not contain a significant roost i.e. maternity.

A pre-commencement survey will be carried out, to identify any potential changes in the baseline since the surveys were completed. Repair works will be undertaken outside the main bat maternity period (May – August). Implementation of the recommended mitigation within this letter will ensure that there will be no negative impacts to potential roosting bats when works will be undertaken. Alternative roosting locations will be provided which gives roosting opportunity to other bats species also. No significant impacts are anticipated on the local population of soprano pipistrelle or their favourable conservation status.

Monitoring the Impacts of the Derogations

The following measures will be undertaken to ensure that any sensitive fauna which may be located within the structure are adequately protected during the proposed works.

- As bats were observed emerging from the structure, a bat derogation licence will be obtained from NPWS prior to the commencement of works.
- Works will be undertaken outside the main bat activity period (May - August). The works are proposed to take place between September and October 2025 to avoid the main bat activity period.
- Prior to the commencement of works, a toolbox talk will be undertaken to ensure that all staff members are fully aware of the sensitivities of the site i.e. existing soprano pipistrelle roost.
- Scaffolding is not to be sheeted in the areas surrounding the identified bat roost entrances and must be erected in a manner that ensures continued access.
- Scaffolding must be positioned so that it does not obstruct access to the roosting areas – a minimum 1m clearance must be maintained around all identified roost entrances.
- No artificial lighting is proposed as part of the proposed works.
- As five Soprano pipistrelle bats were identified emerging from the structure during the dusk emergence survey, from three separate fascia/soffit locations, a pre-commencement endoscope and visual inspection survey is recommended to ensure there are no roosting bats present in the building prior to works at the identified roost entrances. This includes two confirmed emergence locations on the south aspect of the structure and one additional location on the west aspect where emergence was not observed but where

evidence of use (i.e., droppings) suggests potential roost access (Appendix 2). No works will be carried out on the north side of the structure where one roost location exists. The requirement for a pre-commencement survey does not represent a lacuna in the survey assessment but is fully in line with industry best practice, and will serve to assess any changes in baseline conditions since the survey undertaken in June 2025.

- It is recommended that an ecologist be present during works at the identified roost locations. This will allow for:
  - Confirmation of bat presence/absence at the time of works
  - Verification of the nature of the roost
  - Will provide guidance on appropriate reinstatement or replacement of roosting features

- All works at or around the identified roost locations (e.g. fascia boards, soffits, slates) must be carried out using hand tools only, to minimise disturbance and avoid harm to any bats that may still be present.
- To offset the loss of roosting opportunities, it is recommended that suitable bat roosting features be incorporated into the reinstated roof. Options may include bat access slates, soffit-mounted bat boxes, or other purpose-designed bat roost units, subject to feasibility.
- Where roof and fascia/soffit works are required, the identified roost access points—comprising two confirmed and one suspected fascia/soffit entrance locations—are likely to be impacted during essential repairs. To maintain roosting opportunities, purpose-designed soffit roost boxes will be installed at each of these four locations to replicate existing roost conditions and ensure continuity of access for bats post-works. As an additional enhancement measure, bat access slates may also be installed under ridge tiles or within the main roof slope where feasible, to provide further roosting opportunities within the structure.
- Renovation works will employ bat-friendly construction materials:
  - New roofing felt will consist of bat-safe membrane in the immediate vicinity of bat access points (approximately 1 m^2 around bat slates), with a breathable membrane used elsewhere.
  - Where remedial timber treatment is required, it is recommended to use pre-treated timber, which is dried before being used in close proximity to identified roost locations.

The surveys and recommendations provided in this report are in accordance with the relevant industry guidance. Provided that the works are carried out in accordance with the measures outlined within this report, no impacts on bats are anticipated at any geographic scale.

APPENDIX 1

Method Statement (Original Scope – Superseded)

7L
ARCHITECTS

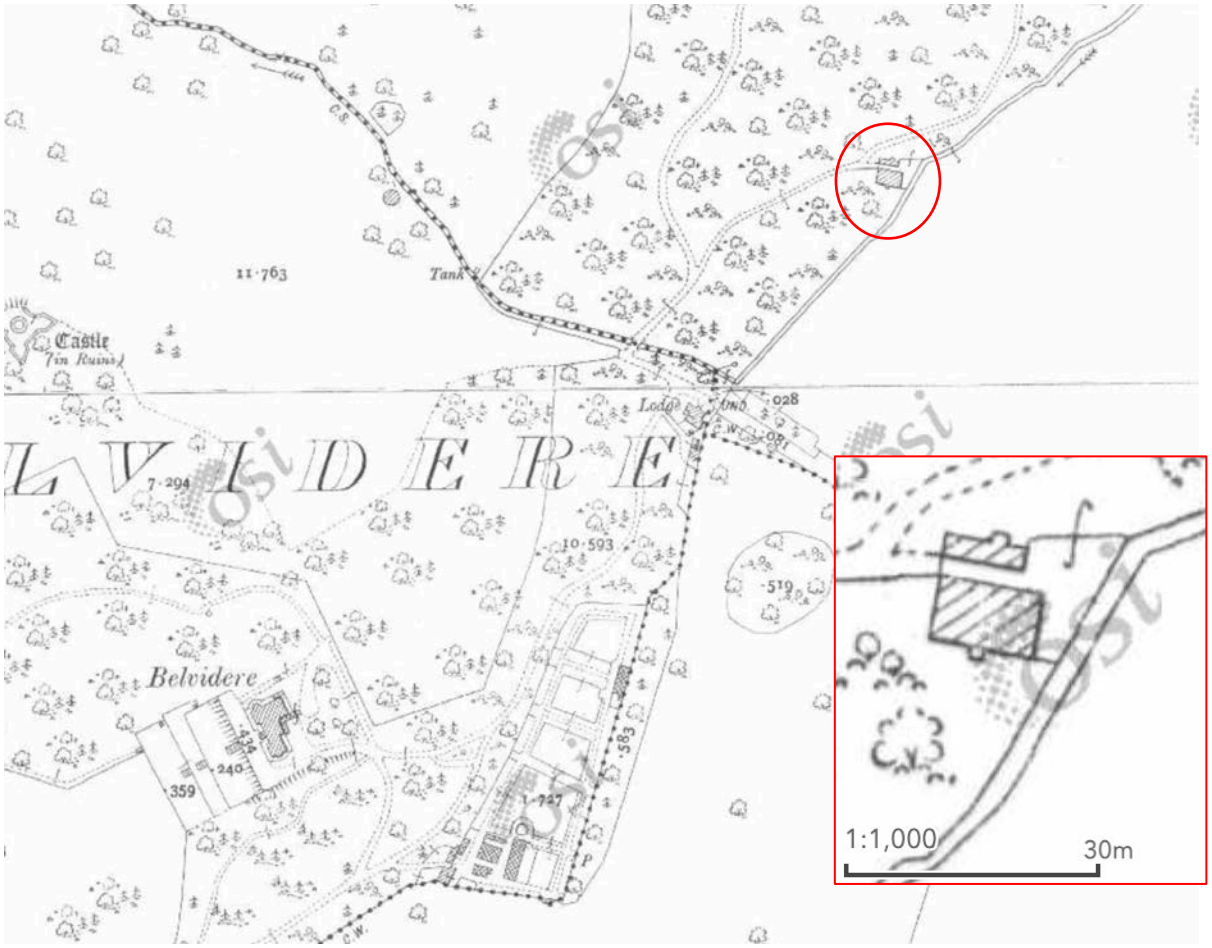
Head Gardener's Cottage
Belvedere House & Gardens

Conservation Repair Works

Method Statement in support of the BHIS2025 application including photographic survey

23_44 ML

May 2024


Castle
(in Ruins)
Belvidere
Lodge
1:1,000
30m


BELVIDERE

Description

The Head Gardener's Cottage at Belvedere, a demesne on the shores of Lough Ennell in Co Westmeath and a protected structure (026-013). The cottage dates from the late nineteenth century and was occupied up until recently. It is in the ownership of Westmeath County Council as part of Belvedere House & Gardens, a popular public amenity. The house is approached along a curving drive from one of the main walks to the north of the visitor centre. A small stable and outhouse under a monopitch roof is set opposite the rear of the house with a narrow courtyard secured with a pair of timber doors. Walls are faced with squared limestone rubble with handmade brickwork quoins and surrounds to the openings. Its east wall has a ruled ashlar render in fair condition. Although roughly rectangular in plan, it has a gable fronted east end with a lower roof to an outshot used as a kitchen. Its roofs are covered with Bangor blue slates with prominent brick chimneys with fluted clay pots and a small dormer to the front. A porch was added in the late twentieth century using textured concrete blocks and a pitched roof. External door and window joinery has all been replaced with new double glazed timber casement windows. Although sympathetic to the appearance of the house, we have no evidence of their original design. Inside is a hall with a stairs, with a living room to one side, and a dining room to the other. Upstairs are two spacious bedrooms and a box room.

While there is some patches of cement pointing, most of the walls have retained lime mortar. Barge boards require redecoration and some splice repairs to decayed sections. Half round gutters are blocked up and in need of redecoration and re-fixing in places. Chimneys need flaunching and repointing. Of most concern in the inspection of the house was the presence of possible dry rot on one of the window boards. There are other areas of concern where there appears to have been some patch repairs and signs of dampness. The walls below the central chimney, which appears to have been rebuilt post 1950, are covered in mould. Some investigation will be necessary to identify the full extent of rot damage, but another indication is cracking above the window head on the south façade which may relate to a rotten lintel, hidden behind plasterboard.

The proposed works funded under the BHIS 2025 Grant Scheme include the following, to be reviewed following localised opening up of areas of concern:

- The raking out and repointing of the chimneys, to include re-lining of flues, repair of brickwork and flaunching with lime mortar. Localised repair of slipped slates.

- Taking down, cleaning, redecorating and refixing gutters and downpipes, replacing missing or corroded sections. Repair/ redecoration of barge and eaves boards.

- The opening up of the window lintel, replacement with new concrete lintel and making good of finishes. Localised repointing of cracks over the lintel to stonework externally.

- Finishes such as carpets and drapes should be removed, along with damaged wall or ceiling plaster to allow inspection and improved ventilation implemented.

- Removal of any areas of rot identified ensuring that structural timbers are inspected and rotten timbers removed along with structural repairs.

REAR GABLE W/ WATER TANK

CRACK OVER WINDOW HEAD

MISSING GUTTER TO GABLE

VIEW FROM APPROACH (WEST SIDE)

VIEW FROM SOUTH

RUBBLE & BRICKWORK

YARD & TIMBER GATES

REPOINTING NEEDED TO CHIMNEY

DAMPNESS AT FLUE

BEDROOM & DORMER WINDOW

ORIGINAL BOARDED DOOR

VIEW OF DAMP AT SKIRTING LEVEL TO LIVING ROOM

DRY ROT TO WINDOW BOARD

DAMPNESS OVER STAIRS

DRY ROT TO WINDOW BOARD

POSSIBLE ROT TO JOIST ENDS

Methodology for the Protection of historic fabric

Site access should be controlled and the perimeter closed off and secured for the duration of the works.
Care must be taken to ensure that adjacent areas are protected from accidental damage, fenced off or boxed out in plywood as necessary.
Removals of unstable masonry are to be carefully sequenced, after assessment of the risk of consequential damage, rather than pulled out using mechanical means.
Temporary propping or strapping of walls, openings may be required in advance of repairs commencing.
Historic fabric should be suitably protected during the works.
Care shall be taken not to damage the ground and public areas during works.
Contractor to limit access to areas undergoing works and protect the ground from contamination by builder's refuse or from damage.
Any damage to the ground shall be repaired and the site cleared and made good, to the satisfaction of the CA at the expense of the contractor prior to handover.
The method statement for the specific design and construction of the protection must be agreed with the CA.
Hoarding (framework/sheeting) shall be constructed using non-ferrous screw fixings to facilitate ease of alteration/inspection. Nails shall not be used.
The form, construction and materials used must be sufficiently robust to protect historic features from falling items/debris from above.
Under no circumstances shall the protection measures fix into the historic fabric unless previous agreement with the CA.
The contactor shall facilitate the opening and closing of hoarding/protection as directed by the CA for the purposes of inspection.
Protection measures are to be inspected by the site supervisor daily and maintained/repaired as necessary.

Repairing/ renovating/ conserving masonry

Generally/ preparation

Scope of work

Schedule:

- Re-pointing of stonework and brickwork.
- Consolidation and repair / renewal of stonework and brickwork.

Works must only be carried out by specialists with extensive experience in repairing and re-pointing historic fabric. Submit evidence of competence.

Records of masonry to be repaired: Before starting work, use measurements and photographs as appropriate to record existing masonry.

Identification of masonry units to be removed and replaced or repaired and repointed to be agreed with conservation architect. Mark clearly, but not indelibly, on face of masonry units or parts of units to be cut out and replaced. Transcribe markings to drawings/ photographs.

Site inspection

Purpose: To confirm type and extent of repair/ renovation/ conservation work .

Parties involved: Conservation Architect

Instructions issued during inspection: Confirm in writing, with drawings and schedules as required, before commencing work

Raking out of pointing

Rake out all existing pointing using a fine-toothed mason's saw and hooked knife blade.

Removal of fittings/ fixtures

Remove: all existing redundant timberwork, metalwork and services

Record of work

General: Record work carried out to masonry clearly and accurately using written descriptions, sketches, drawings and photographs, as necessary.

Specific records: Mason to take good quality before, during and after photographs and forward to conservation architect for records.

Documentation: Submit on completion of the work.

Workmanship generally

Power tools

Usage for removal of mortar: Pointing mortar:
Permitted only stitch drilling in centre of large very hard cementitious joint for removal of old pointing. Use of disc cutters is not permitted.

Protection of masonry units and masonry

Masonry units: Prevent overstressing during transit, storage, handling and fixing. Store on level bearers clear of the ground, separated with resilient spacers. Protect from adverse

weather and keep dry. Prevent soiling, chipping and contamination. Lift units at designed lifting points, where provided.

Masonry: Prevent damage, particularly to arrises, projecting features and delicate, friable surfaces. Prevent mortar/ grout splashes and other staining and marking on facework. Protect using suitable non-staining slats, boards, tarpaulins, etc. Remove protection on completion of the work.

Structural stability

General: Maintain stability of masonry. Report defects, including signs of movement that are exposed or become apparent during the removal of masonry units.

Disturbance to retained masonry

Retained masonry in the vicinity of repair works: Disturb as little as possible.

Existing retained masonry: Do not cut or adjust to accommodate new or reused units.

Retained loose masonry units and those vulnerable to movement during repair works: Prop or wedge so as to be firmly and correctly positioned.

Workmanship

Skill and experience of site operatives: Competent for types of work on which they are employed.

Documentary evidence: Submit on request.

Adverse weather

General: Do not use wet or frozen sand or lime and do not lay masonry units on frozen surfaces. Store all binders in frost-free conditions. Do not use frozen mortar for bedding, pointing.

Air temperature: Do not bed masonry units or repoint:

In hydraulic lime: Lime and sand mortars not to be applied when ambient air temperature is at or below 5°C and falling or the week weather forecast is below 5°C. If sudden drop in temperature occurs use propane gas heaters.

Temperature of the work: Maintain above freezing until mortar has fully set. At 20°C and 90% humidity NHL may achieve frost resistance after 90 days. At 10°C it will reach it in 135 days. Ideally work should be carried out between April and October.
If this is not achievable, always provide full protection of the work during application and curing. Protect scaffold all the way to the top lift.

Rain, snow and dew: Protect masonry by covering during precipitation, and at all times when work is not proceeding.

Hot conditions and drying winds: Prevent work from drying out rapidly. Protect from wind with multiple layers of hessian or old woollen blankets draped against or close to the work. Spray to keep damp, not wet. Damp coverings on weekend, make provision. Provide scaffold sheeting, if plastic hung at least 100mm from face of wall. Protect also top lift of scaffold with sheeting or tarpaulins to avoid driving rain for at least first few weeks to avoid leaching. In good weather 15 days is long enough for protection. 20 days or longer if cold, longer if wet and windy.

New mortar damaged by frost: Rake out and replace.

Protection of lime work: All works require adequate protection until fully cured. Protect from rapid drying out from wind and direct sun and allow for air to circulate. New lime

works will need to be dampened regularly (by lightly spraying). Plasterer/mason to forward proposed plan for protection suited to time of year and wall location and factor in aftercare when assessing works. (It is expected dampened multilayers of hessian will be used.)

Control samples

General: Complete an area of each of the following types of work, and arrange for inspection before proceeding with the remainder

S1: one square meter of pointing on granite in east link with Otterbein NHL2 and sand

Materials/ production/ accessories

Material samples

Representative samples of designated materials: Submit before commencement

Retention of samples: Unless instructed otherwise, retain samples on site for reference. Protect from damage and contamination.

New Stone

Standard: BSEN 771-6 for new stone.
Also comply with BS 5628-3:2001 sections 4 and 5.
It is essential that replacement stone – either from the original quarry or, where the original is no longer available, an alternative source – is compatible with the existing. Compatibility includes durability, porosity, colour and texture. Lead in times can be critical; allowance must be made for sourcing sufficient quantities and for seasoning.

Supplier: Submit proposal and provide sample before order is placed. Sample to be sufficiently large to show natural variations and specified finishes before ordering. The contractor shall be responsible for site measurement and provision of templates.

Quality: Free from vents, cracks, fissures, discolouration, or other defects that may adversely affect strength, durability or appearance. Thoroughly seasoned, dressed and worked in accordance with shop drawings prepared by the supplier.

Finish: to match existing, hammered and dressed

Replacement stone units

Sizes and profiles: To match existing masonry. Maintain existing joint widths.

Sinkings for fixings, joggles and lifting devices: Accurately aligned and positioned in relation to existing masonry.

Marking: Mark each block/ dressing clearly and indelibly on a concealed face to indicate the natural bed and position in the finished work.

Orientation of natural bed

In plain walling: Horizontal.

In projecting stones and copings: Vertical and perpendicular to wall face.

Dismantling

Dismantling masonry

Masonry units to be removed: To be confirmed with Conservation architect. Remove carefully.

Treatment: Rake out all pointing. Lever unit from position by whatever method necessary to prevent damage to any surrounding work and approved by conservation architect. Timber block may be used to prop adjoining masonry to be retained in situ. Clean off old mortar, organic growths and dirt, and leave units in a suitable condition for storage in location to be agreed with employer.

Identification: Mark each unit clearly and indelibly on a concealed face, indicating its original position in the construction. Transcribe makings to drawings/ photographs.

Replacements and insertions

Preparation for replacement masonry

Defective material: Carefully remove to the extent agreed. Do not disturb, damage or mark adjacent retained masonry to be retained in situ.

Existing metal fixings, frame members, etc: Report when exposed.

Redundant metal fixings: Remove.

Recesses: Remove projections and loose material; leave joint surfaces in a suitable condition to receive replacement units. Protect from adverse weather if units are not to be placed immediately.

Replacement of stone

Stone: to match existing

Bedding depths: to match existing

Mortar: As section Mortars.

Standard: BS EN 459-1:2010 and BS EN 998-2

Mix: NHL 2: sand ratio by volume 1:2.5

Lime manufacturer:

. NHL 2 Otterbein

Aggregate source/ type: well graded gritty Wexford beach silica sand 0.07mm-7mm

Joints: to match existing

Replacement of brick

Brick: All replacement bricks to match existing as closely as possible in type, colour, texture, size, shape, durability and porosity. Second-hand bricks to be carefully inspected to ensure they have not been damaged by demolition or mishandling and that they are deemed for external weathering. All new brickwork to be to. Refer also to Practical Building Conservation, Earth, Brick and Terracotta, English Heritage, Ashgate 2014

Bedding depths: to match existing

Mortar: As section Mortars.

Standard: BS 771-1:2011 + A1:2015 Specification for Masonry Units: Clay Masonry Units

Mix: Mix: NHL 2: sand ratio by volume 1:2.5

Lime manufacturer:

. NHL 2 Otterbein

Aggregate source/ type: well graded gritty Wexford beach silica sand 0.07mm-7mm

Joints: to match existing

Bond: to match existing

Stone inserts

Stone: to match existing

Finish: to match existing.

Mortar: As section Mortars.

Standard: BS EN 459-1:2010 and BS EN 998-2

Mix: Mix: NHL 2: sand ratio by volume 1:2.5

Lime manufacturer:

. NHL 2 Otterbein

Aggregate source/ type: well graded gritty Wexford beach silica sand 0.07mm-7mm

Laying replacement masonry units

Exposed faces of new material: Keep to agreed face lines.

Faces, angles and features: Align accurately. Set out carefully to ensure satisfactory junctions with existing masonry and maintain existing joint widths.

Joint surfaces: Dampen to control suction as necessary.

Laying units: On a full bed of mortar, all joints filled.

Exposed faces: Keep clear of mortar and grout.

Installing stone inserts

Pockets to receive inserts

Cut out accurately. Undercut sides of pocket where necessary to provide space for bonding material. Install new stone in exact position previously occupied by original stone. Flush out voids with clean water to remove deleterious material. Dampen stone, spread a mortar bed on the stone and tamp into place using the mortar bedding as a lubricant for manoeuvrability. Pack the mortar around the stone when set in position using a suitable size pointing iron. Push mortar firmly.

Adjust depth so that insert stands proud of existing stone for finishing in situ.

Clean out thoroughly.

Inserts: Cut to the smallest rectangular shape necessary to replace the defective area and provide a firm seating. Install accurately and securely.

Exposed faces: Keep clear of bonding material.

Existing joint widths: Maintain. Do not bridge joints.

Corroded metal fixings

Removal: If found cut out carefully, causing the least possible disturbance to surrounding masonry. Remove associated rust debris.

Structural stability

Contractor shall be responsible entirely for the structural stability during repairs and shall arrange that sufficient temporary supports are used as works proceed to keep the structure stable until repair is complete.

Pointing/ repointing

Preparation for repointing

Tools: Rake out defective mortar with chisel and hammer by hand or for very narrow joints a hand-held saw blade. For very hard cementitious mortar use a tungsten carbide-tipped chisel or claw chisel or stitch-drill along centre line of joint to break up mortar. Disc cutters will not be permitted.

Existing mortar: Working from top of wall downwards, remove mortar carefully, without damaging adjacent masonry or widening joints, to a minimum depth of roughly twice joint width for regular size joint. For large rubble masonry joints rake out to a depth of minimum 30mm.

Loose or friable mortar: Seek instructions when mortar beyond specified recess depth is loose or friable and/ or if cavities are found.

Note should be taken if pinnings/gallets are removed in the cutting out process and these should be retained for re-use.

Do not damage arrises of stone nor disrupt masonry face. Where the arrises of the walling material are worn the pointing is to be kept back square within the joint so that the pointing thickness is not increased. The ability to deliver this must be demonstrated by the contractor at commencement of work with completion of an exemplar.

Raked joints: Remove dust and debris with air puffers compressed air and stiff bristle brush. Wash down with hosepipe fitted with spray attachment. This must always proceed from the top, working down the building, ensuring all traces of debris are cleaned down. Where there are deep joints or voids, care must be taken not to flood the core of the wall. Leave square cut joint.

Control suction by wetting substrate with pump-action sprayer or hosepipe fitted with spray. Couple of days of spraying if weather is hot. Protect scaffold to avoid drying effect of sun and wind. Masonry should be damp not wet.

Pointing

Mortar: As section Mortars

Standard: BS EN 998-2 and BS EN 459-1:2010

Mix : Mix: NHL 2: sand ratio by volume 1:2.5

Lime manufacturer:

. NHL 2 Otterbein

Aggregate source/ type: well graded gritty Wexford beach silica sand 0.07mm-7mm

Joint filling: The mortar should be relatively stiff while still pliable.Joint and surrounding masonry to be damp (not wet) when mortar is applied. The new mortar should be stiff and not sloppy, as this will result in shrinkage and leave a smudged and dirty finish. Methodical

introduction and compaction of mortar is required. Tools have to be used of suitable dimensions. Complete packing must be achieved and no smearing lime on the surface of the surrounding masonry.
Joints must be filled from the back to ensure compaction. Any smear on surface to be sponged off with clean water immediately.
Build up pointing in layers of 25mm depth with a minimum of four days between coats, from upper part of wall down to avoid damaging finished work when dampening down subsequent areas of work.
Fill joints slightly proud of intended finished joint profile to allow for shrinkage and compaction of mortar as it firms up. For joints larger than 18mm do not use large blobs of mortar; build up with stone pinnings/gallets. If voids are large bed in the pinning stone in the normal way , if smaller then fill the void and the drive in a stone wedging it in tightly to tighten up loose masonry.

Joint profile/ finish: to match existing.
A joint is ready when it is still damp but in a semi-hard, leathery consistency and has become stiffer. When ready, beat back/tap the mortar with a churn brush to expose the aggregate and assist with the compaction of the mortar into the joint and reduce shrinkage. Excessive tooling to be avoided. Press back any crack when mortar is still plastic (i.e. you can mark it with a thumbnail but a thumb pressed into surface leaves barely any impression).

Curing: Water is essential when new pointing mortar is curing. Relative humidity to be kept at 90%during curing, particularly for the first twenty days.
Protective covering with multiple layers of damp hessian sheeting and light mist spray for 7 days to keep mortar damp (not wet). Hessian to be arranged to hang clear of the face of the wall in such a way that I t does not form a tunnel through which the wind could increase the evaporation of water. Hessian must not have intermittent contact with the pointing as this may cause a patchy appearance. Further daily spray is beneficial for the first 30 days. Optimum curing temperature is roughly 15°C. Protect also from rapid drying conditions.

Control shrinkage: Protect against weather to control rate of drying of mortar. Shrinkage cracks to be closed up by pressing with pointing iron or spatula. Work needs to be checked regularly so that cracks can be closed up as soon as noticed.

Pointing with tools/ irons

General: Press mortar well into joints using pointing tools/ irons that fit into the joints, so that they are fully filled. Pointing trowels should be avoided, as this will not allow pressure to be applied across the whole of the joint.

Face of masonry: Keep clear of mortar. Use suitable temporary adhesive tape on each side of joints where necessary. Finish joints neatly.

Brushed finish to joints

Timing: After initial mortar set has taken place and mortar has stiffened, remove laitance and excess fines by tapping with a church brush, to give a scrap finish to expose aggregates leaving a very well textured surface. It is ideal for carbonation and curing, and for maximum evaporation of moisture from the joints once fully cured. It will also ensure a good bond with surrounding masonry and will eliminate initial shrinkage. Tamp firmly the mortar with stiff bristled churn brush to compact mortar. Do not rub joints with the brush. Mortar has to be of the right consistency in the drying process. If mortar is too soft the brush will leave pin-holes.
Do not use wet sponges as it can leave smears on adjacent masonry

Repairing/ renovating/ conserving timber

MATERIAL

All materials used to be formaldehyde-free binder. Formaldehyde emissions are limited to the natural content of formaldehyde in solid wood (less than 0.03ppm)

Timber (including timber for wood-based products): Obtained from well-managed forests and/ or plantations in accordance with:

The laws governing forest management in the producer country or countries.

International agreements such as the Convention on International Trade in Endangered Species of wild fauna and flora (CITES).

BRITISH STANDARD: Unless stated otherwise comply with BS 1186; Timber for, and workmanship in Joinery Part 1; Specification for Timber 1991.

Note: This part of BS 1186 specifies requirements for the classification, species, moisture content and quality of softwood, hardwood and wood based panel products used in joinery.

SOFTWOOD SPECIES: Generally softwood to repair joinery items will be of the same species as the existing element being repaired / replaced. In instances where material is not available select species similar in moisture content strength, and grain pattern to existing and submit to CA. for approval. For softwood for joinery refer also to BS EN 942 free from decay and insect attack (except pinhole borers). Ensure control on quality of timber used, ensuring species, grain direction, moisture content etc. is appropriate for the host timber. Timber grain should be slow grown with ring growth closely spaced.
Moisture content on delivery: (9–13% for buildings with heating providing room temperatures in the range 12–21°
6–10% for buildings with heating providing room temperatures in excess of 21°C)

HARDWOOD SPECIES: Generally hardwood to repair joinery items will be of the same species as the existing element being repaired / replaced. In instances where material is not available select species similar in moisture content, strength and grain pattern to existing and submit to CA. for approval. Generally to BS EN 942; free from decay and insect attack (except pinhole borers). Moisture content on delivery: 13-19%

CLASSIFICATION OF JOINERY TIMBERS: unless instructed otherwise use timber from the following classes.
CSH: for all timber sections having one finished dimension measuring 12mm or less.
Class 1: Timber for high quality or specialised work.
Class 2: Timber for good general-purpose joinery.

TIMBER FOR EXTERNAL JOINERY is to be:
Suitable for machining, and machined well to provide a quality finished surface to receive decorative finishes specified
Suitable for manufacturing to tight tolerances.
Stable in both production and use.

SHEET MATERIALS

KRONOSPAN Oriented Strand Board 3 22mm thick class 2 tongue and groove board for the new floor decking fixed to existing and new joists. To BS EN 300:2006

FILLERS, STOPPERS AND SEALANTS

FILLERS: use proprietary soluble cellulose fillers for internal work.
Note: Preferably not used externally.

STOPPER: Use proprietary Polyester, Epoxy or polyurethane two pack mixtures, Manufacturer and Ref.: Plastic Padding Woodfiller or similar to SO approval.

SEALANT for diagonal floorboards caulking use Soudaseal see spec at end of section.

WOOD HARDENER: by Ronseal ltd or similar to approval.
Note: use to consolidate softwood after cutting out rot and open grain prior to painting.

FIXINGS

SCREWS: To BS 6105 austenitic stainless steel to be not less than 11 / 2 times the thickness of materials to be joined. Stainless steel only.

NAILS: to BS 1202, part 1, of a suitable type and size for use to be not less than twice the thickness of material through which nails are to be driven. Stainless steel only.

BOLTS, NUTS AND WASHERS: to BS 6105 austenitic stainless steel. Sizes to be appropriate for the connection type.

PLUGS: Plastics / nylon, length and diameter to suit screws.

WORKMANSHIP GENERALLY

BRITISH STANDARD: generally comply with the relevant sections of BS 8000 part 5 Code of Practice for carpentry, joinery and general fixings.

The recommended subcontractor to have extensive experience in working with historic joinery and to be able to present evidence of such competence.

REMOVING JOINERY FRAMES / ISOLATED TRIMS

PREPARING RECORDS

Prior to stripping out operations prepare a record of existing work to enable new joinery work to be built to match existing and provide copies to the C.A. for comment prior to fabrication.

Use full size patterns, drawings and photographic recording methods in accordance with the CA's requirements.

Cross reference work to drawings and schedules in accordance with the CA's requirements.

REMOVING JOINERY WORK: Generally:

Frames should be detached from fixings wherever possible to minimise damage to adjacent work.

Joinery components are to be removed using means that prevent damage to the work and surrounding structure and finishes. Retain where necessary as a pattern for new work or re-use. Where possible remove as a complete unit.

Part removal / disassembly of work, such as individual frames, should always be carried out using existing joint positions as limits of removal.

REMOVING FIXINGS: Remove all remaining existing fixings, cramps and the like from adjacent work following removal of joinery.

REMOVE ISOLATED TRIMS FOR RE-USE: Remove picture rails, dado rails, skirting and the like using methods which avoid damage to the joinery and; set aside for inspection and re-use
Detach at fixings wherever possible and where not possible use methods which reduce leverage on trim.
Store at locations agreed with the CA

EMOVE EXISTING DOORS FOR RE-USE: Remove doors at hinges and mark / label and store doors for re-use in accordance with CA

PROTECTION
Where external wall is left open following removal of joinery work, fix secure temporary waterproof coverings to prevent ingress of water.Protect all surrounding areas from impact damage.

DISPOSAL: Dispose of all builder's debris and unwanted material from site.

PREPARING OPENINGS: ensure openings to receive repaired / restored joinery are free from dust, debris or any other loose material.
Ensure, by survey, that structural openings to receive joinery items co-ordinate with the size of that item. Pre-fix bracketry and the like, where necessary, to facilitate installation of joinery.

TRANSPORT, HANDLING AND STORAGE

TRANSPORT:

Transport joinery work in soft packing material isolated from all hard sharp surfaces capable of inflicting impact damage.
Prevent racking, twisting or warping of materials or components. Ensure protection from weather damage.
Maintain primer film integrity at all times.

STORAGE AND PROTECTION: In accordance with BS 8000: Part 5: paragraph 2.1.3.3 and store joinery components.

Under cover, well ventilated in conditions of temperature and humidity similar to those in which they are being fixed. Always maintain both quality and seasoning achieved during fabrication.
Keep away from possible sources of soiling and contamination.
Store in such ways that components to be fixed earliest in the programme are most easily available.

PREPARATION

Inspect primer film and ensure it is not damaged. Repair damaged or defective areas.
If primer film is thin, re-coat.
If primer is weathered wash over with white spirit.
If primer has cracked, flaked or shows signs of mould growth, remove and re-coat.

REPAIRING JOINERY
Generally
Dismantling of joinery elements should be avoided as far as possible, even if treatment in situ appears more complicated.
Dismantling should not be adopted as a way of making repairs easier or making work less expensive.
In most cases in situ repairs will reduce the loss of authenticity and result in better conservation practice.
Where dismantling cannot be avoided the elements to be dismantled should be a large as possible.
A full photographic record should be made before and during dismantling and all elements clearly labelled with a durable identification tag.
A good photographic record during dismantling will aid correct reinstatement.
Skirtings and architrave assemblies should be gently levered off the walls with hardwood wedges and flat chisels, blocked off protective timber linings to avoid damage to adjoining plaster finishes, taking particular care to avoid damage to the timber joinery element.
Once prised off the wall, resistant nail fixings can be cut through using a hacksaw blade and then punched out from behind.
All loose pieces must be immediately logged, noted and temporarily reassigned to the host component and kept together.
Fragile elements will require temporary bracing, boxing or other protection to facilitate storing, handling or transportation.
All removed timber that is found to be sound to be stored carefully on site, either for reinstatement in its original location, or for possible use in the patch repair of other elements.
Nails should not be removed from the front to avoid damaging the surrounding timber.
The joint between the component and its host should be carefully opened with hardwood wedges, the nail cut with a hacksaw blade and the nail punched out from behind.
All historic fixing - nails, screws, hinges and other door or window furniture to be retained and stored in boxes marked with their original locations.
Where it is found to be necessary to remove elements of joinery, such as doors, skirtings or architraves, bench repairs should be carried out as close as possible to the original location of the removed element.
Only in exceptional circumstances will joinery be permitted to be removed off site and only with the approval of the contract administrator and conservation architect.
In many instances joinery elements may be complete and in a reasonable condition, but will require dismantling, either to facilitate paint removal, or to allow re-fixing square on

new or packed out grounds, where a joinery element has moved and an excessive amount of filler has been inserted into the gap over the years.
Most of the timber in the building is made from pine.
In all repair cases cutting back damaged or decayed timber should allow for the most efficient manner of jointing the new material, while removing as little historic fabric as possible to make the joint as unobtrusive as possible.
When piecing-in suitably shaped timber inserts avoid defects such as resin pockets and knots.
The inserted repair timber should be heartwood, selected to match the species, moisture content, density and grain direction, growth rate, profiles and pattern of the original host element.
When the new timber has been fitted the gap can be filled with a reversible filler
All fixings - nails, screws, angle plates. connectors, fixing lugs etc to be non ferrous or stainless steel.
Glues, where used should be reversible. PVA glues (Polyvinyl acetate emulsions) and urea formaldehydes such as "Casamite" are acceptable.
The moisture content of an inserted timber and the levels of humidity in the environment should be taken into consideration when inserting new timber. The thicker the insert the more important this becomes.
Small circular holes formed by screw fixings or cableways should be repaired with timber dowels of similar species and suitable size to create a neatly fitting insert, that can be trimmed back flush with a wood chisel.
Small areas of damage and lacunae up to 4mm and where the depth exceeds the length or width, can be filled with an approved filler, submit proposal.

BRITISH STANDARD: Comply with BS 1186; Timber for and workmanship in Joinery, Part 2; specification for workmanship. 1988.

SITE DIMENSIONS: Take site dimensions and patterns to ensure that replacement items / elements are correct in size and pattern to match existing work.

SITE CUTTING
Smooth sawn off timber to remove dust. Paint with primer ensuring it is compatible with treatment. Clear away dust and debris generated during sawing operations.

OVERHAULING DOORS FOR RE - USE: remove door from frame / lining as per tender drawings
Take off all ironmongery and store. Cross-reference where required for re-use or indicated on CA's schedules.
Carry out pieced in repairs at redundant hinge and latch / handle positions to receive new / refurbished ironmongery.
Ensure all tenon joints and the like are tight and sound. Make repairs where necessary in accordance with this worksection.
Carry out fire proofing work / treatments in accordance with CA's drawings and schedules where necessary.
Redecorate in accordance with Finishes.

REPLACE DAMAGED MEMBER
Remove member, record and take dimensions and patterns to fabricate new member to match existing.

Brace loose members to remaining work and prevent from being displaced or damaged.
Fabricate new member in treated oak, to match existing in size, length and joint.
Fix into position as existing wedging and gluing as necessary.

PIECE IN TIMBER JOINERY
Cut out defective material, using splay cuts, with additional 50mm either side as safety margin. Cut new piece of timber, material to match existing, as a very tight fit and cover with adhesive, before drawing into cavity.
Plane off to a neat flush profile before priming

REPLACING / REINSTATING JOINERY
FIXING WINDOW / DOOR FRAMES
Take precautions to prevent builders materials from blocking of fouling drainage holes / capillary grooves, mechanisms and the like.
Make fixings no more than 150mm from corners and no more than 450mm centres.
Do not allow frames to distort and impair weather tightness or glazing operations.
Where perimeter pointing is used over a gap of over 5mm install a polythene foam backing strip otherwise sealant should be laid in a 6mm fillet.

INSTALLING CASEMENTS / SASHES
Install to operate without racking or binding.
Re-use set aside has weights.
Gap between framing and new element not to exceed 3mm.
Glazing beads, where fitted, to be full width at bottom.

REINSTATE ISOLATED TRIM: Reinstate skirtings, picture rails, dado rails and the like:
In continuous lengths of re - used materials only. DO NOT MIX reinstated with new material in any one full run of material.
In agreement with the CA to ensure maximum re - used material with minimum numbers of joints.
Using splay cut butt joints to join material.
Decorate in accordance with Finishes

FIXING NEW ISOLATED TRIM: fix new picture rails, dado rails, skirtings and the like:
In continuous lengths of new material only. DO NOT MIX new and re - used material.
Using splay cut butt joints to join material.
Decorate in accordance with Finishes.

PELLETED SCREW FIXINGS: in accordance with BS 8000: Part 5: paragraph 3.1.3.

STOPPED SCREW FIXING: in accordance with Bs 8000: Part 5: paragraph 3.1.1.

PERIMETER POINTING: prepare, fill and seal perimeter joint between frames and structure in accordance with those workmanship requirements applicable to the type of filler and sealant specified.

PROTECT: Following installation of new / reinstated frames:
Frames from soiling by building materials during fixing.
Frames from impact damage.

DISPOSAL: Dispose of builder's debris resulting from fixing operations.

Glued Joints

Adhesive: To BS EN 301 Type 1

Compatibility: Where relevant, obtain manufacturer's confirmation that adhesive is compatible with preservative/ fire retardant treatment.

Glued structural components: Fabricated to BS 6446 in clean, controlled workshop conditions.

FINISHING

Removing contaminants
Remove grease, oily deposits and mortar splashes.
Glazed elements to be free from putty deposits and marks.

SMOOTHING TIMBER DEFECTS IN NEW MEMBERS / FRAMES

Plan off irregularities smooth and flush with surrounding work to receive paint.
Sand smooth and finish minor irregularities.
Remove dust and debris prior to commencement of decorating operations

SMOOTHING EXISTING JOINERY / MOULDED WORK TO RECEIVE FINISHES
Plane off irregularities to a smooth finish agreed with the C.A.
Sand indentations to provide a key for filler to flush finish with adjacent areas. Build up as necessary and sand / carve back to moulded profile as necessary to achieve a smooth / flush finish.
Remove dust and debris prior to commencement of decorating operations

DECORATIONS: See Finishes for details of preparation for and application of decorative finishes.

Rainwater drainage systems

General

Gravity rainwater drainage system

Rainwater outlets: From main roof 2no outlets onto and down main facade.

Gutters: Existing parapet gutter

Pipework: existing cast iron downpipes

Below ground drainage: As found

Disposal: As found

System performance

Design

Design: existing system to be temporarily re-routed, removed, over-hauled and reinstated.

Standard: To BS EN 12056:2000

Collection and distribution of rainwater

General: Install rainwater disposals to ensure the complete discharge of rainwater from the building without leaking or noise nuisance.

Products for replacement sections

Cast iron pipework - flexible couplings

Standard: To BS EN 877, Agrément certified.

Manufacturer: Submit for approval

Product reference: Heritage square pipe

Coupling type: Push fit

Nominal size: 100x100mm , approximate length of sections 1200mm

Finish as supplied: to be delivered to sire fully painted

Brackets: Cast iron to match existing

Fixings: Stainless steel screws

Accessories: Rainwater shoes to match existing

Execution

Preparation

Work to be completed before commencing work specified in this section

Ensure below ground drainage is ready to receive rainwater.

Below ground drainage. Alternatively, make temporary arrangements for dispersal of rainwater without damage or disfigurement of the building fabric and surroundings.

Painting of surfaces which will be concealed or inaccessible.

Installation generally

Products:

Colour coated rainwater pipes must be handled with care to prevent scratches and dents.

Materials should be stored on a level surface or racking, preferably under secure cover. Uneven fading or water marks on coated and mill finish surfaces
may occur if water enters protective packing or goods are stored exposed to sunlight.

Access fittings: Provide access fittings and rodding eyes as necessary in convenient locations to permit adequate cleaning and testing of pipework.

Electrolytic corrosion: Avoid contact between dissimilar metals where corrosion may occur.

Allowance for thermal and building movement: Provide and maintain clearance as fixing and jointing proceeds.

Protection

Fit purpose made temporary caps to prevent ingress of debris.

Adequately protect pipework from damage and distortion during construction.

Fit access covers, cleaning eyes and blanking plates as the work proceeds.

Where not specified otherwise use plated, sherardized, galvanized or nonferrous fastenings, suitable for the purpose and background, and compatible with the material being fixed.

Fixing pipework

Pipework: Fix securely, plumb and/ or true to line. Make changes in direction of pipe runs only where shown on drawings unless otherwise approved.

Branches and low gradient sections: Fix with uniform and adequate falls to drain efficiently.

Additional supports: Provide as necessary to support junctions and changes in direction.

Vertical pipes

Provide a loadbearing support at least at every storey level.

Fix every length of pipe at or close below the socket collar or coupling

Tighten fixings as work proceeds so that every storey is self supporting.

Wedge joints in unsealed metal pipes to prevent rattling.

Thermal movement: Provide for thermal and building movement when fixing and jointing, and
ensure that clearances are not reduced as fixing proceeds.

Fixing vertical pipework

Bracket fixings: Plugged and screwed into masonry as per manufacturer's recommendation.

Distance between bracket fixing centres (maximum): to match original

Jointing pipework and gutters

General: Joint with materials and fittings that will make effective and durable connections.

Jointing differing pipework and gutter systems: Use adaptors intended for the purpose and as recommended by manufacturer

Cut ends of pipes and gutters: Clean and square. Remove burrs and swarf. Chamfer pipe ends before inserting into ring seal sockets.

Jointing or mating surfaces: Clean and, where necessary, lubricate immediately before assembly.

Junctions: Form with fittings intended for the purpose ensuring that jointing material.

Jointing material: Strike off flush. Do not allow it to project into bore of pipes and fittings.

Surplus flux, solvent jointing materials and cement: Remove.

Jointing external pipework

Jointing: Low modulus silicone sealant DOW 791

Cutting coated pipework and gutters

Cutting: Recoat bare metal or make good to coatings after cutting and any other damage Aluminium can be cut and drilled on site with regular metalworking tools. Pencil cut lines and apply masking tape either side of cut line to protect against accidental saw damage.

Site painting: Degrease with white spirit and clean thoroughly. Prime with zinc phosphate or similar aluminium primer, followed by at least two coats of full gloss paint on all exposed surfaces. Undercoating is not required. Where powder coated materials have been cut, it is necessary to deburr exposed edges and follow the above painting procedure.

Access for testing and maintenance

General: Install pipework and gutters with adequate clearance to permit testing, cleaning and maintenance, including painting where necessary.

Access fittings and rodding eyes: Position so that they are not obstructed.

Completion

Testing generally

Dates for testing: Allow sufficient time for sealant joints to fully cure. Inform CA sufficiently in advance to give him a reasonable opportunity to observe tests.

Period of notice (minimum): one week

Preparation

Pipework: Complete, securely fixed, free from defects, obstruction and debris before testing.

Testing

Supply clean water, assistance and apparatus.

Carry out tests as specified. Fill up to overflow level (but not beyond). Allow 5 minutes before inspecting all joints for leaks. After testing, locate and remedy all defects without delay and retest as instructed.

Do not use smoke to trace leaks.

Records: Submit a record of tests.

Maintenance instructions

General: At completion, submit printed instructions recommending procedures for maintenance of the rainwater installation, including full details of recommended inspection, cleaning and repair procedures.

Care and Maintenance: Regularly clean out rainwater gutters and ensure that downpipes are clear. Check joints and fixings are secure by periodic inspection no less than twice a year, preferably at the start of Autumn and end of Winter.

Polyester powder coated surfaces can be cleaned by washing with warm detergent solution and leathering off. Life expectancy depends on any installation damage being repaired immediately with appropriate touch-up paint, as should any site-cut ends exposing bare metal, which must be
de-burred and then repainted in accordance with manufacturer's site painting procedure.

Immediately before handover

Construction rubbish, debris, swarf, temporary caps and fine dust which may enter the rainwater system: Remove. Do not sweep or flush into the rainwater system.

Access covers, rodding eyes, outlet gratings and the like: Secure complete with fixings.

Methodology for Scaffolding

General

Before starting work:
Examine all available information.
Survey the structure, site and surrounding area.
Ensure that all statutory notices have been given and licenses obtained.

Commencement Condition Survey

Before starting work, carry out a visual inspection of the existing fabric and record with photographs any damage to the existing fabric, and note areas that look unstable and may require special care of operatives during erection of the scaffold

Codes of Practice

Design scaffold in accordance with BS EN 12811 2005
Workmanship to be in accordance with BS EN 12811 2005

Design Loading

Design wind loads to be in accordance with BS EN 12811 2005

Extent of Scaffolding

Provide scaffolding as shown on the tender drawings to carry out works to:
. the north elevation along service yard
Provide safe access and safe places of work in the scaffold for inspection and repair of damaged areas.
Ensure that working platforms are suitably close the walls of the building so as not to allow materials or tools to accidentally fall from one level to the next.
Scaffolding to be suitable to provide necessary protection when using lime mortars.
Access to all exit doors/fire exit doors to be maintained throughout works and passage to be protected from falling objects.

PHASE 2 - Assess services and plant equipment to do with heating system and mist suppression system in Marsh's library north yard. Services will have to be temporarily rerouted to allow scaffolding construction.

Maintenance of Scaffolding

Regularly inspect and maintain scaffolding, making good ties, wedges, connections, corrosion protection, etc. as necessary.

Stability

Temporary wall fixings to be agreed with architect prior commencing. All fixings to be in stainless steel. To be made good on completion when the scaffold is removed.
Provide bracing to the exterior of the scaffold, so as not to inhibit any works.

Safety

Operatives must be appropriately skilled and experienced for the type of work
Site staff responsible for supervision and control of the work are to be experienced in the methods of erection and maintenance of support systems to be used
Examine and note the contents of the pre-contract health and safety file before commencing the work.

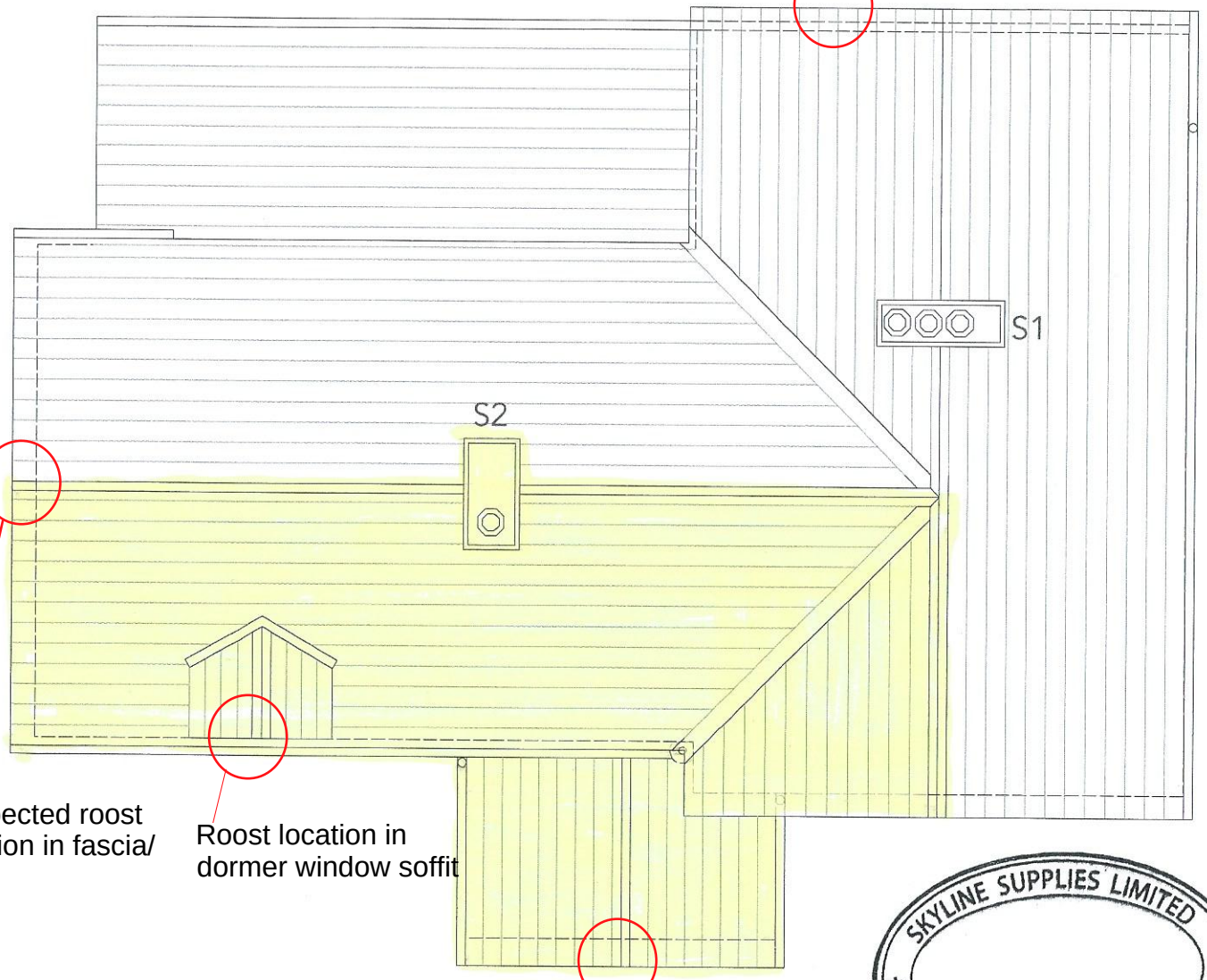
Prevent access of unauthorised persons onto scaffold.
Leave safe outside working hours.
The building itself must not be used for access or to support demolition of construction materials.
Before starting work, submit detailed proposals for all systems to the Contract Administrator, and resolve any amendments proposed.
Accept responsibility for the adequacy and stability of scaffold and thereby the integrity of scaffold for the period from commencement of erection to completion of dismantling of scaffold.

APPENDIX 2

Reduced Scope Roof Plan & Roost Locations

Appendix 2 - Reduced Scope of Works -
Works area highlighted in yellow

Roost Location in soffit. No works proposed



Suspected roost location in fascia/ soffit

Roost location in dormer window soffit

Roost location in porch fascia

Demolitions & Stripping
Refer to items S01-S12 of the Schedule of Works

. Re-arrange all existing services to enable works
. Take down all rainwater disposal systems of gutters and downpipes and set aside for inspection. Provide temporary re-routing of water away from the fabric., 100mm diameter half-round section cast iron gutters and 100mm diameter cast iron downpipes with drive-in brackets.
. Carefully remove all fascia and soffit boards and dispose of
. Carefully lift all clay capping stones and set aside for reuse
. Carefully strip existing slates from all roofs - assume 60% salvage rate. Scrape off by hand dirt, clean, sort & set aside neatly all reusable slates. Dispose of all brittle, cracked and broken slates or slates that have been holed already three times
. Strip existing lead lining to all pitched valleys and remove and dispose of all timber supports and bearers
. Remove all lead soakers and cover flashings at abutment of slates with dormer, chimney stacks and first floor outer walls and rake out hard cement poinitng without damging the masonry.
. Strip all timber battens and felt and dispose of
. Remove 4no clay chimney pots and set aside for reuse
. Allow for protecting all ceilings exposed areas before commencement
. Allow for the temporary protection of the exposed roofspace timberwork
. Allow for the inspection of all timberwork with Conservation Architect

NOTE
Refer to the Ecological Consultant's Bat Survey and Report.
If a bat is discovered the ecological consultant will advise but generally, each slate is to be carefully removed, turned over and inspected, if a bat is present, the ecological consultant will remove it. If for any reason the consultant is not present, the best thing is to pick it up wearing gloves and to put it in a cardboard box with the lid lightly closed so it is calm in the dark. The consultant will provide toolbox talks prior to commencement. All works will be conducted during daylight hours to minimise impacts on nocturnal or crepuscular species.

Revised Scope 8/8/2025.

SKYLINE SUPPLIES LIMITED * Registration Number 572[illegible] *

PROJECT	Job No.	Sheet No.
Belvedere Estate_ Gardeners House	24_22	24_22 -T01
CLIENT	Date	Scale
Westmeath County Council	04.06.25	1:50@A3
TITLE	Drawn	Checked
Roof Plan Existing_ Stripping & Demolitions	SM	-

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