



Shackleton Museum Athy

SHACKLETON MUSEUM

Redevelopment of
Athy Heritage Centre,
Emily Square
Athy

Architectural Design Statement
Submitted as Part of Planning Application
January 29th 2019
P16-232K-RAU-XX-XX-RP-A-30001

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Image 1: The Athy Heritage Centre on Emily Square

Cover image: Endurance trapped in ice, photo by Frank Hurley



1.1 Introduction

This report has been prepared by Reddy Architecture + Urbanism on behalf of Kildare County Council for a Part VIII Planning Application in accordance with the Planning and Development Acts 2000- 2013 and the Planning and Development Regulations 2001 -2013 and B1.1 of Appendix B of Architectural Heritage Protection – Guidelines for Planning Authorities.

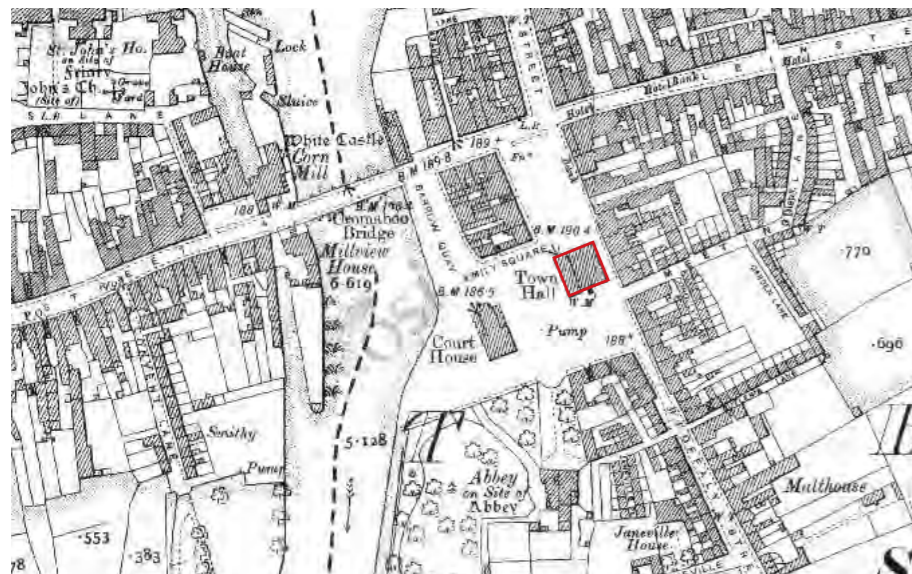
The Athy Heritage Centre is a Protected Structure included in the Record of Protected Structures for Athy, Ref. RPS AY075 (NIAH Ref.11505332) and is located within the Athy Architectural Conservation Area.

Kildare County Council and the Board of the Athy Heritage Company are committed to the development of a dedicated Shackleton Museum in Athy, designed to a high standard to attract national and international tourists.

The core objectives of the design team are to create:

- The world's premier museum, archive and forum for the celebration of Ernest Shackleton and Irish polar exploration in general, as well as the wider heritage of Athy, a designated heritage town.
- A building of high quality in terms of form, materiality and detailing which reflects a museum of such standing in the public realm.
- A sensitive intervention to a protected structure with the perspective of respecting the building's former uses and creating a sustainable functionality to allow the continued use of the building.

Image 2: 6" OS Map showing the Town Hall in Athy



The design shown in the proposals has been reached after a consultation process with Kildare County Council which also included a Pre-Planning Meeting in August 2018.

The report follows generally the information requirements for Architecture Impact Assessment set out in Appendix B of Architectural Heritage Protection – Guidelines for Planning Authorities, issued by the Department of Environment, Heritage and Local Government. This Architectural Design Statement has been produced to explain the design rationale for the proposed development and to confirm the appropriateness and validity of the design proposal as it has evolved for a contemporary intervention into this protected structure.

This report will demonstrate that the proposals for the existing building are:

- A positive re-use of a protected structure of local and regional importance
- A sensitive intervention into the building.
- Of a high architectural quality which will enhance the prominence of the subject site.
- Appropriate in terms of materiality and quality of detailing and finish.

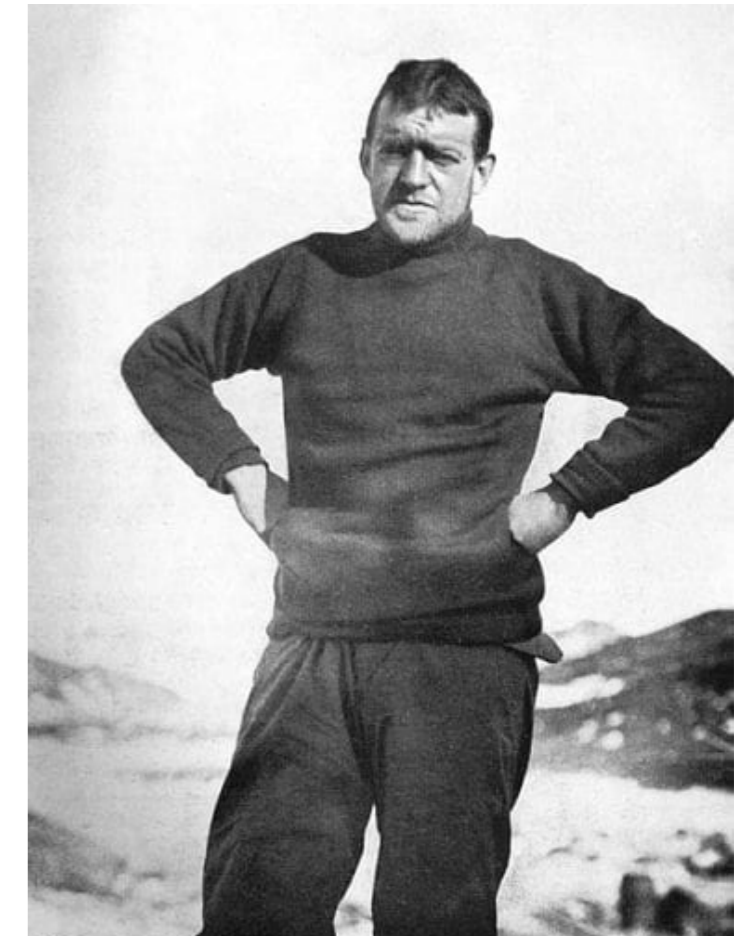


Image 3: Ernest Shackleton. Photo: Frank Hurley



Image 4: The Town Hall ca. 1915

1.2 Project Team

In response to the location of the site, the protected structure status of the Athy Heritage Centre, the location of the site within a zone of archaeological potential, and the significance of the proposed development the applicant, Kildare County Council, have assembled a design team with a strong record in successfully delivering conservation projects within town centre environments.

The key members of the design team are:

Architect:	Reddy A+U 41 Dean Street, Irishtown, Kilkenny City
Conservation Architect:	Consarc Design Group 23 South Great George's Street, Dublin, D02 AP66
Structural Engineer:	Martin Peters Associates, Consulting Engineers, Ormonde Road, Kilkenny City
M&E Engineer:	Hayes Higgins Partnership 'The Arches', Gas House Lane, Kilkenny City
Archaeologist:	Colm Flynn Archaeology The Commons, Kilmainham, Mountmellick, Co. Laois
Ecologist:	Moore Group Corporate House, Ballybrit Business Park, Galway
Quantity Surveyors:	Nolan Construction Consultants 10 Ormonde Street, Kilkenny



Image 5: The crew of the Endurance 1915. Photo: Frank Hurley

Bat and Swift Surveys:	Scott Cawley College House, 71-73 Rock Road, Blackrock, Co. Dublin
Visual Impact:	3rd Eye 9 Rocklands Carrigtwohill Co. Cork
Exhibition Designers:	Mirador Media Complex 5, Unit 6. Riverstown Business Park Tramore Co. Waterford

Acknowledgements:

We wish to acknowledge and thank the following individuals and organisation for their assistance and support towards the development of this project:

The Board of the Athy Heritage Company Limited

Joe Boland, Niall Morrissey, and Mairead Hunt: Kildare County Council

Sven Habermann, Letterfrack Conservation

2.0 History

2.1 Athy Heritage Centre

Athy Market Building / Town Hall

The existing structure was originally built circa 1730 or early 1740's as a Market House and Courthouse. The building was a granite stone two storey four bay building.

It appears to have been one of the improvements to the town undertaken by its then-owner James FitzGerald, 20th Earl of Kildare who succeeded to his title and family estates in 1744. The Market House occupies one end of Emily Square, named after his wife, Lady Emily Lennox, who he married in 1747.

As was so often the case, the building had more than one purpose since it also served as courthouse, hence the carved plaque above the door which shows the British crown occupying a position between the scales of justice and resting on a base containing a pike and a sword. The matching plaque above another door on the same façade features a similar design but this time the centre is filled with the Harp of Ireland and without any weaponry.
(*The Irish Aesthete 2016*)

The bell on the Town Hall is from the former St. Michael's Church of Ireland once located to the rear of the Town Hall and bears the date 1682. The original building, which may have been designed by Richard Cassels (who designed Leinster House and Carton House) was extensively enlarged at the turn of the 19th Century and again in 1913.

The building was sold by the Fitzgeralds to Kildare County Council in 1975 for £9,000.

The Athy Heritage Centre

Athy Heritage Centre was established in 1997 to celebrate the vibrant socio-historic legacy of the area. It houses material and audio-visual programmes that chronicle the ancient, medieval and post 16th century lives and achievements of the people of the town and its hinterland.

Athy Heritage Centre is home to the only permanent exhibition anywhere devoted to Ernest Shackleton. Highlights include an original sledge and harness from his Antarctic expeditions, a 15-foot model of Shackleton's ship Endurance, an exhibition of unique Shackleton family photographs and an audio-visual display featuring Frank Hurley's film footage of the Endurance expedition.

The Centre also houses material on the Great War and its effects on Athy; the industrial and social effects of the canal in Athy life; information on the Gordon-Bennett race, which is celebrated annually in the town, and a wide range of seasonal exhibitions which reflect life past and present in this vibrant community.

(*Source: Athy Heritage Centre website*)

The Athy Heritage Centre was awarded full Accreditation from The Museum Standards Programme for Ireland in 2016.

"The particular strength of the Museum lies in the fact that so much is achieved by so few staff. This is due to a firm commitment to public engagement through the collections, in particular those telling the story of the locally-born Antarctic explorer Earnest Shackleton, and the 1903 Gordon Bennet motor race which was centred on Athy."

(*Source: Heritage Council website*)



Image 6: The Board of the Athy Heritage Company Ltd with the Norwegian Ambassador at the opening of the "On Thin Ice" exhibition, September 18th 2018.
Photo: Paula Campbell, Leinster Leader

The Autumn School

The Shackleton International Autumn School was established to commemorate the Explorer in the county of his birth. It is held each year on the October Bank Holiday weekend.

The Autumn School provides a forum for the discussion on polar exploration and the presentation of artistic work relevant to Shackleton, local history and polar exploration.

Lectures, Exhibitions, Drama, Film, Music and excursions are all part of the activities of the school. The internationally renowned website www.antarctic-circle.org has described the Shackleton Autumn School as "the best polar gathering in the world".

It is acknowledged that the Athy Heritage Centre-Museum provides the only base for international research involving overseas participants in Ireland. This, combined with the Heritage Centre/Museum's current membership of the Museum Accreditation Programme, is important in promoting the centre as a valuable resource both nationally and internationally.

A statue of Shackleton was unveiled outside the Heritage Centre on 30th August 2016, to mark the centenary of the rescue of the men of Endurance from Elephant Island.

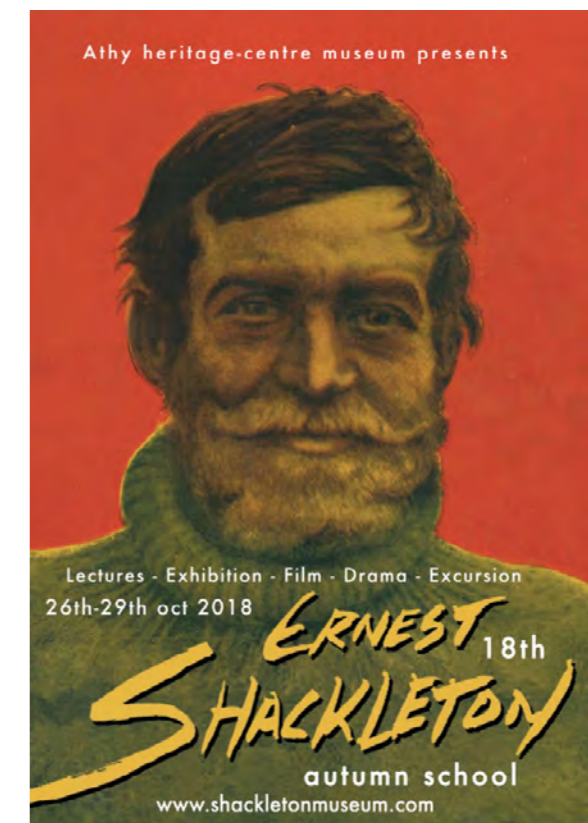


Image 7: Brochure for the 18th Ernest Shackleton Autumn School

2.1 Ernest Shackleton

Ernest Shackleton

Born close to the village of Kilkea, between Castledermot and Athy, in the south of County Kildare in 1874, Ernest Shackleton is renowned for his courage, his commitment to the welfare of his comrades and his immense contribution to exploration and geographical discovery.

The family moved to London where Shackleton was educated. Rejecting his father's wish that he become a doctor, he joined the merchant navy when he was 16 and qualified as a master mariner in 1898. He travelled widely but was keen to explore the poles.

Shackleton joined Captain Scott's Discovery expedition (1901 - 1904) and, in time, was to lead three of his own expeditions to the Antarctic: Nimrod (1907 - 1909), Endurance (1914 - 1916), and Quest (1921 - 1922). His Endurance expedition has become known as one of the great epics of human survival against the odds. After the ship got trapped in the ice, Shackleton took five crew members to search for help. In a small boat, the six men spent 16 days crossing 1,300 km of ocean to reach South Georgia and then trekked across the island to a whaling station. The remaining men from the 'Endurance' were rescued in August 1916.

He died in 1922, at South Georgia, on his fourth expedition to the Antarctic, and – on his wife's instructions – was buried there.



Image 8: Frank Hurley and Ernest Shackleton
Photo: Frank Hurley

The Shackleton Cabin

The ship's cabin in which Ernest Shackleton died in 1923, on his final voyage to South Georgia, stood for many years as a garden shed in northern Norway. Despite its simple construction in 1919 of a wrought iron frame clad with insulation and pitch pine, it remains in very good condition. The cabin itself measures 3.5 metres wide x 2.5 metres long x 2.5 metres high, and weighs approximately 600 kilos. The cabin was originally part of the Norwegian schooner-rigged steamship, Quest, which Shackleton had acquired for his final voyage.

The Cabin has been donated to the Athy Heritage Centre and transported back to Ireland. This has created an opportunity to consolidate the Athy Heritage Centre as Ireland's premier polar exploration museum.

Shackleton's Cabin has been analysed and conserved by Sven Habermann (Letterfrack Conservation Manager). Mr. Habermann has recommended that an environment providing 18 degree Celsius room temperature along with 55% Relative Humidity should be provided to avoid shrinkage and excessive drying out of this and other artefacts. The cabin will be located in the central double height exhibition space on the first floor. The visitor will have the chance to walk around and reflect upon the cabin and its significance.

The Ernest Shackleton Experience

Failte Ireland's Ancient Ireland East initiative's emphasis is on the use of 'storytelling' to bring Irish history to life with 'hero stories'. Shackleton's feat in bringing of his men back alive after his ship was crushed in the ice is universally acknowledged as the greatest polar adventure of all time. The Endurance story ranks with Apollo 13, or Papillon, as an epic escape story. The entire first floor of the proposed Museum would be dedicated both to telling of the Shackleton story in full and placing it in the wider context of Ireland's extensive polar exploration heritage.



Images 9 and 10: Ernest Shackleton's cabin which he shared with his second-in-command, Frank Wild



3.0 Photographs of Existing Building

3.1 Photographs of Exterior



Image 11: North Facade to Emily Square



Image 12: East Facade



Image 13: West Facade

Image 14: South Facade



Image 15: Central bay of South facade.



Image 16: Carved Frieze above Door on North Facade



3.2 Photographs of Interior: Ground Floor



Image 17: Groin vaulted central space looking South



Image 18: Groin vaulted central space looking North

Image 19: Descending the ramp looking East



Image 20: WW1 exhibition space looking East



Image 21: Original door surround

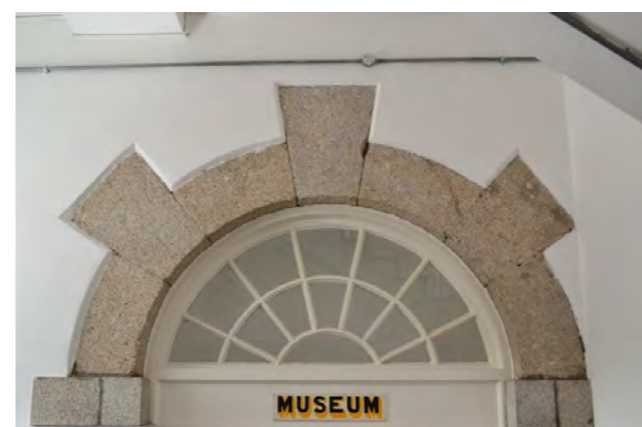


Image 22: Groin vaulted bay to East facade with cobblestone floor

Image 23: Arrol Johnston car



3.2 Photographs of Interior: First and Second Floors



Image 24: Central double-height room looking South



Image 25: Central double-height room looking North towards existing mezzanine



Image 26: Window on West facade looking towards Courthouse



Image 27: Double height room to West facade



Image 28: First floor room to South facade

Image 29: First floor access panel to Clock on North facade

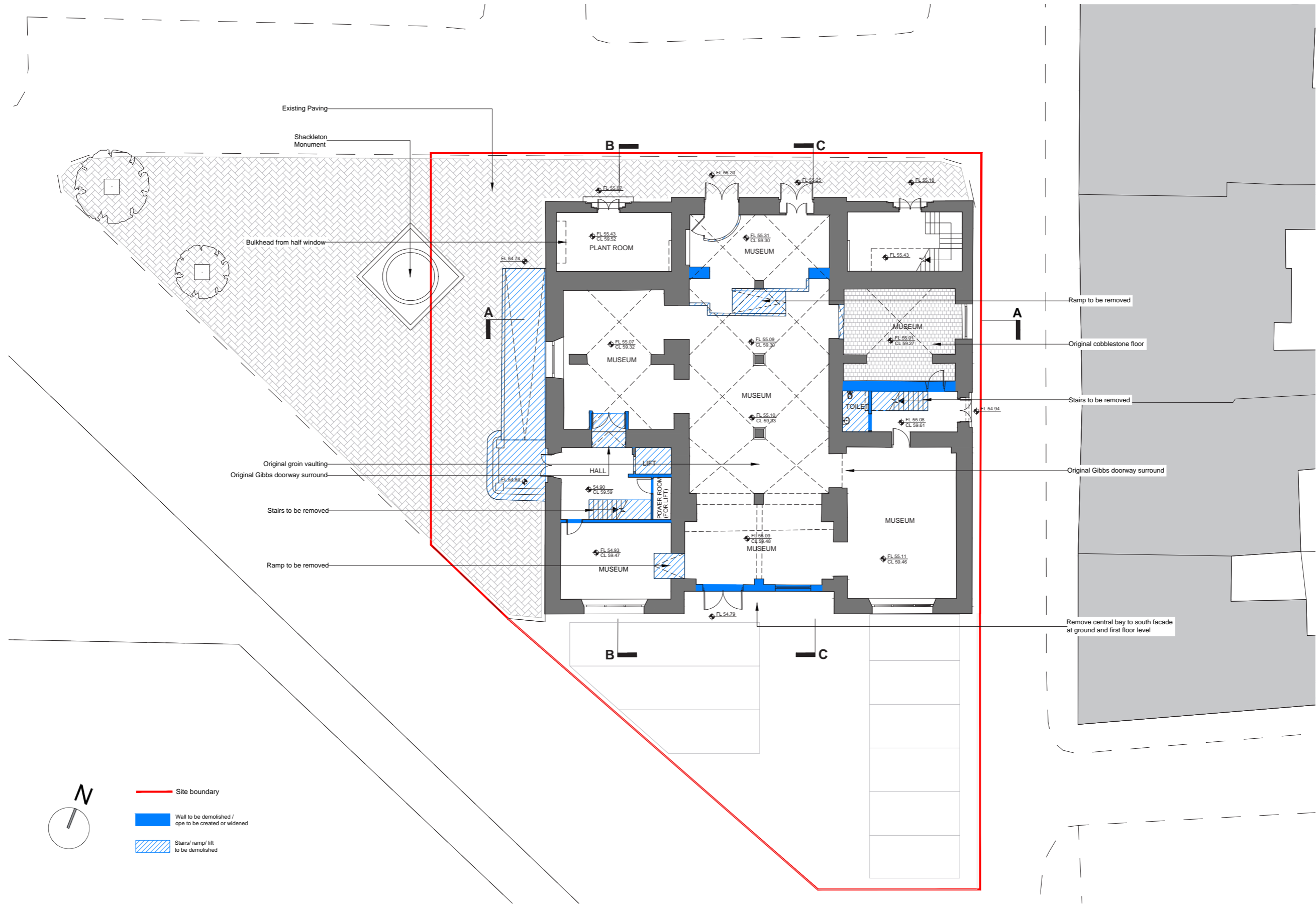


Image 30: Second floor office to East facade



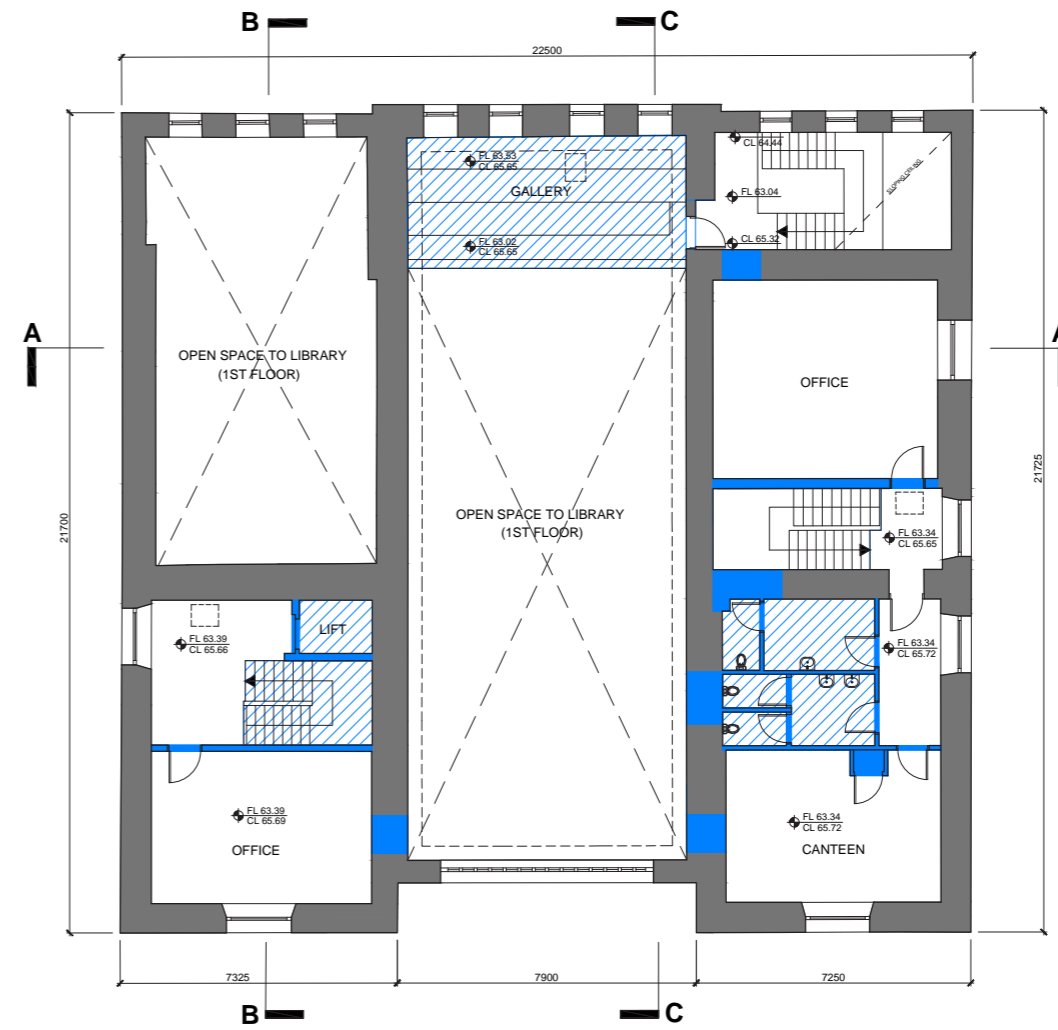
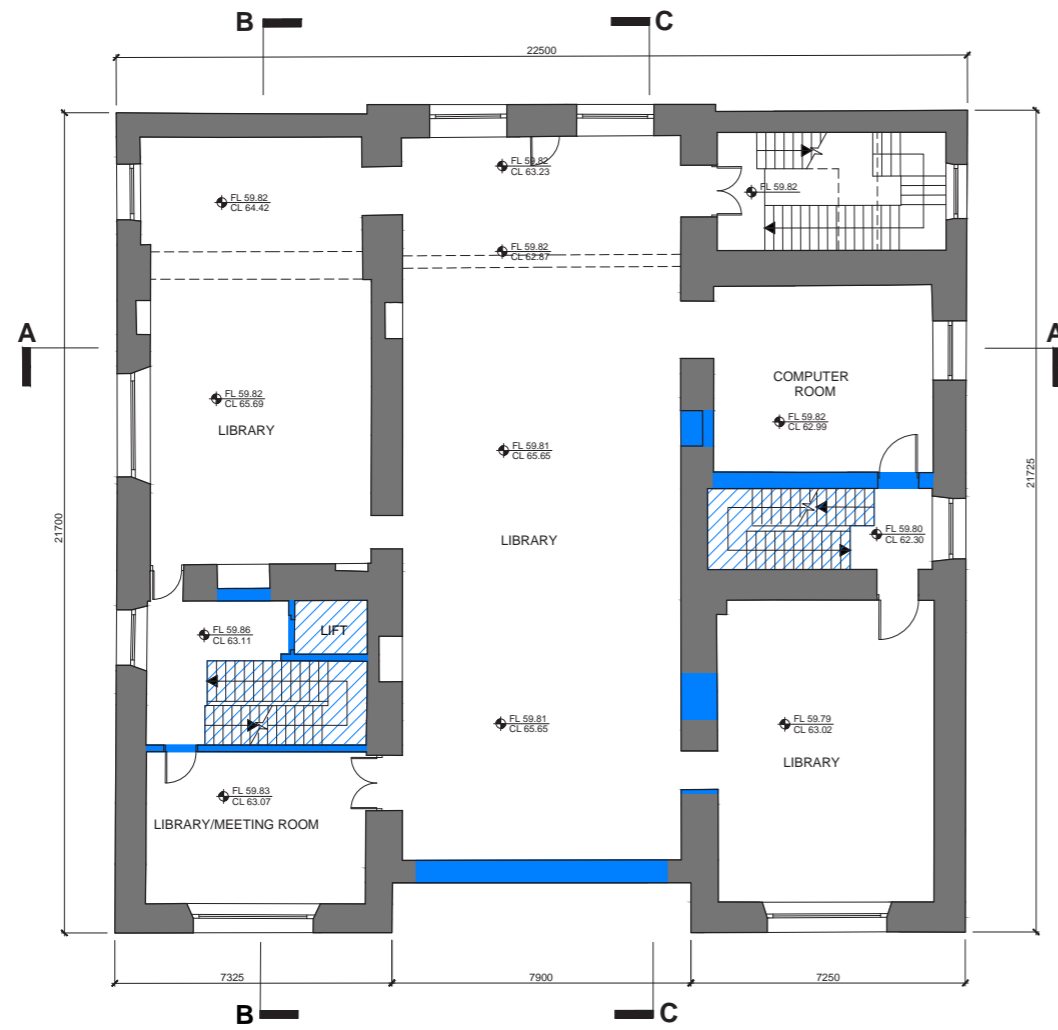
4.0 Drawings of Existing Building

Ground Floor Plan 1:200

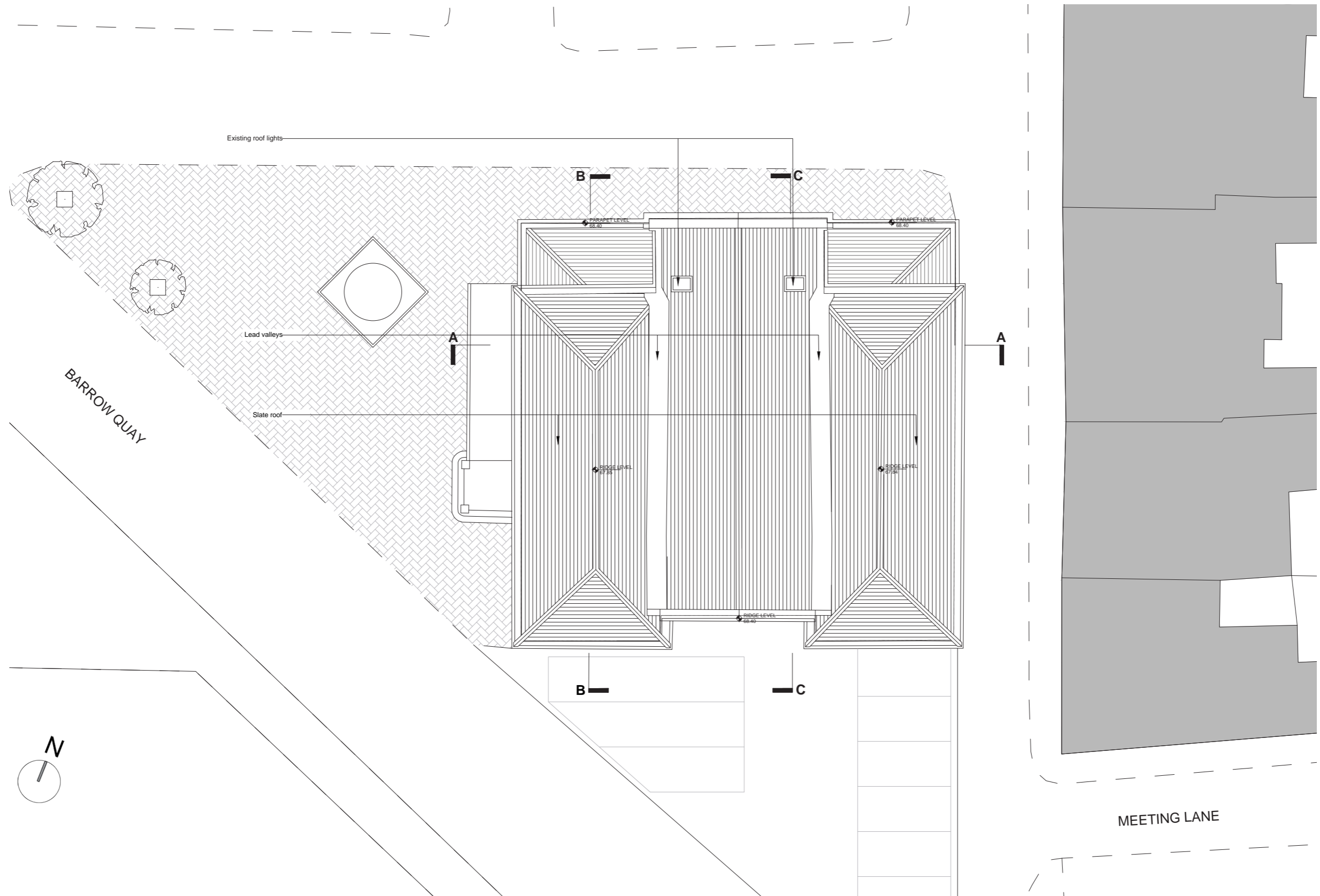


First floor plan 1:200

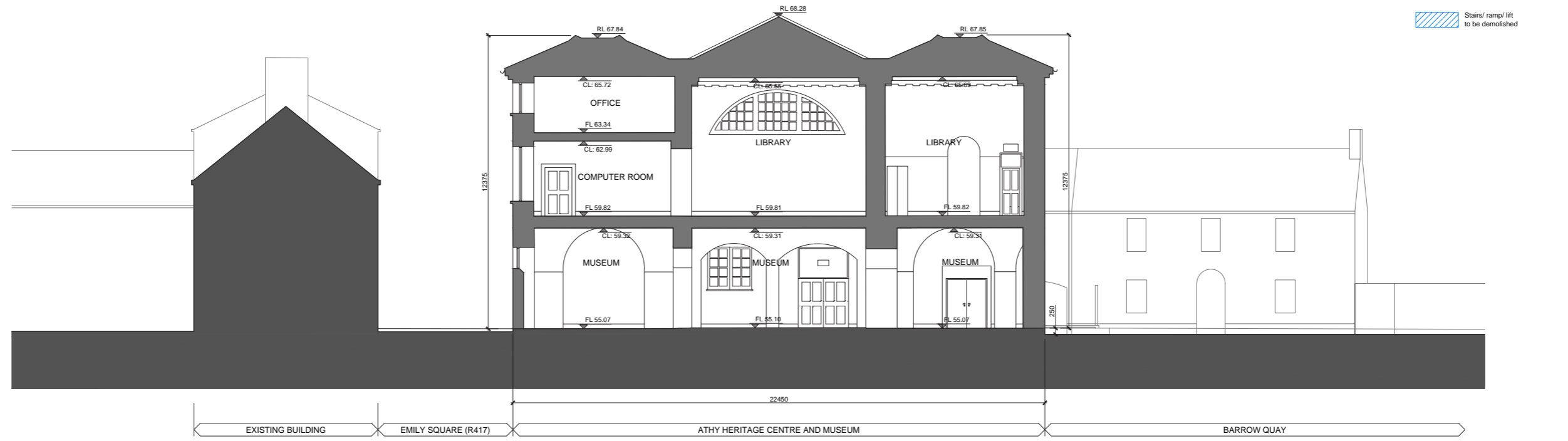
Second floor plan 1:200



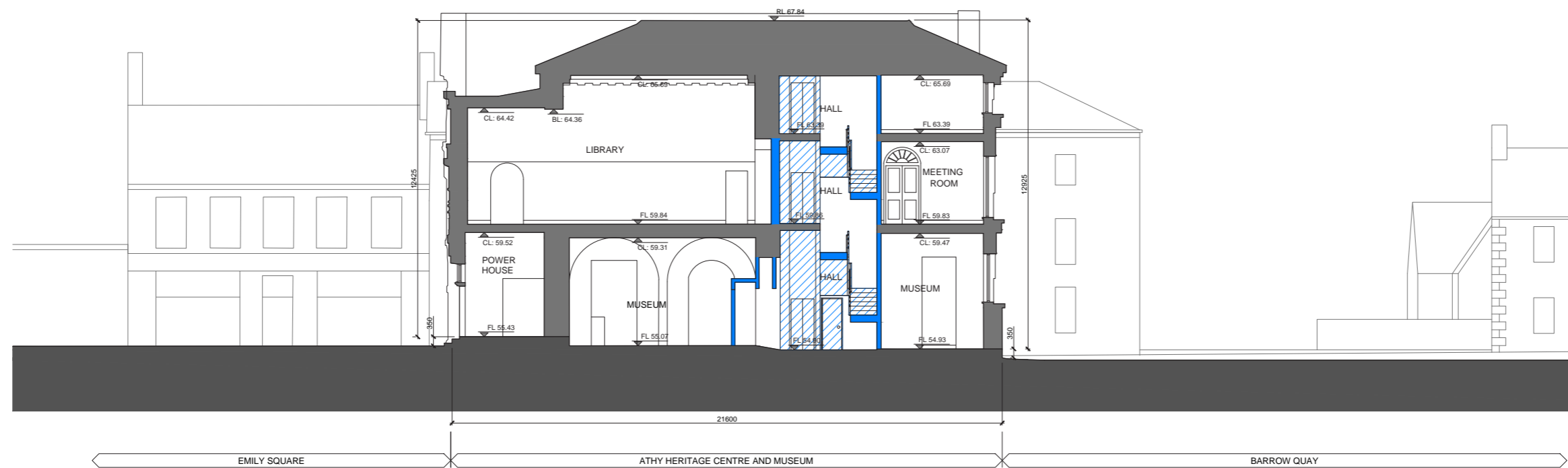
Roof plan 1:200



Section A 1:200

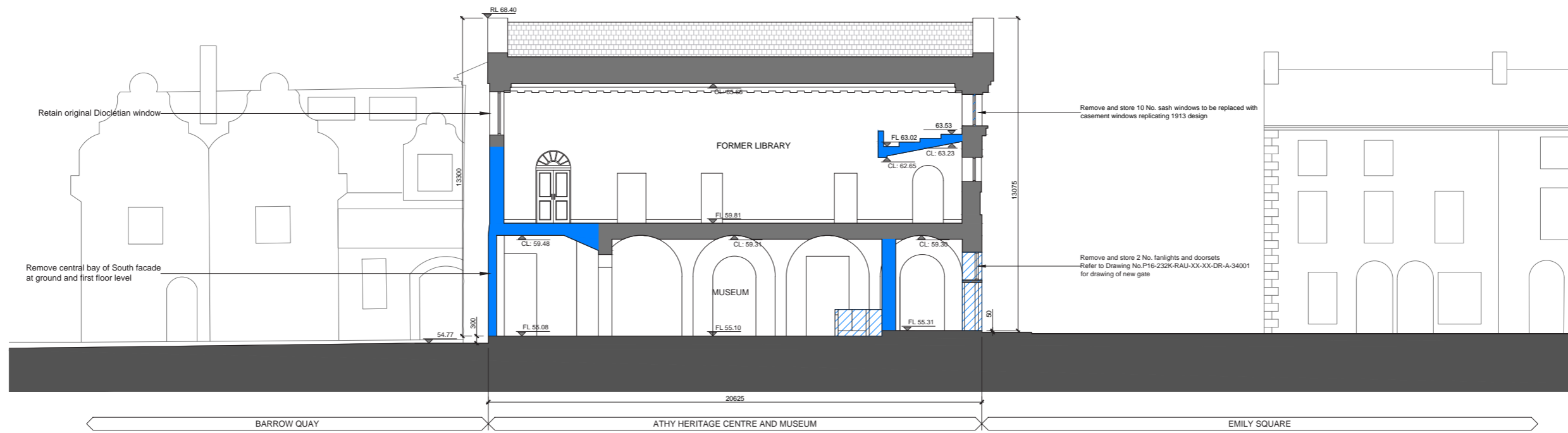


Section B 1:200

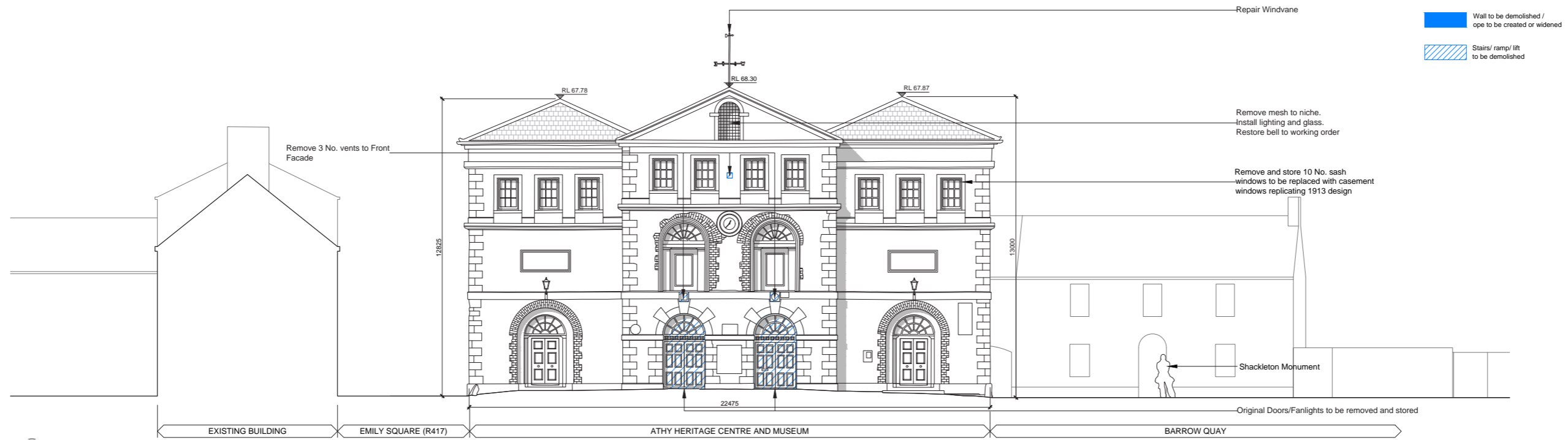


Section C 1:200

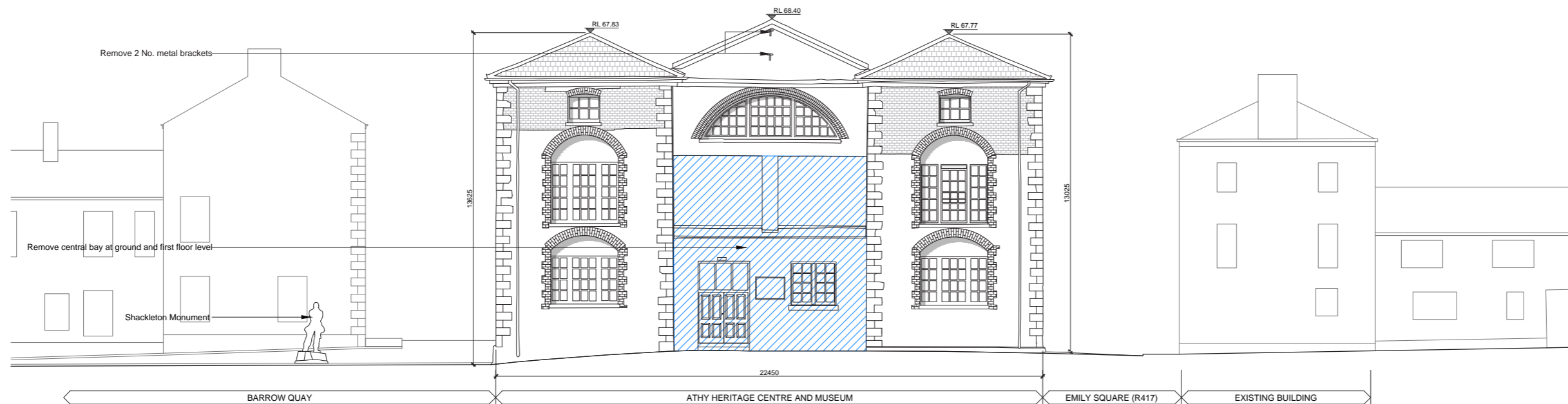
- Wall to be demolished /
ope to be created or widened
- Stairs/ ramp/ lift
to be demolished



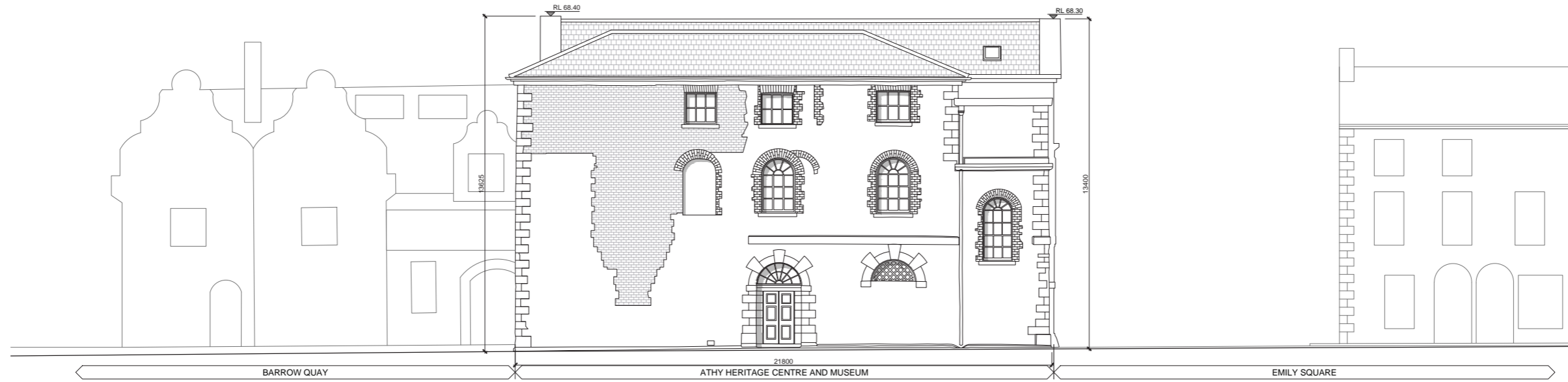
North Elevation 1:200



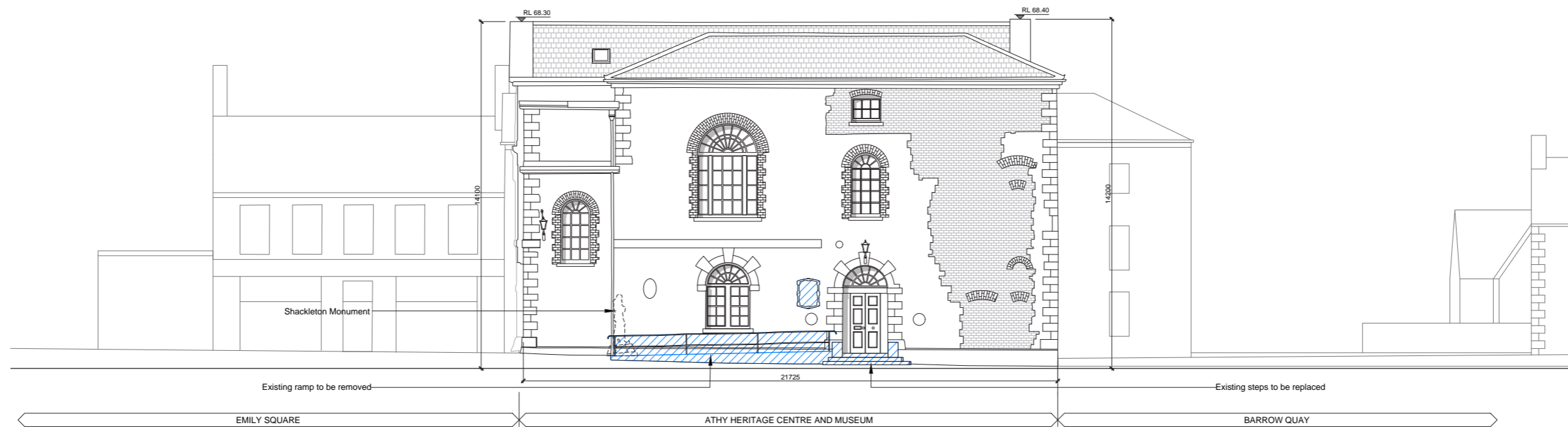
South Elevation 1:200



East Elevation 1:200



West Elevation 1:200



5.0 Design Proposal

5.1 Design Response and Approach

Design Response

The initial project brief sought to limit the works to the Heritage Centre in so far as was practicable, and to generally work with the building as it was. This led to the decision to locate the Shackleton Cabin on the ground floor to the rear of the building.

Upon review it was determined that this location was not appropriate and furthermore the overall project would be better served by undertaking a detail analysis of the conservation and archaeological issues surrounding the project.

The Cabin was to be the centrepiece to the exhibition which led to the conclusion it should be located on the first floor central double-height space. Analysis of the existing building led to the following key considerations:

- Interconnectivity between floors was an issue.
- The artefacts should be allocated sufficient space in order to be showcased properly.
- Accessibility for all users, both physically and visually, should be prioritised.
- The building previously had a more open relationship with Emily Square and this characteristic should be restored.
- The building in terms of its location presented a unique opportunity for its revitalisation and to create an exciting and innovative design solution that will become a landmark building for the town.

In order to lead people seamlessly from ground floor to first floor, a new stairs should be provided to the rear of the building. This was an exciting opportunity to design a really special extension to maximise the future potential of the building.



Image 31: Current Shackleton exhibition space and artefacts

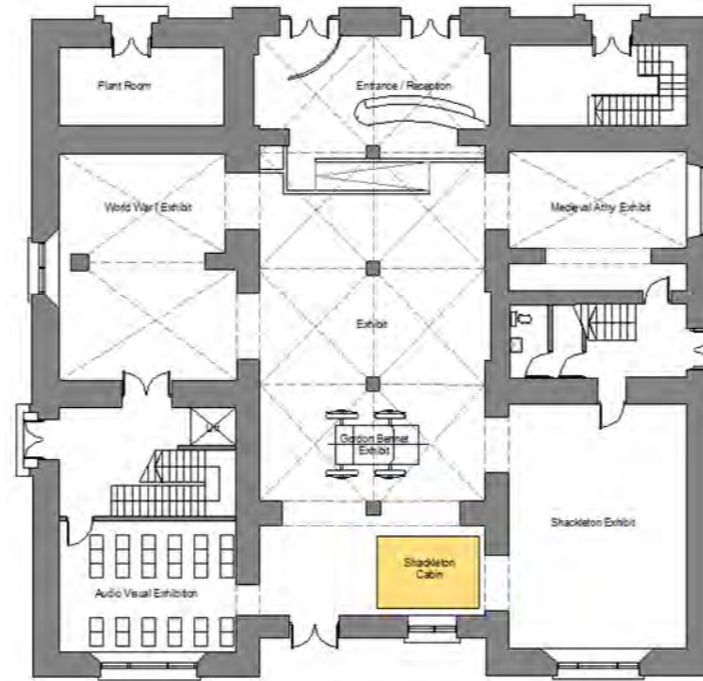


Image 32: Early layout with the Shackleton Cabin located on the Ground floor

Evolution of the Building Form

As part of the design process, the team undertook various studies on potential building design form, as follows:

- A rectilinear extension to the rear of the building
- A rectilinear extension to the side of the building
- A cylindrical extension to the rear of the building

Upon review of these options it was determined that the design responses, whilst appropriate to the building in terms of scale and geometry, simply did not offer a design solution that was reflective of the important proposed function of the building as a museum to Ernest Shackleton, Ireland's greatest explorer.

Following Client approval to proceed with a more dynamic form, the design evolved and was developed to what it has become today. Whilst the extension is not orthogonal, its geometry, form and scale is derived directly from the site, setting and functionality of the building.

On balance, the design evolution explored the spectrum of "do nothing" to creating a sensitive yet iconic intervention to a protected structure. The extension is striking and does not try to "blend in" or detract from the principal facades of the building, rather an appropriate balance is struck between old and new to enhance a landmark building pertinent to its use as a national and international tourist destination.



Image 33: Options presented to the Client in March 2018



Images 34-37: Design Development April to August 2018

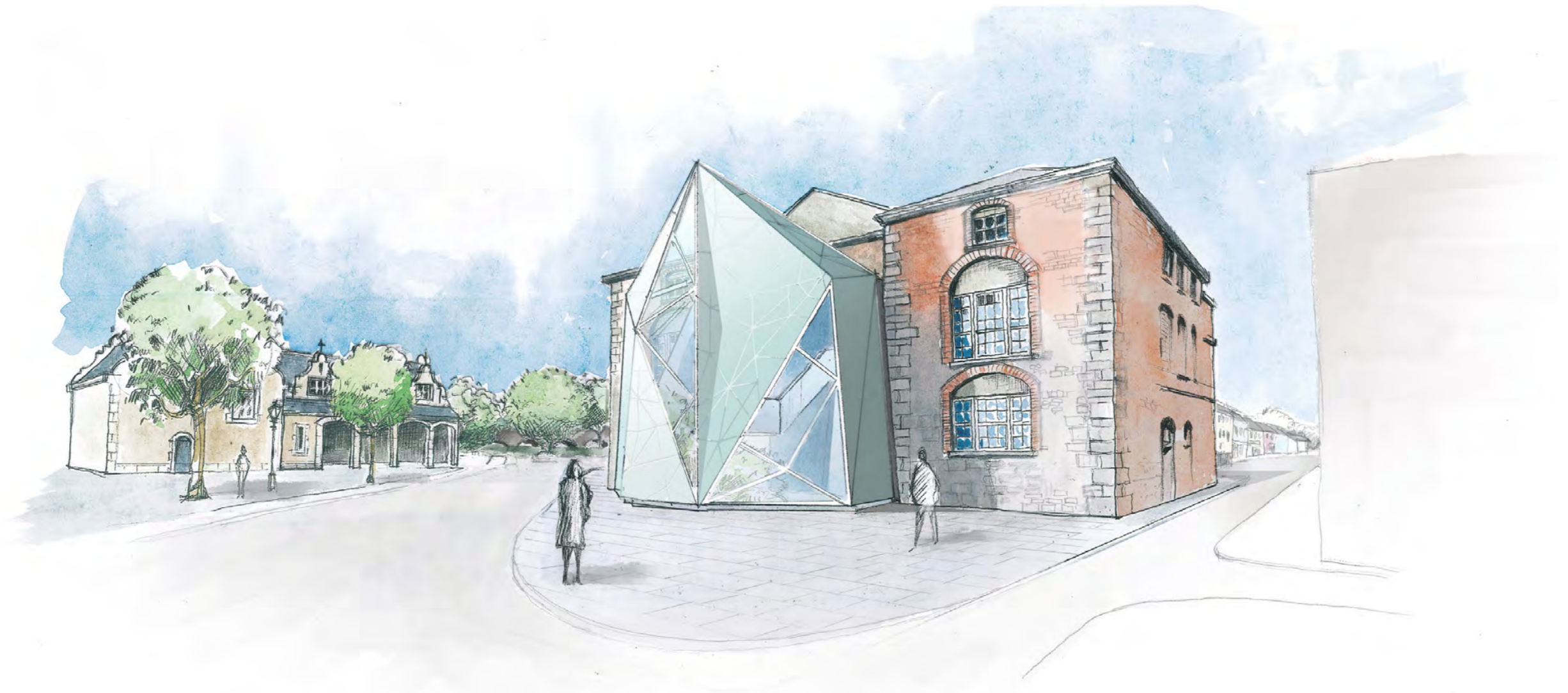


Image 38: Final Scheme September 2018: View from the South East

Existing building and survey

The Building has been fully surveyed and is generally found to be in good condition.

The building currently has 3 distinct stair cores and a lift access to the west elevation which serves the former library on the first floor. The building has had various modifications and extensions over its lifetime but is well maintained and appears to have no major issues with the structure or fabric.

Erkina Surveys completed the full dimensional survey of the building which will be used to inform all further works with highly accurate baseline information.

The Athy Heritage Centre lies within the Town Centre Architectural Conservation Area and abuts the Zone of Archaeological potential. It also is situated in close proximity to the River Barrow (a Natura 2000 site)

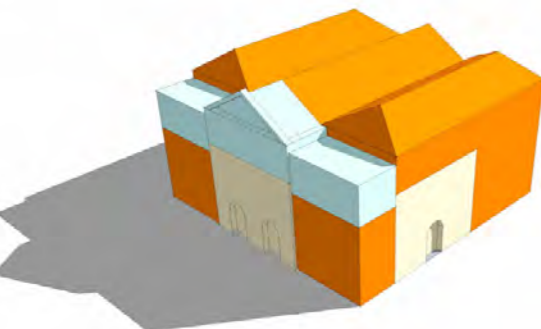
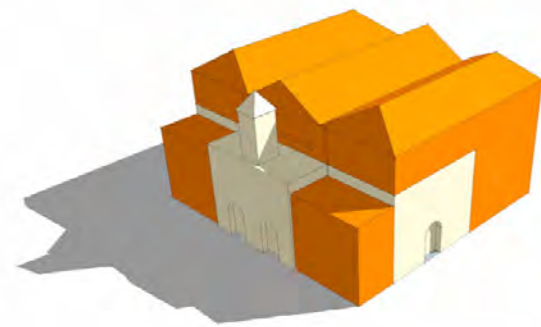
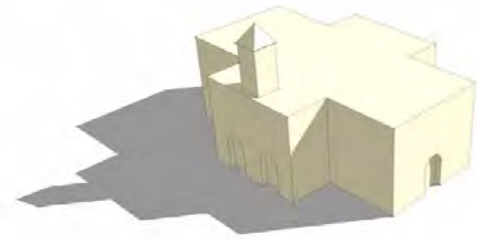


Image 39: Historic Build-up
18th Century Market House - 19th Century extension - 20th Century extension

Review of existing building

When reviewing the existing building, from the perspective of the creation of the Shackleton Experience, RA+U noted the following key considerations:

1. Interconnectivity between floors is an issue, where the floors of the building are remote from each other. This creates difficulties in the formation of an experience in the building without disconnection.
2. Accessibility for all users is a concern, with varying floor levels on the ground floor it is cluttered with ramps and varying floor finishes. The lift access is currently provided at the former Library Entrance area and serves only one room on the West side of the building at second floor level. Ideally, universal access should be provided along the main experiential route of a museum to ensure equal opportunity of the enjoyment of the experience for all users as well as the staff working there.
3. Generally, the building in terms of its orientation and location within Emily Square and proximity to the River Barrow represents a unique opportunity for the revitalisation of the Building and to bring greater prominence to the Shackleton Experience.

Proposed Accommodation

The brief shown in the proposals has been reached after an extensive consultation process with the Client and the Board of the Athy Heritage Company Limited.

The proposed accommodation includes;

- Reception counter
- Temporary exhibition area
- Permanent Shackleton exhibition
- The Athy Story exhibition
- Shop
- Cafe
- Cinema / AV Room
- Public Toilets
- Staff Toilets
- Staff room with kitchenette
- Artefact storage room with dedicated quarantine area
- Office
- Research room
- Plant Room

The proposed development works will consist of the following:

- Alterations and extension to, and refurbishment of the Athy Heritage Centre. The building is a Protected Structure RPS Ref AY075. The building will house a Shackleton Museum and Experience.
- Provision of a two-storey 82sq.m contemporary glass and steel-clad extension to the rear of the existing building with removal of the associated part of the central bay of the south façade.
- Refurbishment of existing building, including repointing and cleaning of masonry and brickwork, repairs to windows, re-dressing of lead linings and repairs to roof.
- Provision of plant in attic space and associated vents to inner valleys of the roofs.
- Removal of existing 26m² mezzanine level and construction of a new 37m² mezzanine at second floor level.
- Removal of 2 No. existing stairways and one lift and associated structure, construction of a new lift and fire escape stairs to serve all floors.
- Provision of level access to entire ground floor from front entrance by raising ground floor internally.
- Removal of 1980's access ramp and steps to entrance at the West façade and replacement with new stone steps.
- Complete internal redecoration and new internal openings to allow improved circulation within the building.
- Replacement of existing signage.
- Site works associated with formation of new connections to existing public foul and surface water drainage, and existing utilities as required.
- Removal of 8 No. parking spaces to the rear of the building (Barrow Quay), provision of hard landscaping surrounding new extension and associated site works.

Spatial description of the proposal

This proposal is the culmination of two years of design evolution and discussion with the Shackleton Committee, Exhibition designers and the Client: Kildare County Council. The design evolved over time due to the change and expansion of the brief, as well as the relocation of the Municipal Library on the first floor to the former Dominican Church on the opposite bank of the Barrow, therefore allowing valuable space for the Shackleton Museum brief to expand.

With the exception of the central bay of the South façade, the current building is harmonious in its appearance. The Southern façade was amended several times over the last half century due to the building's change of use from the Town Hall to a Fire Station. The façade at ground and first floor levels is incongruous to the appearance of the rest of the building, it was therefore the rational location for the new extension.

Ground Floor:

The main entrance is located on Emily Square. On arrival, visitors need strong affirmation that they have come to the right place. The proposed new gates will provide access to an open arcade – this is an area where people can gather before proceeding through the glazed entrance into the reception area. Here, the visitor would enjoy a clear vista of an open and impressive Main Hall right through to the striking new extension at the far end.. The new gates allow the building to re-establish its more open relationship with Emily Square, as we can see from the photo below (Image NoXXX).



Image 40: This historic image suggests that the building had a more open relationship with Emily Square. Photo: NLI



Image 41: View from Reception area looking South towards the new extension

The ground floor will be provided with a level access from Emily Square that continues throughout the ground floor– this provides access for all and means that all internal ramps can be removed – freeing up the space visually and allowing a better flow through the building. The level ground floor also allows for the introduction of insulation and under-floor heating which improves the thermal performance of the building.

The ground floor houses a shop, AV room and cafe: the cafe along with the AV room can also be accessed independently from the West. The central space past the reception could be used for temporary exhibitions.



Image 42: New entrance gates on the North facade to Emily Square



Image 43: View inside Cafe looking West

The service block on the south-east corner will house toilets, lifts and stairs on all floors. This simplifies and frees up the spatial allowance for the rest of the building. The lift services all levels ensuring access for all. The extension to the rear of the building serves to improve the vertical circulation in the building, the visitor is drawn towards the light and dramatic form of the “shard” and is invited to proceed to the first floor exhibition space via a sculptural steel stairs.



Image 44: Ice cave. Photo: Frank Hurley, Endurance Expedition



Image 45: First floor exhibition space looking North towards the Shackleton Cabin

First Floor:

The visitor can access the first floor either via the main stairs in the proposed extension or via the lift and stairs in the service block. With the exception of the service block, all first floor rooms will be used for the Shackleton exhibition and experience. The Exhibition Designers have created an “Ernest Shackleton Experience” for this floor which details his life, the Nimrod and Endurance expeditions, and finally the Quest expedition – culminating at the Shackleton Cabin. Located in the central double-height space, ample space has been allowed to view and contemplate the cabin and its significance.

Second Floor:

The existing mezzanine to the North façade will be replaced with a mezzanine to the South façade in the double height central space. The location of the service block and the new mezzanine improves functionality, allowing all existing floor space on the second floor to be used without additional vertical circulation. The mezzanine will serve as an additional exhibition area. The room to the South-West will be used for storage, including a dedicated quarantine area which allows the Museum to acquire or borrow new artefacts.

The rooms to the East façade will house an office, research room and a staff room.

The visitor returns to the ground floor via the lift or stairs, they can access the shop or café before exiting the building onto Emily Square.



Image 46: First floor exhibition space looking South towards new extension

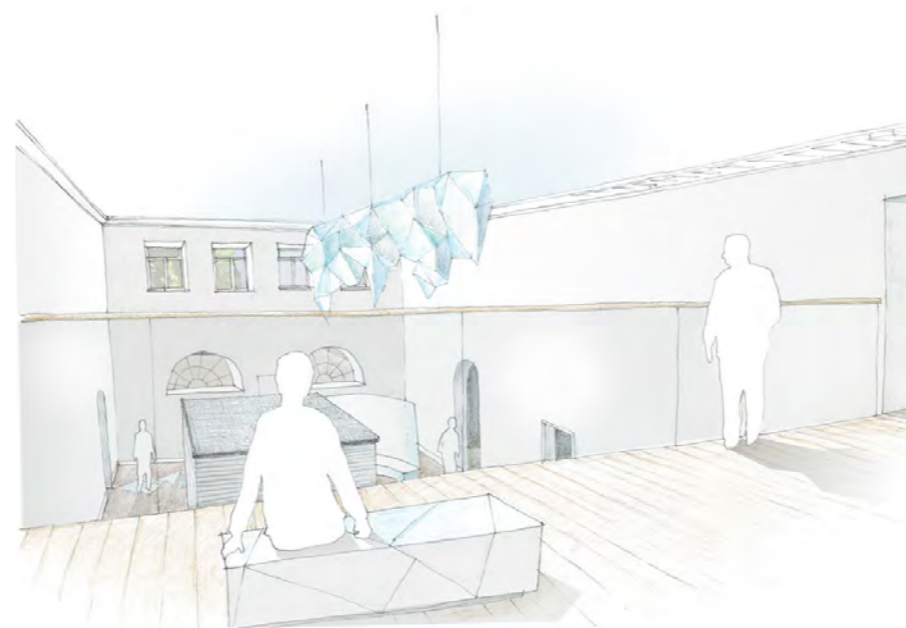


Image 47: View from second floor Mezzanine looking down on the Shackleton Cabin



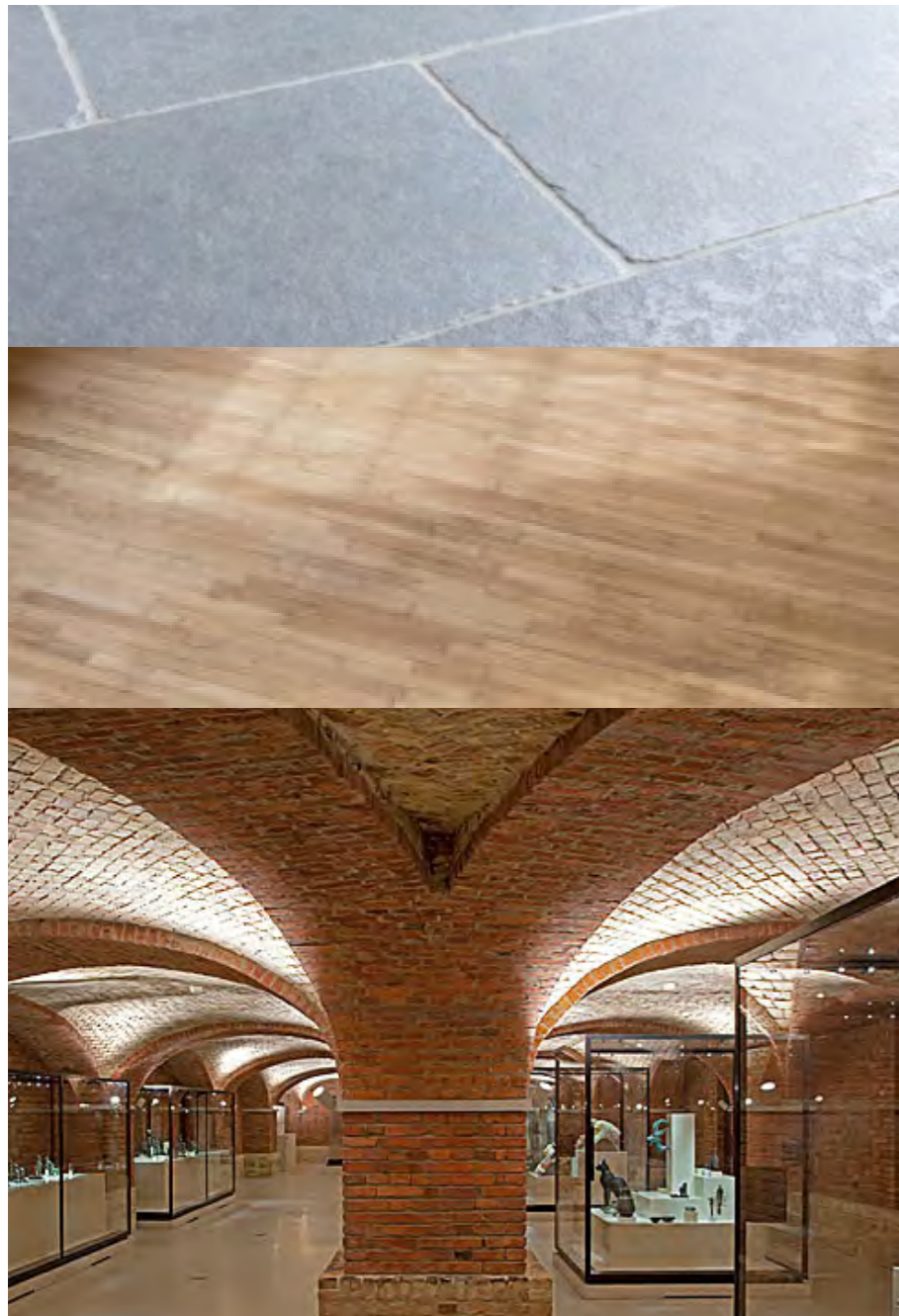
Image 48: View from second floor Mezzanine looking towards the Diocletian Window

5.2 Materiality and Design

Existing Building: Internally

To provide a level ground floor with a stone finish, It is proposed to excavate 500mm to install a limecrete floor with insulation and underfloor heating. This will improve the thermal performance of the building. The new levelled ground floor will have a stone finish throughout which will lend to a sense of visual clarity and permanency of the space. The original cobblestone floor in the North East room will be retained. The first and second floors will have a timber floor finish throughout.

Image 49: Indicative finishes - Stone floor, timber floor, brick vaults



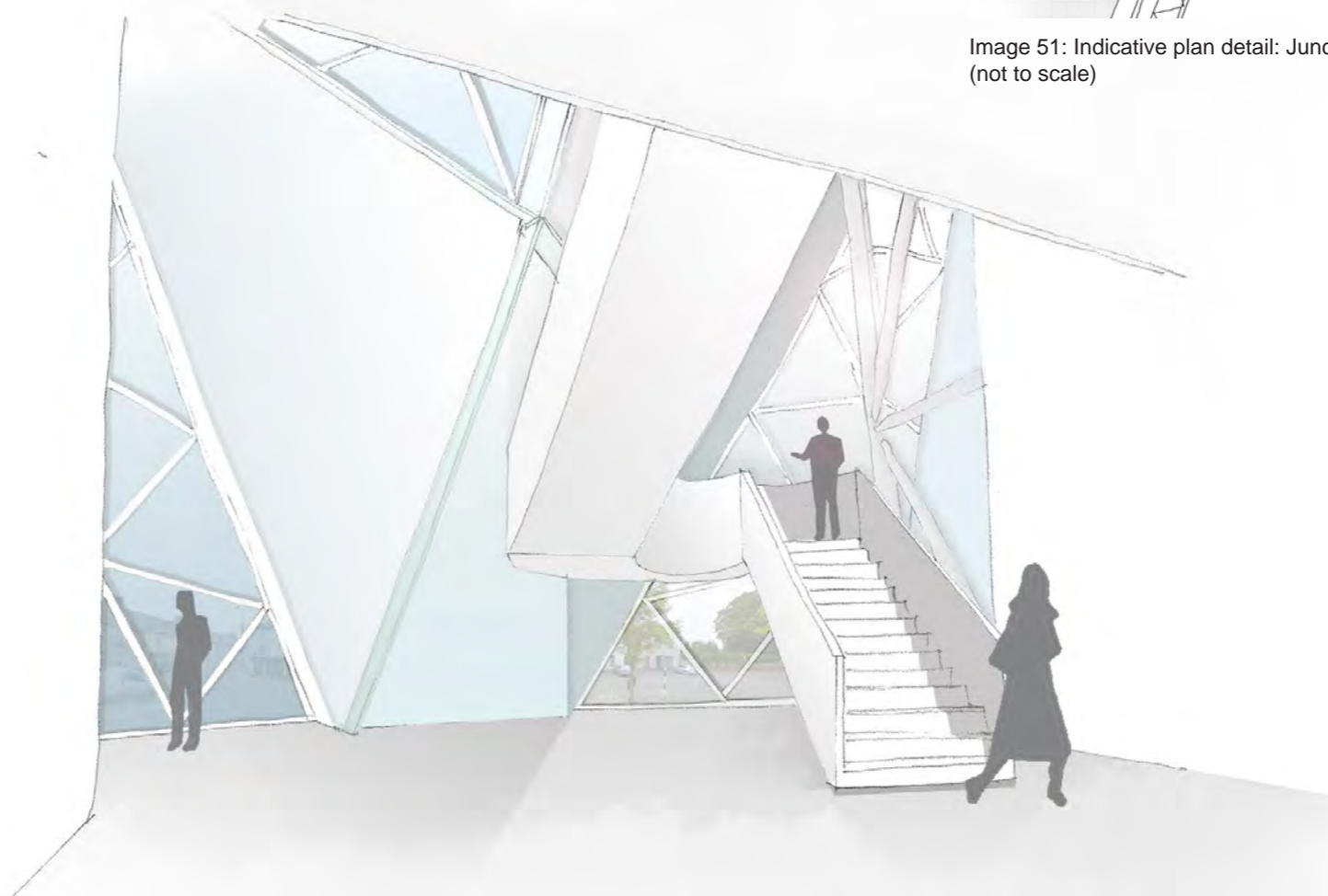
Existing Building: External treatment

The existing building will be refurbished to a high standard which will include re-pointing and cleaning of masonry and brickwork, repairs to windows and replacement where necessary, re-dressing of lead linings and repairs to roof.

Historic photographs show that the West, South and East facades were rendered in the past, it is proposed to retain the rubble stone and brick facades without a render.

In support of retaining the rubble stone and brick facades without a render; the building is a landmark building in the centre of the town. There is a risk that if the building is rendered, it may appear too similar to the adjoining structures. The mix of materials tells the story of the evolution of the building that may be diminished if a shelter coat is applied.

Image 50: Ground floor, looking South towards extension and stairs to first floor



Junction Existing / New extension

The junction between the existing building and the new extension has been carefully considered. The extension is offset by 250mm from the facade of the existing building, this is facilitated via a linking structure consisting of blockwork and insulation with a painted plaster finish. The link also incorporates a service void.

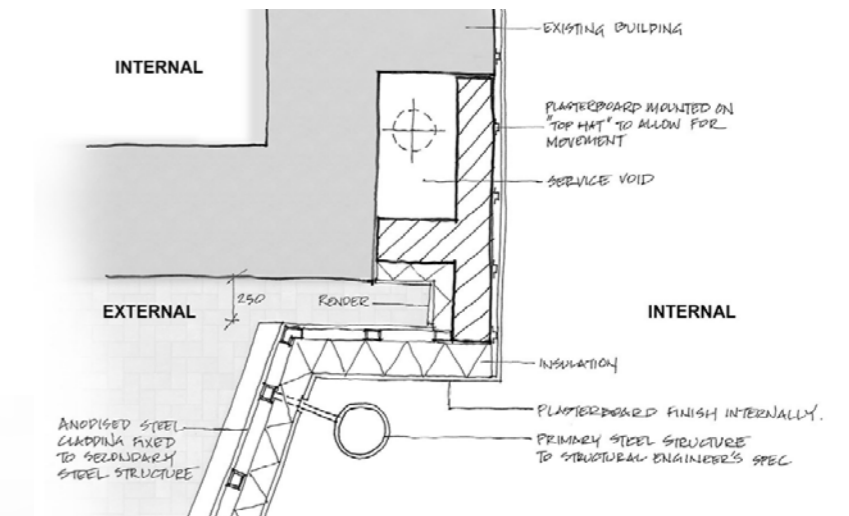


Image 51: Indicative plan detail: Junction of existing building and new extension (not to scale)

Extension

Internally: The structure of the “Shard” extension is composed of a primary structure of steel circular hollow sections, and a secondary structure of structural glazed fins. These fins could differ subtly in colour to reflect the colour scheme of the building inspired by Antarctic landscapes. The solid panels internally will have a painted plaster finish. Lighting will be chosen carefully to highlight the interplay of planes.

The main stairs within the extension is sculptural in form and reads as a solid continuous white form, drawing visitors upwards from ground floor to first floor. The stairs would be finished in powder-coated steel. As you ascend your view will be directed through a glazed facet of the shard towards the river Barrow and the former Dominican church on the opposite bank.

Image 52: Ground floor, view from within extension looking South towards groin vaulted exhibition / entrance area

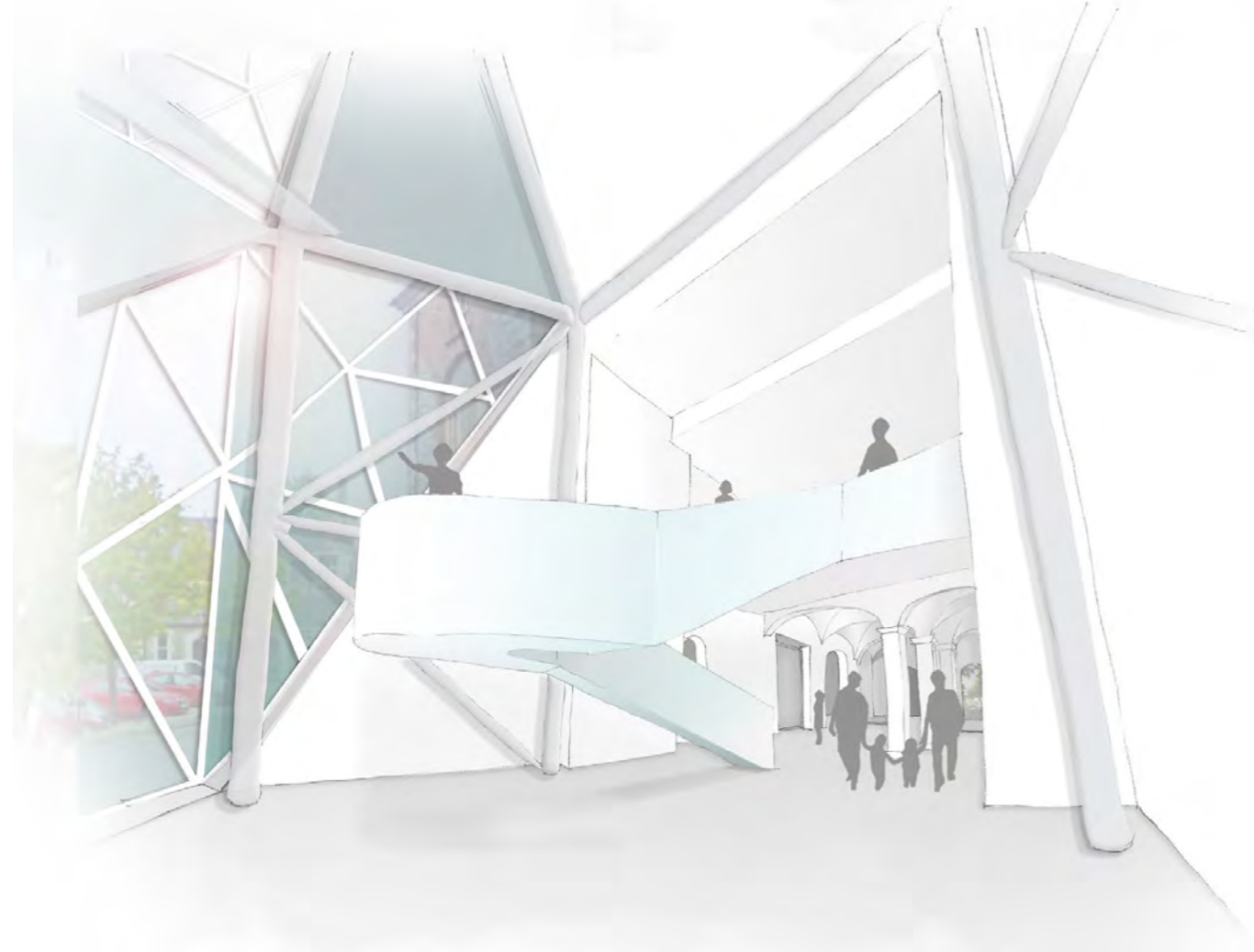


Image 53: KPMB Architects: Saskatoon Gallery, Canada

Externally: The extension consists of a series of angular alternating planes of opaque, transparent and translucent panels. The form is reminiscent of an iceberg.

The opaque panels will consist of anodised steel cladding. The panels will vary slightly in hue, different patterns could also be laser etched on to the cladding.

The glazed panels (44% overall) consist of translucent and transparent glass. The overall breakup of the glazed, translucent and solid elements of the facade is based on the triangulated fractal geometry found in nature.



Image 54: Ice formation

Images 55 and 56: Colours in facades. Photos of Antarctic Icebergs: Dave Walsh



References and Precedents for External Finishes



Image 57: Federation Square Melbourne, Bates Smart Architects

Image 59: South Elevation

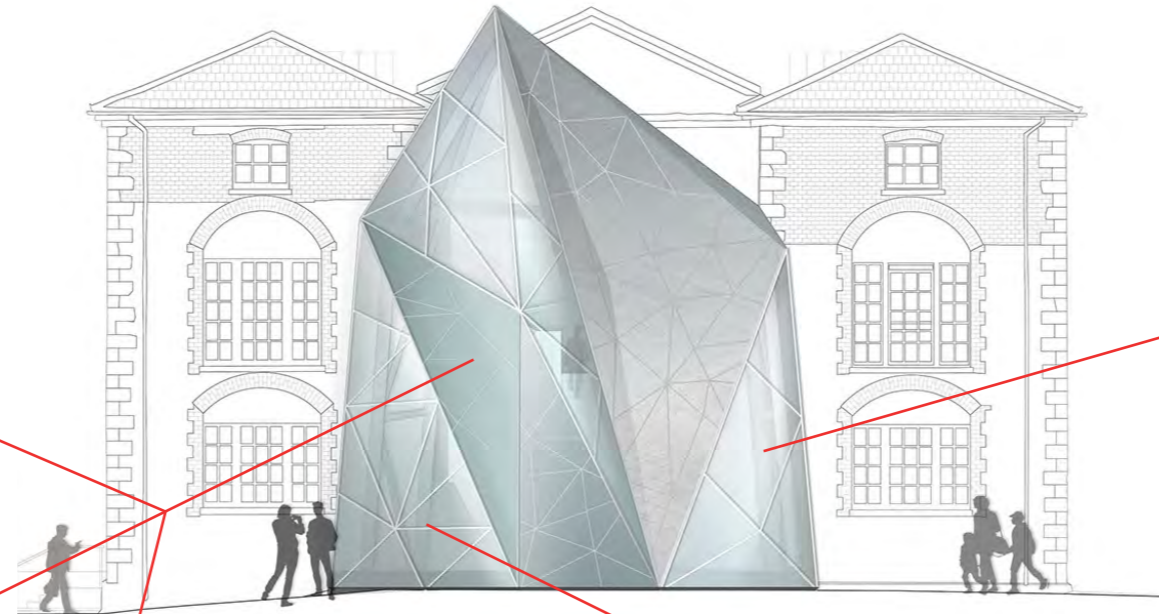


Image 61: Carlow Arts Centre, John Pawson: Translucent glazing



Image 58: Stadtmuseum Rapperswil, Switzerland: MLZD Architects
Anodised steel cladding on a modern extension to a protected structure

Opaque Panels: Anodised Steel Cladding



Image 60: Polur Rock gym, Iran: New Wave Architecture (unbuilt)
"Fractal" glazing and solid planes



Image 62: Poyhedra House New York, Axis Mundi Design: seamed glass with solar reducing pattern



5.3 Cafe

RA+U have had discussions with Sean Moore, Environmental Health Officer in the HSE in Kildare regarding the approach to designing the café.
Primary considerations have been made to allow for a wash up area and ventilation. It has been agreed that full layout plans will be submitted for approval with the HSE at a later stage.

5.4 Signage

There are currently 6 No. signs on the Athy Heritage Centre, 3 No. signs will be retained. The two signs located near the East and West corners of the buildings should be double-sided and will retain their current proportions (600 x 1200mm), the sign located between the two front gates at ground floor level will differ slightly in size (750mm x 1500mm).
Depending on detail, the signs could be either cast aluminium with raised letters and logo, or vitreous enamelling. Both approaches lend a sense of permanence and quality

A graphic designer has not been appointed at this stage to devise a branding for the Museum, however the Client / Committee preference has been for the creation of a logo derived from an abstracted elevation of the proposed extension, which in form and colour is reminiscent of an iceberg.



Image 66: Plaque celebrating the building's heritage



Image 63: Postcard image of the kitchen at Patience Camp, Endurance Expedition

Image 64: "The Ritz": midwinter meal on the Endurance Expedition
Photo: Frank Hurley



Image 65: Indicative signage on the North Facade



Image 67: Indicative signage



5.5 Lighting



Image 68: North facade on Emily Square

Image 69: Existing ground floor groin vaulted space



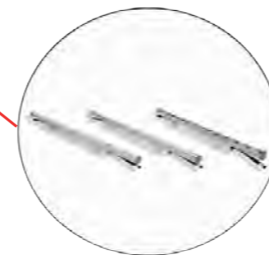
Following liaison with two lighting suppliers / consultants, an outline approach to lighting the main elements of the building has evolved. Lighting will play an important role for the building as a whole: a sensitive approach will be required to accentuate the unique features of the existing as well as subtly highlighting the dramatic spatial qualities of the new extension



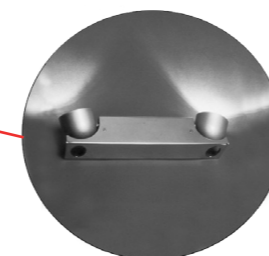
ARC blade light to illuminate bell niche in warm white light



Replacement LED period feature wall light



Discreet LED strip lighting to highlight opes



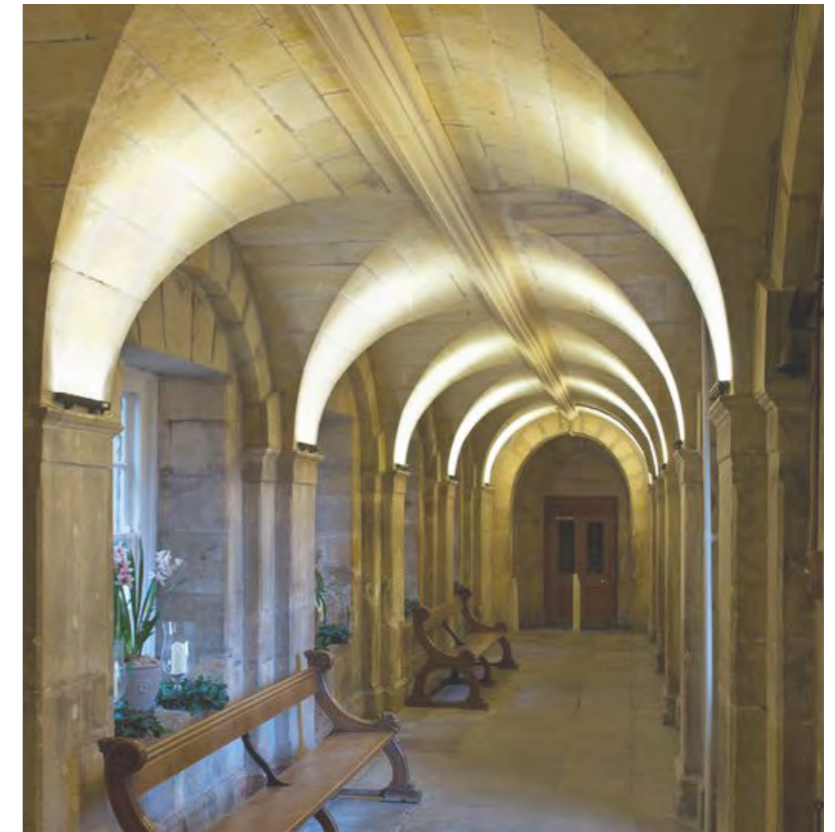
Uplighters to illuminate groin-vaulted ceiling

Reference images



Image 70: Bishop's Palace Waterford

Image 71: Castle Howard, York. Discreet uplighters to groin-vaulted ceiling



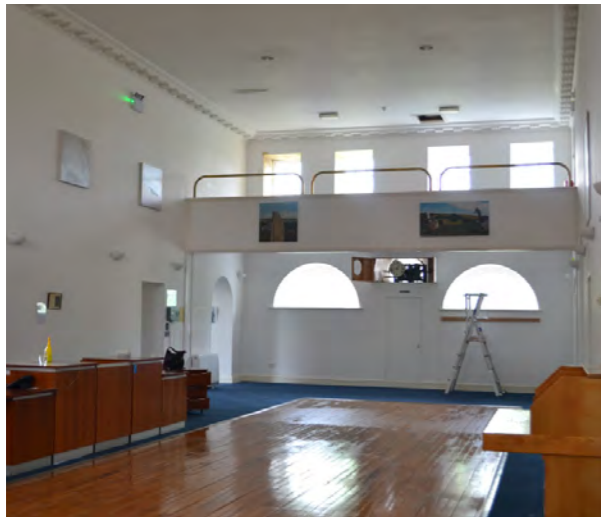


Image 72: Existing First Floor double height space



Image 73: Sketch showing proposed exhibition space.



Replacement of wall lamps with new wall mounted or recessed up/downlighters

Reference images



Image 76: Lighting to exhibition panels will be panel mounted or retro-lit

Image 77: Lighting to subtly highlight edges of internal planes

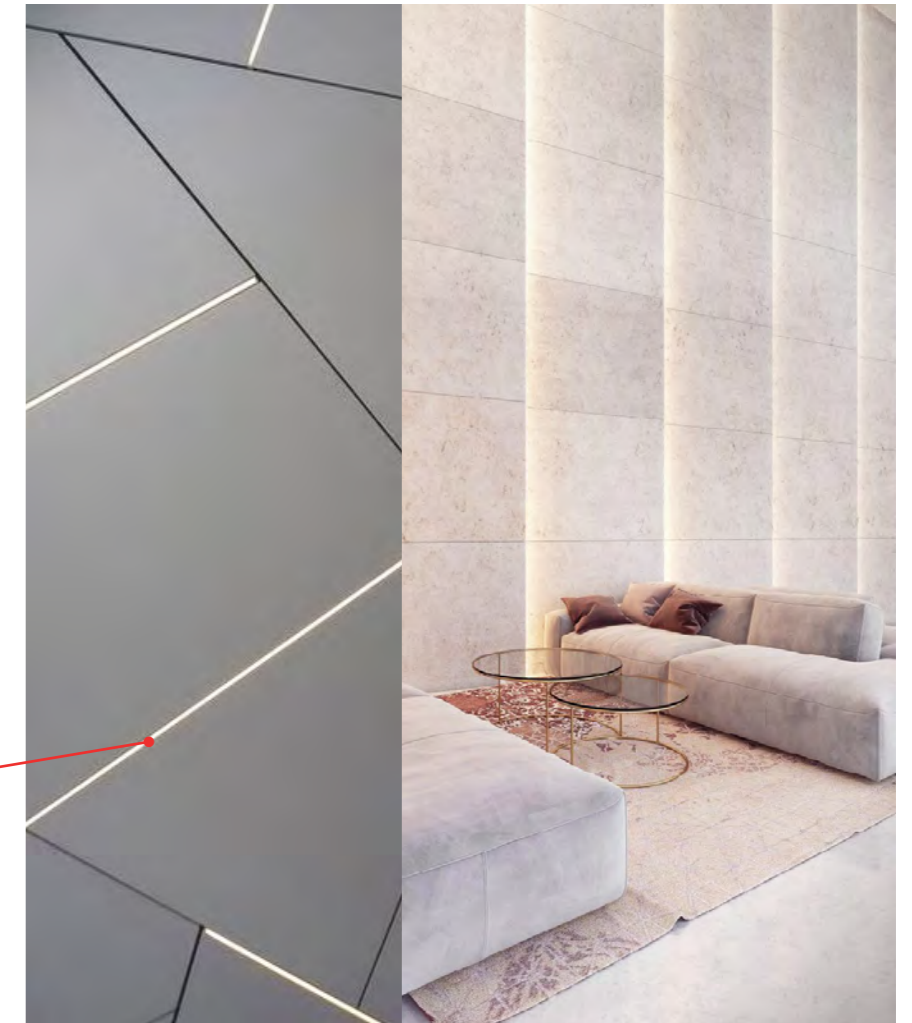


Image 74: Proposed Extension

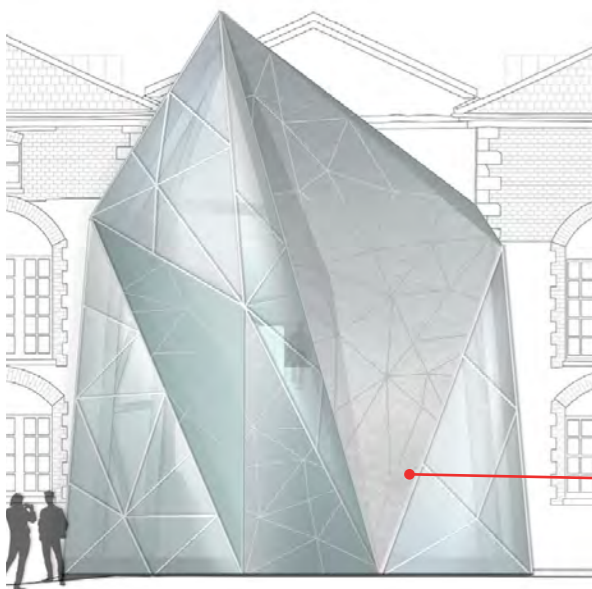
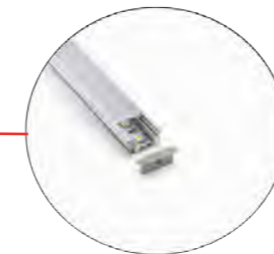
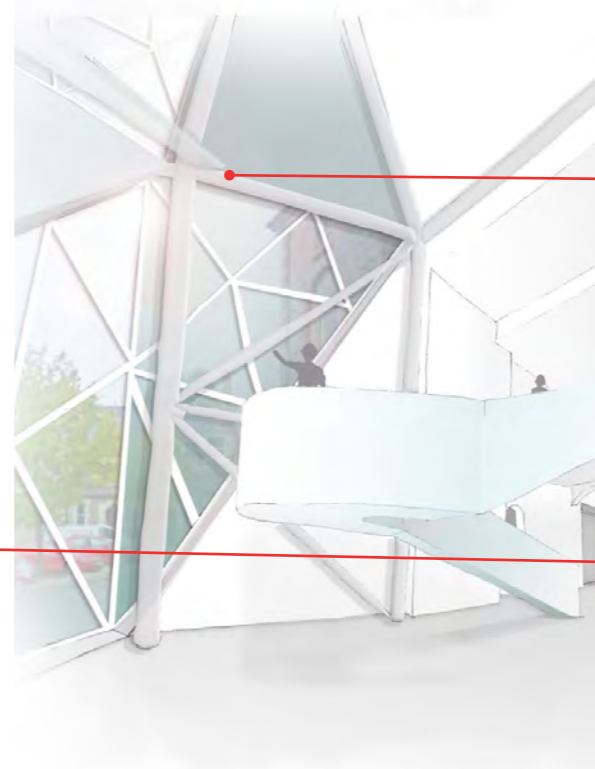


Image 75: Proposed Extension: Internal view



Tape profile for LED strip recessed in wall panels to highlight edges of planes



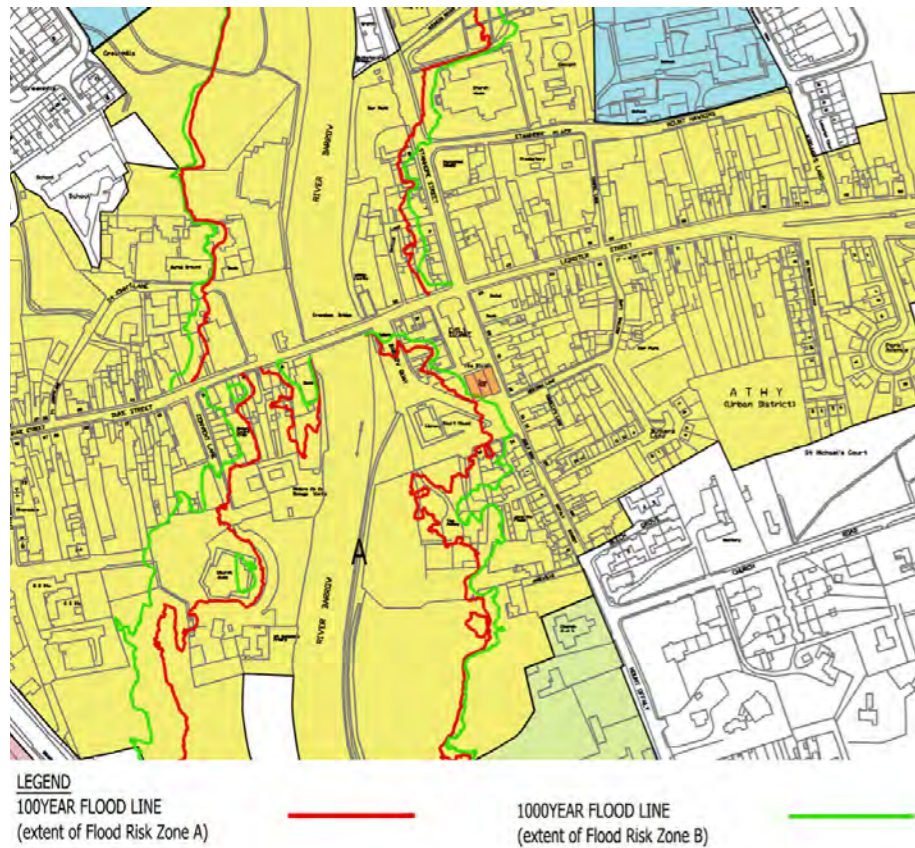
5.6 Flooding

The Hydrometric Station in Athy recorded a serious flood event in Athy on the 19th August 2008. Peak water level was recorded at 4.13 metres over the mAD Poolbeg. Staff in the Athy Heritage Centre confirmed that the building was not flooded during this flood event.

The building is located outside the 1:100-year flood plain however the South-West corner of the building lies just within the 1:1000-year floodplain. The proposed plans for the Museum involve raising the internal ground floor level throughout to 55.20, this is 1.62m above the peak water level of the last serious flood event. Externally, the levels on the South and South West corner of the building will be raised by approximately 100mm with the addition of paving and kerbs.

Please refer to Section 2 of the Civil Structural Report for more detail.

Image 78: Flood plains



5.7 Transport and Access

The Athy Heritage Centre is already well serviced by existing transport infrastructure.

The proposed Museum is within 7.5 minutes walking distance from the train station with 8 trains running daily from Heuston station in Dublin. Bus services from Dublin are also available and the bus stops are located within 5 minutes walk from the proposed Museum.

Athy is easily accessed by car from the M7 and M9. According to the Athy Regeneration Strategy (2015): “probably over 50% of the tourists to Ireland pass within 20 kilometres of the town either on the M7 or M9 – a missed opportunity”.

Ample car parking facilities are provided either in direct proximity or within 5 minutes walking distance from the Museum. Please refer to Section 3 of the Civil Structural Report for more detail.

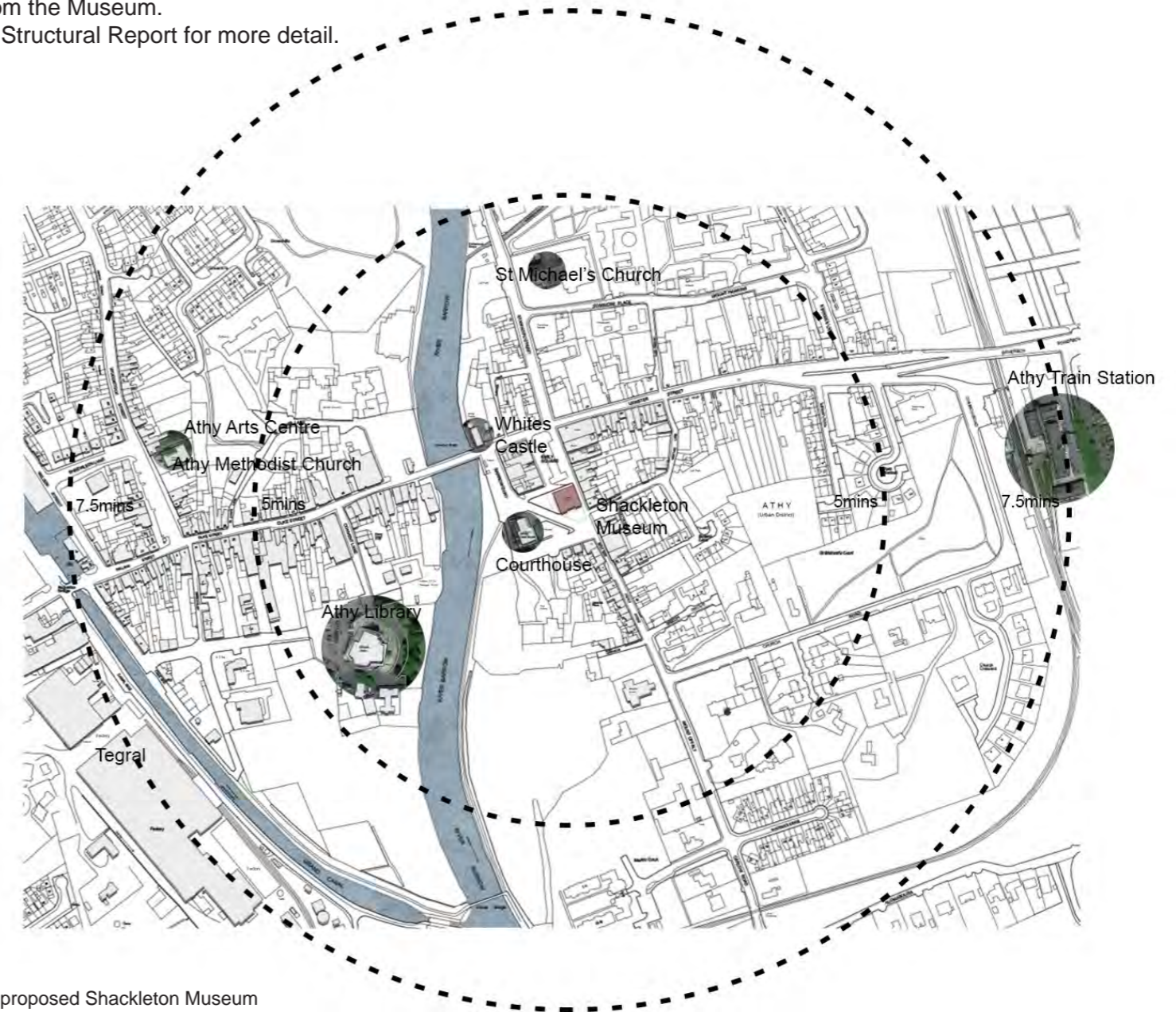


Image 79: Walking Map of Athy centred on the proposed Shackleton Museum

5.8 Assessment of Planning Policy Athy Development Plan 2012

The following texts are excerpts out of Athy Development Plan 2012 and the response of the project to the Development Plan requirements:

Tourism

“... Furthermore the town has strong connections with Arctic explorer Ernest Shackleton, providing the only permanent exhibition in the world on this subject in the Heritage Centre. It is essential to protect and enhance the qualities of Athy so that the growth in tourism visitors into the town is encouraged.”

Response:

The proposed Shackleton Museum will not only celebrate the life and achievements of Ernest Shackleton, but also promote the town of Athy thus encouraging growth and an increase in tourism.

TS1: “To recognise the employment and revenue potential of tourism in the local economy”

Response:

The Museum will act as a significant national and international attraction and will bring tourism and increased spending in restaurants, bars, cafes and shops within the town.

TS4: “To identify opportunities to improve the tourist product in Athy and to co-operate with the appropriate statutory agencies, the private tourism sector and community groups.”

Response:

The Shackleton Committee recognised the opportunity and potential significance of this Museum on a National and International level, together with the support of Kildare County Council and other statutory agencies they have progressed the project to a feasible opportunity.

TS8: “To ensure that the development of new tourist facilities are designed to the highest standard with particular emphasis given to quality materials and accessibility.”

Response:

Reddy A+U strive to produce architecture designed to the highest standard. One of the main design priorities was making the building more accessible, this has been achieved through level entry access from Emily Square, a clear uncluttered layout, and improved vertical circulation.

The materials chosen are modern and appropriate to the scale and use of the building. The building will be detailed to a high standard as would be expected of such an iconic building.

TS10: “To promote the establishment of tourist destinations in Athy subject to them being of an appropriate scale, located in sustainable locations, adequately served by public transport and would not adversely impact upon a Natura 2000 site.”

Response:

The proposed Museum is located in the current Athy Heritage Centre which is already a tourist destination in the town of appropriate scale and adequately served by public transport. An Appropriate Assessment Report was carried out and found that the proposed scheme does not adversely impact upon the Barrow SAC, a Natura 2000 site.

TSO4: “To support the development of the tourism industry by the upgrading of existing amenities in co-operation with the appropriate statutory agencies, private tourism sector and community groups.”

Response:

By using the existing amenity of the Athy Heritage Centre, the Museum has a solid starting point with an existing infrastructure and dedicated team to facilitate its evolution.

TSO8: “To promote Athy’s literary, social, historical, genealogical, archaeological, architectural and natural heritage as tourism generating opportunities.”

Response:

The existing building in its setting on Emily Square and neighbouring the Courthouse promotes Athy’s architectural heritage, bringing a new lease of life to the building and its surroundings. The Museum will also house the “Athy Story” which promotes the historical and archaeological heritage of the town.

TSO9: “To harness the economic benefits of the tourism industry through sustainable means, including the conservation and protection of the built and natural heritage.”

Response:

Bringing a new lease of life to a protected structure is the best way to conserve and protect built heritage. The existing building will be refurbished to a high standard.

Image 80: Curator Margaret Walsh being filmed by RTE. Photo: Athy Heritage Centre



Town Centre – Urban renewal

UR6: “To ensure that town centre environmental improvements including improved paving, street furniture and tree planting are designed and implemented to a high design standard.”

Response:

The proposed rejuvenation scheme for Emily Square will play an important part of the development of the Shackleton Museum. RA+U have assessed the Emily Square proposals and have taken into consideration the street paving, levels and kerbs, and lighting. As stipulated in the Part 8 Planning application for Emily Square, high quality public realm materials should be used to:

“Convey a message of quality that reflects the vision held for the town, its businesses and visitor attractions.”

(The Paul Hogarth Company: Part 8 Planning for Emily Square)

Movement and Transport

WC13: “To encourage the provision of secure bicycle parking facilities in the town centre e.g Emily Square and Edmund Rice Square and at public facilities such as schools, the library, the train station and in all new developments in accordance with the standards set out in the Development Management Standards in Chapter 15.”

Response:

Bicycle parking facilities have been provided at the rear of the building.

Water Drainage and Environmental Services

...”Ensuring that existing and proposed developments are not subject to undue risk of flooding”

Response:

Please refer to section 5.8 of this report: the proposed Shackleton Museum is not at undue risk to flooding.

Energy efficiency in buildings

EE1: “To promote energy conservation and efficiency measures and to facilitate innovative building design that promotes energy efficiency and use of renewable energy sources in accordance with national policy and guidelines.”

Response:

Apart from the provision of high performing new electrical and mechanical installations, the thermal efficiency of the existing building will be improved where possible, this includes replacing or overhauling existing windows and doors, installing an insulated ground floor with underfloor heating, and improving the insulation in the roof space.

Please refer to M&E Report for further information.

Social community and cultural development

PD1: “To ensure that all buildings, public open spaces, recreational and amenity areas are accessible for people with disabilities, having regard to the Building Regulations, the objectives of ‘Building for Everyone’ (National Disability Authority) and ‘Access for the Disabled’ (No. 1 to 3) (National Rehabilitation Board).”

Response:

The proposed Shackleton Museum has been designed to ensure access for all. A level threshold will be provided at the entrance from Emily Square, this new floor level will be maintained throughout the ground floor – therefore eliminating the need for ramps. The stairs in the service block have been designed to comply with Part M of the Building Regulations suitable for ambulant disabled people. The new lift will serve all floors of the building.

AC4: “To support the town’s existing Heritage Centre/Tourist Office by the promotion of further heritage services within the town.”

Response:

The proposed Museum promotes the historical and architectural heritage of the town, as well as showcasing Athy’s connection with the famous explorer: Ernest Shackleton.



Image 81: Statue of Ernest Shackleton erected in Athy in 2016

Architectural and Archaeological Heritage

AH4: “To ensure that development in the vicinity of a site of archaeological interest is not detrimental to the character of the archaeological site or its setting by reason of its location, scale, bulk or detailing and to ensure that such proposed developments are subject to an archaeological assessment. Such an assessment will seek to ensure that the development can be designed in such a way as to avoid or minimise any potential effects on the archaeological heritage.”

Response:

An Archaeological Impact Assessment has been carried out for the proposed Museum. The impact level of the proposed development on the archaeological heritage of Athy is characterised as slight.

It is proposed that archaeological test trenching should be carried out where the extension impacts on possible stone features identified in the geophysical survey carried out previously by Earthsound Geophysics. The report also proposes archaeological monitoring of ground disturbance works within the interior of the building for services, lifts and stairs to mitigate the risk of impacting on subterranean archaeology.

12.6.1: Alteration / Extensions / to Protected Structures

“It is recognised that the best method of conserving historic buildings and prolonging their functional and cultural life is to keep them in active use. While a degree of compromise will be required in adapting a protected structure to meet the requirements of modern living, it is important that its special interest is not damaged.

Sympathetic reuse and/or development of structures, including appropriate design additions near to protected structures, can allow our architectural heritage to continue to offer aesthetic, environmental and economic benefits for future generations.”

PS3: “To promote and encourage the sensitive alteration/extension to Protected Structures so that they are in keeping with the character of the building and adjoining buildings.”

Response:

While the proposed extension is indeed dramatic in appearance, it was deemed the appropriate approach to extending the existing building. More “classic” orthogonal designs for the extension were considered earlier in the design process but they were too static and detracted from the integrity of the existing building and its surroundings.

PS4: “To require a method statement for the conservation of any works to protected structures. Method statements should make reference to the DoEHLG Advice Series on how best to repair and maintain historic buildings.”

Response:

An Architectural Heritage Impact Statement has been prepared for the purposes of this planning application. A method statement will be prepared at a later stage of the project before works proceed on site.

ACA1: “To ensure that any development, modifications, alterations, or extensions within an ACA are sited and designed appropriately, and are not detrimental to the character of the structure or to its setting or the general character of the ACA.”

Response:

The extension and the internal alterations to the existing building will lend a new lease of life on this protected structure, improving its functionality and therefore allowing the building to continue to offer aesthetic, cultural and economic benefits to its users. The building’s setting in an ACA has been carefully considered and many different design options were explored and analysed for their appropriateness before choosing and developing the design presented in this report for planning.

AHO8: “To support the Athy Heritage Centre and museum as an important tourism and heritage resource for the town. To support its board of directors in progressing related programmes and proposals including, in particular, the further development of the Ernest Shackleton theme.”

Response:

Kildare County Council and the Board of the Athy Heritage Centre are committed to the development of a dedicated Shackleton Museum, designed to a high standard to attract national and international tourists.

Urban Design

UDF3: “To strengthen the identity of the town by achieving a balance between old and new which reinforces the distinctiveness of the historic town core.”

Response:

Athy Town is no stranger to modern interventions: The former Dominican Church built in 1964 was the first hyperbolic paraboloid structure in Ireland. The proposed Museum achieves a balance between old and new, the new extension is appropriate in scale and choice of materials and the existing building will be refurbished to a high standard restoring the integrity and importance of the structure within its setting.

14.7.12 Building Language and Finishes

“In cases where it can be demonstrated that the design of a building is of an exceptional nature and particularly in the case of gateway and key buildings, consideration will be given to the use of modern materials.”

Response:

The materials chosen for the new extension are modern: translucent glass, transparent glass and steel cladding. The extension is a contemporary intervention which does not try to detract from or imitate the existing building – which itself will be respectfully refurbished to the highest standards.

Kildare County Development Plan 2017-2023

Protected Structures

PS3: Require that new works will not obscure views of principal elevations of protected structures.

Response:

The principal elevation of the existing building is the North façade on Emily Square. Located at the rear of the building, the new extension does not therefore obscure views of this elevation.

PS 8: Encourage high quality design in relation to planning applications that are made for the construction of extensions or new buildings affecting protected structures or older buildings of architectural merit not included in the RPS.

PS 15: Require an Architectural Heritage Assessment Report, as described in Appendix B of the Architectural Heritage Protection, Guidelines for Planning Authorities, DAHG (2011), to accompany all applications involving a protected structure.

Response:

An Architectural Heritage Impact Assessment has been prepared by Consarc to accompany this application.

Urban Green Infrastructure:

GI 27: Require all new developments to identify, protect and enhance ecological features by making provision for local biodiversity (e.g. through provision of swift boxes or towers, bat roost sites, green roofs, etc.) and provide links to the wider Green Infrastructure network as an essential part of the design process

Response:

Following the recommendation of the Bat and Swift Surveys carried out to accompany this application, it is proposed to install 2 No. Swift boxes and 1 No. Swift Lure under the eaves of the East façade, as well as several Bat Access slates on the roof (location to be confirmed).

Enterprise and Tourism:

ECD 31: Promote the sustainable development of the tourism sector in appropriate locations throughout the county, acknowledging that Ireland's largest tourist market (i.e. Dublin) is highly accessible through the existing transport system.

Response:

The location of the Museum in Athy means that it is less than an hour from Dublin by car or train. According to the Athy Regeneration Strategy (2015), Athy is "Open for Tourism" and "probably over 50% of the tourists to Ireland pass within 20 kilometres of the town either on the M7 or M9 – a missed opportunity". It is anticipated that this development will attract more national and international visitors to Athy and thus promote further sustainable development in the town.

ECD 32: Support the development of new tourist facilities or upgrading/extension of existing tourist facilities at tourist sites in accordance with proper planning and sustainable development principles. These facilities should avail of shared infrastructure and services where possible.

Response

The proposed Shackleton Museum is located in the existing Athy Heritage Centre and is already facilitated by existing infrastructure.



Image 82: Arrol Johnston Car. Photo: Athy Heritage Centre

Image 83: Modified Arrol Johnston car on the Nimrod Expedition



Appendix 1: Architectural Drawings

Drawing number	Drawing
P16-232K-RAU-00-XX-DR-A-31001	Site location plan 1:1000
P16-232K-RAU-XX-00-DR-A-31001	Existing site layout plan 1:500
P16-232K-RAU-XX-00-DR-A-31002	Existing ground floor plan 1:100
P16-232K-RAU-XX-ZZ-DR-A-31001	Existing first floor plan 1:100
	Existing second floor plan 1:100
P16-232K-RAU-XX-03-DR-A-31001	Existing roof plan 1:100
P16-232K-RAU-XX-XX-DR-A-33001	Existing section A 1:100
	Existing section B 1:100
P16-232K-RAU-XX-XX-DR-A-33002	Existing section C 1:100
P16-232K-RAU-XX-XX-DR-A-32001	Existing elevations North and South 1:100
P16-232K-RAU-XX-XX-DR-A-32002	Existing elevations East and West 1:100
P16-232K-RAU-XX-00-DR-A-31003	Proposed site layout plan 1:200
P16-232K-RAU-XX-00-DR-A-31004	Proposed ground floor plan 1:100
P16-232K-RAU-XX-ZZ-DR-A-31002	Proposed first floor plan 1:100
	Proposed second floor plan 1:100
P16-232K-RAU-XX-03-DR-A-31002	Proposed roof plan 1:100
P16-232K-RAU-XX-XX-DR-A-33003	Proposed section A 1:100
	Proposed section B 1:100
P16-232K-RAU-XX-XX-DR-A-33004	Proposed section C 1:100
P16-232K-RAU-XX-XX-DR-A-32003	Proposed elevations North and South 1:100
P16-232K-RAU-XX-XX-DR-A-32004	Proposed elevations East and West 1:100
P16-232K-RAU-XX-XX-DR-A-34001	Proposed gates to North elevation 1:20



Image 84: CGI view from the South West

Appendix 2: Visual Impact

View 1: From Meeting Lane looking towards the South facade and the Back Square



EXISTING



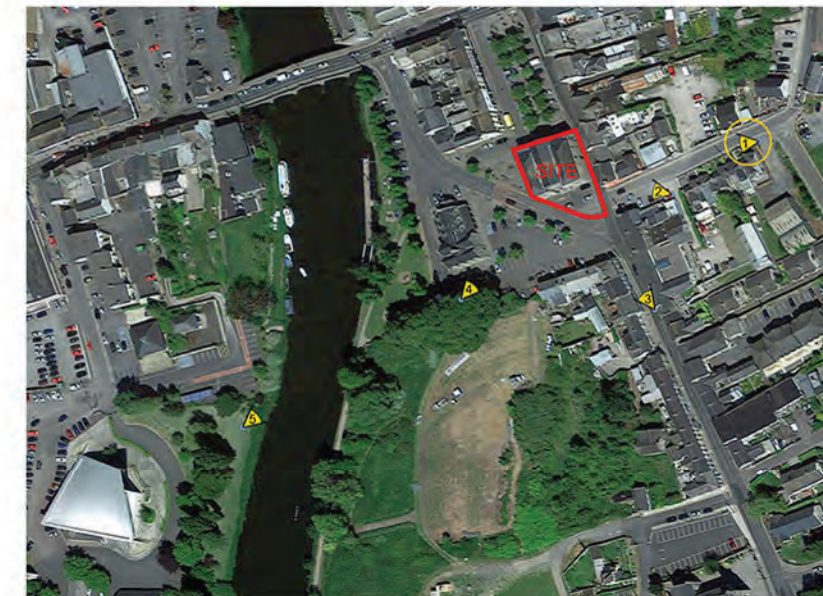
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Date / Time of Photo: 08th Sept 2018 15:20

Camera/Lens: Canon EOS 5d 50mm prime lens

Camera Coordinates: East 668352, North 693935, Elevation 56.62m



Reference Map: View set up camera locations

PHOTOMONTAGE REPORT

Project:

Shackleton Museum Athy

Client:

Kildare Co. Council

Prepared by:

3RD EYE
9 Rocklands
Carrigwohill
Co. Cork

On behalf of:

Reddy Architecture + Urbanism
41 Dean St
Gardens
Kilkenny

Date of issue:

Sept 2018

View 2: From Meeting Lane looking towards the South Facade and the Back Square



EXISTING



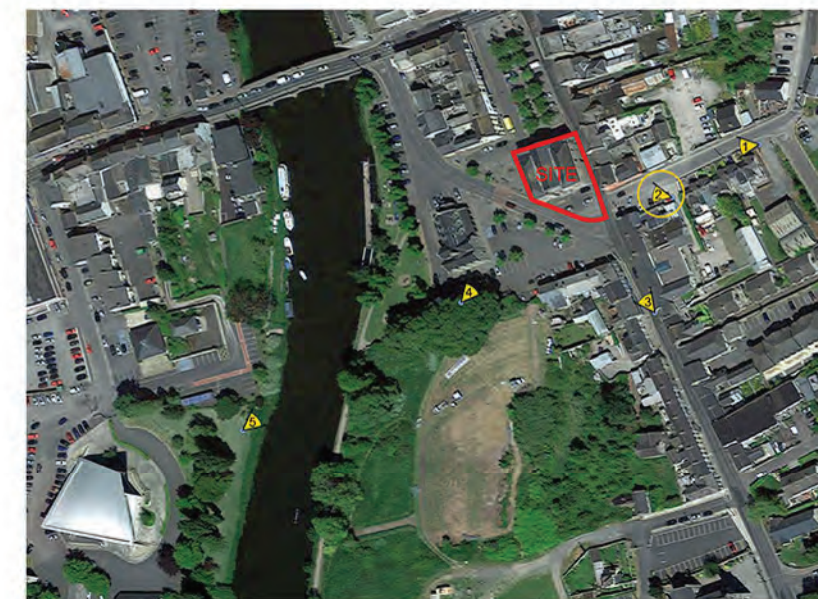
PROPOSED

Camera Data: View2

Date / Time of Photo: 08th Sept 2018 15:13

Camera/Lens: Canon EOS 5d 50mm prime lens

Camera Coordinates: East 668318, North 693909, Elevation 55.39m



Reference Map: View set up camera locations

PHOTOMONTAGE REPORT

Project:

Shackleton Museum Athy

Client:

Kildare Co. Council

Prepared by:

3RD EYE
9 Rocklands
Carrigwohill
Co. Cork

On behalf of:

Reddy Architecture + Urbanism
41 Dean St
Gardens
Kilkenny

Date of issue:

Sept 2018

View 3: From Emily Row looking towards South Facade and the Back Square



EXISTING



PROPOSED

Camera Data: View3

Date / Time of Photo: 08th Sept 2018 15:08

Camera/Lens: Canon EOS 5d 50mm prime lens

Camera Coordinates: East 668312, North 693859, Elevation 55.17m

PHOTOMONTAGE REPORT

Project:

Shackleton Museum Athy

Client:

Kildare Co. Council

Prepared by:

3RD EYE
9 Rocklands
Carrigtwohill
Co. Cork

On behalf of:

Reddy Architecture + Urbanism
41 Dean St
Gardens
Kilkenny

Date of issue:

Sept 2018



Reference Map: View set up camera locations

View 4: From the boundary wall to The Abbey looking towards the South Facade and the Back Square



EXISTING



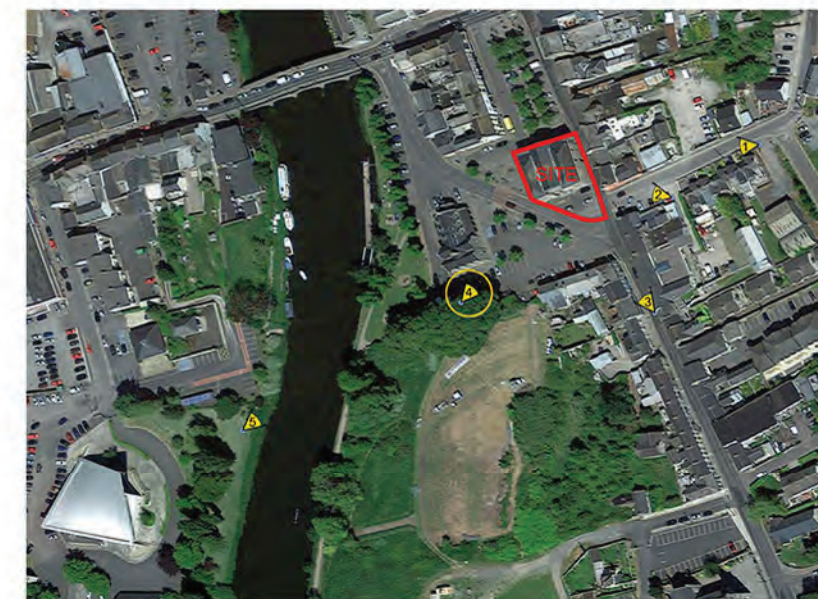
PROPOSED

Camera Data: View4

Date / Time of Photo: 08th Sept 2018 15:25

Camera/Lens: Canon EOS 5d 50mm prime lens

Camera Coordinates: East 668220, North 693861, Elevation 53.70m



Reference Map: View set up camera locations

PHOTOMONTAGE REPORT

Project:

Shackleton Museum Athy

Client:

Kildare Co. Council

Prepared by:

3RD EYE
9 Rocklands
Carrigtwohill
Co. Cork

On behalf of:

Reddy Architecture + Urbanism
41 Dean St
Gardens
Kilkenny

Date of issue:

Sept 2018

View 5: From the Library at the former Dominican Church looking across the Barrow towards the Back Square



EXISTING



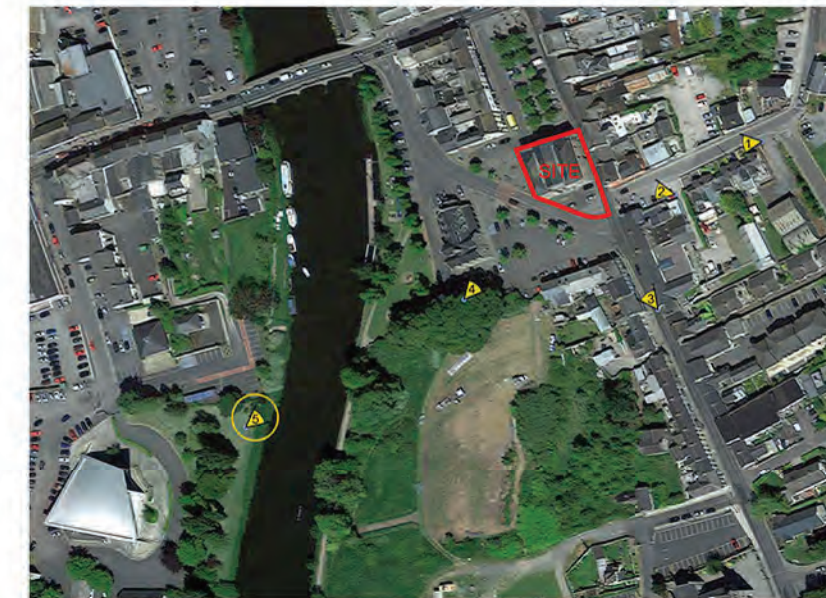
PROPOSED

Camera Data: View5

Date / Time of Photo: 08th Sept 2018 15:44

Camera/Lens: Canon EOS 5d 50mm prime lens

Camera Coordinates: East 668127, North 693806, Elevation 53.85m



Reference Map: View set up camera locations

PHOTOMONTAGE REPORT

Project:

Shackleton Museum Athy

Client:

Kildare Co. Council

Prepared by:

3RD EYE
9 Rocklands
Carrigtwohill
Co. Cork

On behalf of:

Reddy Architecture + Urbanism
41 Dean St
Gardens
Kilkenny

Date of issue:

Sept 2018

Methodology for creation of photomontage views for the proposed development,

Shackleton Museum Athy.

1.0 Overview

This document has been prepared by 3RD Eye to explain the methodology used for producing photomontage images for the proposed development, Shackleton Museum Athy. The purpose of this appendix is to present an accurate overview of the proposed development which enables its effect on the skyline and important settings and sensitive locations to be objectively evaluated with regard to relevant planning policy criteria. During this document, you will be guided through a step-by-step description of how 3RD Eye produced an accurate representation of the proposed building in pictorial form and to explain the process used.

2.0 Site Photography

The photomontage photographs were taken with a Canon EOS 5D full sensor camera using 24mm and 50mm dedicated prime lenses. At each viewpoint location the camera was setup at a height above ground of 1.6m using a professional heavy duty tripod. A bubble level fixed to the camera head was used to ensure that the camera is perfectly horizontal. The choice of photographic method used for each base line photograph has been determined in order to reflect as closely as possible the view as seen by the human eye. In each case, the lens that has been used has been chosen in order to avoid distortion and to provide an impartial and objective view of the proposed development in relation to existing views that will accurately reflect its scale, form, massing, proportion and silhouette and relationship to other structures. The views therefore reflect a realistic perspective of how the views are seen by the human eye in relation to the existing environment. The date and time of each photograph was recorded by the camera to allow for accurate lighting conditions to be recreated in the computer model as required. Additional detail photographs of the site area and surrounds were taken for reference purposes using a variety of lenses.

3.0 Survey Information

A detailed survey of the site and surrounds was supplied by the architects enabling a block model of the existing building and immediate landscape to be modelled. Each camera viewpoint location was surveyed by 3rd Eye using a Trimble RTK GPS Rover system (+/- 1cm accuracy) and identified by Ordnance Survey co-ordinates. The heights and distances of significant points within each view that are easily distinguishable have also been recorded as Ordnance Survey grid and level datum and their accuracy has been checked relative to the fixed camera position. The number of survey points that have been identified in each view range from 8 to 12 separate points dependent upon the particular view. These survey points provide an effective check for ensuring that the three dimensional model and existing views are accurately merged together.

4.0 Modeling

The development was modelled in 3d Studio Max from imported AutoCad drawings supplied by the architects. The provided site survey and proposed site layout were over-laid and aligned to create a 'Base' model file to include all relevant information. This Base model allowed for the laying out of the proposed building, camera positions and reference points. The individual models were then placed into the base model at the orientation and levels indicated. At each viewpoint location a virtual camera was set up in the 3D software using the surveyed coordinates. The 3D coordinates of the verification points were used to create an accurate model of the surveyed parts of the scene. The scene was verified by matching generated polygons between the digital model and the background photograph. The control survey points were used to confirm the target position and the field of view of the virtual camera.

5.0 Camera matching and rendering

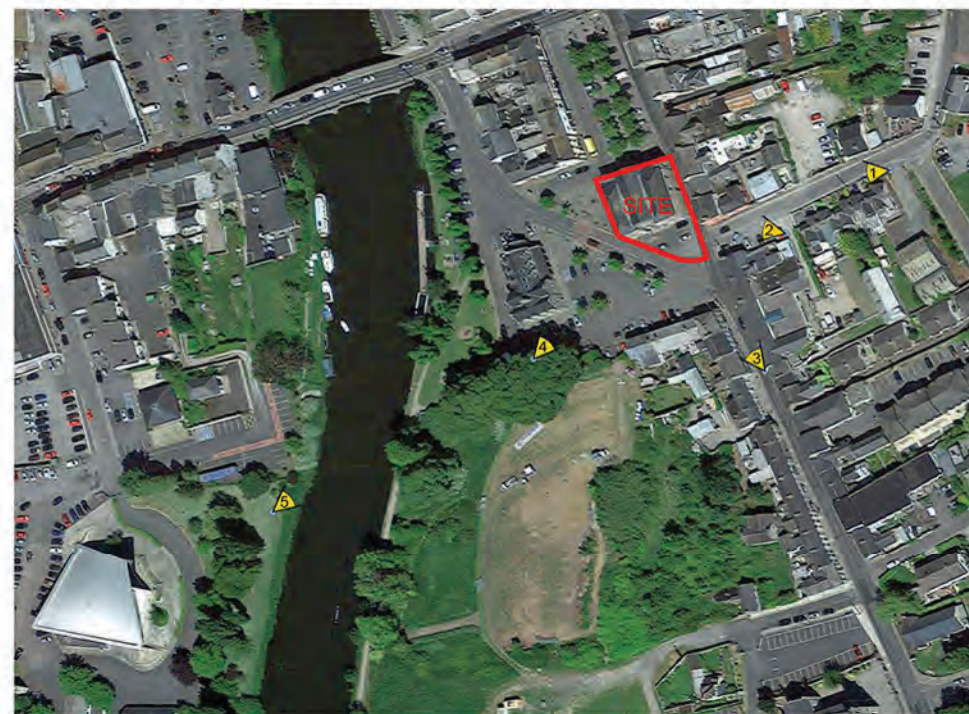
The next step in the process involves accurately positioning the three-dimensional model of the proposed development within each existing view. The central horizon line in each of the existing views is then calculated and imported into 3D Studio Max as a backdrop to the 3D model. The survey points as well as the specifications of the lens type relating to each existing view is also entered into 3D Studio Max. The survey points of the camera position and those relating to specified objects within each particular baseline image are then highlighted on the digitised image. A further check of the accuracy of the survey points in each digitised existing view is carried out by overlaying the central horizon line of each existing view with the digitised survey points prepared in 3D Studio Max. This additional check ensures that the survey points match precisely. This exercise requires meticulous attention to detail. Once the process of camera matching is complete, the three-dimensional model of the proposed development is accurately positioned within each of the existing views. This is achieved by rendering the camera matched three dimensional model of the proposed development within 3D Studio Max at the same size as the digitised existing view.

6.0 Post production

The render of the three-dimensional model is then superimposed on the existing still views in Adobe Photoshop. The foreground of the existing views i.e. trees, lampposts, cars, buildings etc, are then copied and placed over the rendered model in order to ensure that the depth is accurate within the photomontage view between the foreground, background and the rendered model. At this stage, the textured model can be further adjusted to match the resolution, colouring and saturation of the photograph taken to create a close impression of what the textures of the building would look like. This is a qualitative exercise and requires interpretation by the designer on how the building will look, and guidance from the architect. A final qualitative check of all of the photomontage images has been carried out to ensure that they provide objectively accurate views of the proposed development.



Example screen grab from the 3d software showing the existing building modelled with the surveyed reference points marked in red overlaid and matched to the photograph.



Reference Map: View set up camera locations

PHOTOMONTAGE REPORT

Project:

Shackleton Museum Athy

Client:

Kildare Co. Council

Prepared by:

3RD EYE
9 Rocklands
Carrigwohill
Co. Cork

On behalf of:

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Date of issue:

Sept 2018

Appendix 3: Architectural Heritage Impact Statement

Athy Shackleton Museum

Emily Square, Athy, Co. Kildare

Architectural Heritage Impact Assessment

November 2018



CONSARC CONSERVATION

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1.0 INTRODUCTION

This document is to accompany a Part 8 application for a proposed extension and refurbishment of The Market House, Athy, Co. Kildare to accommodate a new Ernest Shackleton museum. The lead architect is Reddy A+U and Consarc Conservation was appointed as Conservation consultant on the project. Consarc Conservation is a RIAI Grade 1 Conservation Architectural Practice.

The report has been prepared with regard to the historic status of the building and with reference to the government publication *Architectural Heritage Protection Guidelines for Planning Authorities*. The overall policy is to retain, restore and enhance the integrity and significance of the buildings within its wider context. Any works to the site should be carried out in accordance with best conservation practice, as defined by the International Council on Monuments and Sites (ICOMOS) in the Venice Charter of 1964 and subsequent charters.

Athy Town Development Plan 2012-2018

- Protected Structure:

RPS Ref: AY 075 (Map 12.3(a))

- Architectural Conservation Area

It is within Architectural Conservation Area 2: Emily Square Environs (Map 12.2)

- Archaeological

The site is also located within a zone of archaeological potential (RMP 35-22).

- Zoning

Town Centre (Map 5.1)

NIAH

The site is registered in the National Inventory of Architectural Heritage: Its interest values are listed as Architectural.

- NIAH Ref: 11505332 Market House Importance: Regional

2.0 DESCRIPTION OF THE BUILDING

2.1 Historical Background

Athy Market House sits as a historic landmark addressing Emily Square in the town centre. The town hall was built in the mid-18th Century by the Duke of Leinster as part of his estate.

Market Houses were located in most provincial towns in Ireland and would have been one of the town's major public buildings. They were usually sited in the centre of the town; at a cross roads or on a square, as in Athy. Its primary function was to provide a market hall, while the upper floor was often used as a town hall, assembly rooms or sometimes sessions houses. Many were erected to accommodate corn markets, particularly in the 18th Century.

The market house was traditionally a two-storey building with arcaded ground floor and a corresponding number of windows on the upper floor. Some had an eaves pediment with clock and many had timber roof lanterns. Market houses were generally modest buildings, and only rarely would they have been designed by a known architect.



Plate 1

The former Market House at Dunlavin, Co. Wicklow, attributed to Richard Castle. It is on a similar cruciform plan. The arcades, once open, are now infilled.

The building is a detached three storey building located in Emily Square, Athy. Built in course rubble limestone (lime-washed), with granite quoin stones, string courses and dressings. The ground floor was arcaded providing entry to a groin vaulted market hall. The upper floors were designed as meeting rooms. The building may have been designed by the eminent architect of the day, Richard Castle. Castle was architect to other works by the Earl of Kildare at the time, notably; Carton House, the Earl's primary residence and Kildare House, later Leinster House, his town residence.

It has many of the hallmarks of Castle's design, with a strong Palladian influence. It is a sophisticated design with robust detailing including; the style and layout of the fenestration, the use of granite dressings, the arcaded entrances and groin vaulting; all resembling other works by the office of Castle. The former market House at Dunlavin is also attributed to Castle, but Craig has suggested not.¹

¹ Craig, M *The Architecture of Ireland* 1982

The building was most likely erected in the late 1740's, as it is noted as new within the writings of Bishop Pocock in 1752;

*"[We arrived in] Athy, a small market town well situated on the Barrow, they have a new market house."*²

This would further correspond to the fact the square in which the building is situated was named after the Duke of Leinster's Wife, Emily, whom he married in 1747.

The market house primarily acted as a corn exchange and weekly market during for its first century and it proved to be a regionally successful market. Due to the success of the market an extension was required in the early 19th century. As noted in a letter to the Duke of Leinster, an expansion to Market Hall was advised by Mr. Robert Johnston as far back as 1795;

"My Lord...

I have the pleasure to inform your grace of the thriving prospect of our Market, from which I hope and think the Town will derives much greater advantage than from the canal...I must remark that we now very much feel the want of the market house and store as you wished to have them laid out and likewise we will want three or four more cranes and weights and measures....In Castledermot, I would attend you and there receive your instruction for the better accommodation of the market....

*Robert Johnston"*³

The additions, built at the turn of 19th Century, provided a two-storey extension to the front and rear. Either side of the arcade entrance was infilled, effectively closing the open arcade.

These entrances were enclosed with panelled doors and fanlights. The extension was built of limestone rubble with tooled limestone dressings, differentiating it from the original structure. A new staircase was built within the extension to the east of the main entrance, providing direct access to the first floor. The fenestration was also changed, which included the introduction of 'Wyatt' style windows, as was the fashion at the time but also to provide additional light to the first floor. There is brick infill on the west elevation in particular and at second floor level on the south façade. A bell from the former St Michael's church, dating to 1682, was added to the front façade. The clock was presented to the people of Athy by Lord Downes in c.1838.⁴

The early 19th century extension also provided the Market house with a courtroom, as the building itself is referred to as a "Courthouse" in the Sherrard, Brassington & Green Map of 1826. The extension of the market house allowed the building to have a greater civic function; the ground floor housed the market hall whilst the upper floors housed meeting rooms, a courtroom and offices for town officials. (Taffe, 2001)

During the 19th Century the town hall maintained its success as a market. Athy was well situated as a main thoroughfare between Dublin, Cashel and Cork which is noted by Lewis;

"Athy, an incorporated market and post-town... pleasantly situated on the river Barrow and on the mail coach road from Dublin through Cashel to Cork....On the east side of the Bridge the road from Monastereven to Carlow intersects the main street at right angles, forming...a neat square called the Market-square. The only trade is corn, of which a very considerable quantity is sold in the market for the supply of some extensive mills on the Barrow, and of the Dublin market, the proportion destined for which is sent thither by the Grand Canal in boats and barges; there is also a daily fly-boat for the conveyance of passengers to the metropolis... The market is on Tuesday and Saturday, and, in addition to an ample supply of corn is well furnished with meat, poultry, butter

² Pocock, Pocock's tour of Ireland 1752, Pg 165-166

³ Johnston, R. Letter to the Duke of Leinster, November 12th, 1795" –National Library of Ireland– Ref MS 41552/40

⁴ Nationalist & Leinster Times 12.06.1987 Pg.12

and other provisions. Fairs are held on the 25th of April and July under the patent granted August 17th 1756 by George the II, also on March 17th, June 9th, Oct 10th and Dec 11th for the cattle, sheep and pigs.

*The summer assizes for the county and the epiphany and Midsummer quarter sessions for the division and also a weekly petty session on Tuesday are held in the court-house, which is a neat and commodious building in the market square.*⁵

In 1858, a new purpose-built corn exchange was erected opposite the town hall. (Ireland, 2018). In 1872, as noted in the OS map, this building had taken over the role of courthouse. The rooms on the upper levels of the market house were retained as a town hall. They were used as a meeting space for the town commissioners and the borough officers, with weekly markets and dances held in the ground floor in the market hall.⁶ It is also interesting to note the inclusion of a Mechanical Institute on the South West Corner of the building on the 1872 OS map and the location of the original historic stairs.

During the early 20th Century, the town hall was host to a number of prestigious meetings from Lady Aberdeen, the Viceroy's wife in 1908, John Redmond in 1914 and Eamon De Valera in 1932.⁷

Throughout its history, the town hall retained its use as a market, hosting a weekly butter and egg market on the ground floor whilst the upper floors still housed the offices and meeting rooms for the Town hall. The market was one of the most successful in Leinster at the time, as noted within the council minutes in 1926.⁸

By 1913, further improvements were required to the building, and the following tender notice was published in the Irish Builder and Engineer;

"Tenders are invited for important improvements about to be undertaken at the Town Hall. The accommodation for the public has been felt to be inadequate for a considerable time past. Plans and specifications have been prepared for his Grace the Duke of Leinster by Mr. James F Reade A.M.I.C.E. Waterford and may be inspected at the offices of Mr James Roger, Athy. Tenders must reach the architect not later than the 30th inst."

James Reade, originally from Kilkenny, studied civil engineering at the Royal College of Science in Dublin and later became the chief hydraulic engineer in Ireland and worked on drainage schemes for the rivers Barrow and Bann. He was appointed architect for an artisans' dwellings scheme in Athy, after winning a competition in 1909.

Works to the Market House included a further storey added above the early 19th Century extension to provide a second floor. The central pediment was extended forward, and a niche created to incorporate the bell. The Diocletian window on this elevation was removed. Internally, a gallery was created at second floor level and the staircase was extended to provide access. The interior was most likely further upgraded but much of this work was subsequently lost.

At a Council meeting in June 1927 it was agreed that the Town Clerk Room was to be refurbished to accommodate a small-town library as noted within the council minutes. This was further enlarged in 1932, to also accommodate the Leinster Office. In 1932, in conjunction with these works, redecoration took place.⁹

The town hall before World War II, was a busy community hub, providing a library, Town Hall, Market and sometimes, ballroom. Sometime after the war, the building fell into disrepair, to such an extent that in 1963, the council discussed the demolition of the town

⁵ Lewis, S. A Topographical Dictionary of Ireland, 1837 pg 90

⁶ Taffe, F. Eye on Athy's History, (2001)

⁷ Taffe, F. Athy Urban District Council 1900 - 2000,(2000)

⁸ ibid

⁹ ibid

hall. Historic photographs (<http://www.athyphotos.gallery/fire-brigade.html>) would indicate that the ground floor was in use as a fire station since the mid-20th Century. In c.1969 the rear ground floor façade was adapted to accommodate a larger entrance for fire tenders.

In 1975, the ownership of the building passed from the Earl of Kildare to Kildare County Council. However, this does not seem to have stemmed the decline in the condition of the building and in the minutes of the council meeting in February 1982, it was recorded that; *“Kildare County Council is hereby requested to replace Athy Town Hall with a suitable building, incorporating offices for the county council, a branch library, toilets etc., in addition a concert hall/ballroom and other accommodation for a community centre purposes and that Urban District Council share the costs of this project.”*

In 1983 the Council agreed that rather than demolish the building it be refurbished to provide a heritage centre for the town. The heritage centre was to house an exhibition to compliment a proposed exhibition for Woodstock Castle. The Castle had recently been gifted to Kildare County Council by the Duke of Leinster and it was the hope the castle would act as a tourist attraction. Renovations of the town hall were led by Kildare County Council Architect Mr. Denis Coogan. The first floor and second floor were converted into a public library, with a heritage centre located on the ground floor. (Taffe, Eye on Athy's History, 2001).

Previous dashed finish was removed from the exterior to expose the stonework beneath. The chimneys were also removed. All the 19th Century internal plasterwork was lost at this stage; the internal joinery, doors and windows were also replaced. New concrete staircases and a lift were inserted, and new toilet facilities added.

Key Dates:

1745-50	Building first constructed by James Fitzgerald, 20 th Earl of Kildare
1766	James Fitzgerald created First Duke of Leinster
early 1800s	Two storey extension added and adaptations for use as a Court House.
1913	Building upgraded and a second storey added
c.1969	Rear elevation altered and alterations to the interior to allow vehicular access for fire tenders.
1975	Ownership of building passed from Duke of Leinster to Kildare County Council.
c.1983	Major refurbishment carried out. Building converted to use as heritage centre.

2.2 Description of the Building

Exterior

Detached multi-bay Market House located on Emily Square, original cruciform plan, with later extensions. Central two-bay breakfront, with triple pitched roof, with central pediment and niche containing bell.

Slate roofs, with galvanised steel and uPVC rain water goods.

Front Elevation (north)

Rubble granite walls arcaded with four round headed openings articulated with granite voussoirs and block and start surrounds to the central openings and brick to the outer openings, and to the openings at first floor level. Cut stone granite string course at first and second floor levels, and with granite quoin stones

Ten square headed windows to second floor level, with concrete surrounds and aprons. Windows are three over six sliding sash. All windows and doors are non-historic.

Rear Elevation (south)

Three bay three storey façade with central bay recessed. Rubble stone walls, with granite cut stone quoins. Brick to upper section and brick window arches. Cement rendered finish to central bay, with timber door and fanlight and double sash window at ground level and Diocletian window to top floor. Wyatt style windows to outer bays, with two small three over three sliding sash windows at second floor level.

West Elevation

Three bay three storey elevation in random rubble with brick infill section to the south. Cut stone granite string course to part of first and second floor levels, and with granite quoin stones. Round headed door opening articulated with granite voussoirs and block and start surround. Round headed window opening articulated with granite voussoirs at ground level. Round headed brick surrounds to all other windows. Timber sliding sash windows throughout, all non-historic.

East Elevation

Four bay three storey elevation in random rubble with brick infill section to the south. Cut stone granite string course to part of first and second floor levels, and with granite quoin stones. Round headed door opening articulated with granite voussoirs and block and start surround and concrete inset. Round headed window opening articulated with granite voussoirs at ground level, with a lattice fanlight (possibly original). Round headed brick surrounds to all other windows. Timber sliding sash windows throughout, all non-historic.

Interior

Ground Floor

Currently in use as a museum and heritage centre.

Original cruciform plan evident with groin vaulted ceiling, supported on cut stone piers. Flat ceilings to later extensions. Cement plaster finish to walls. Original granite string course (part) exposed in south east corner and original granite voussoirs and block and start surrounds to the original door openings exposed in south east and south west. An original cobble stone floor survives on the east side. Staircase and lift to west side and staircase with WC to east side were installed in 1980s.

First & Second Floors

Central double height space, flat ceiling with replacement Doric style cornice, with balcony at north end and lit by clear-storey windows from north end and Diocletian window on south end.

Long double height room to the west, with niche on south wall and lit by clear-storey windows from the north and round-headed Wyatt type window from the west.

All finishes date to the 1980s when major refurbishment was undertaken.

2.3 Photographic Record



Early 19th Century extension

Plate 2

From Lawrence Collection, (1880-1900)

Early 19th century extension visible either side of the original central projecting two bay façade. There are two panels on the façade; one either side of the central breakfront. The panel on the east side shows the scales of justice entwined with the Crown of England. The panel of the west side shows the scales of justice with the Harp of Ireland, reflecting its use as a courthouse.



Plate 3

From Lawrence Collection, (1882.2 **Description of the Building 0-1900**)
Same photograph showing the newer adjacent Courthouse built in 1858.



Plate 4

In this early 20th century image, the ground floor was still in use as a market and the sense of openness and permeability is evident through the central door on the right of the image.



Plate 5

1913 Extension created a second storey of 10 bays with pediment and niche for bell. In c.1984, the building was refurbished. The external render was removed, and all of the external windows and doors were replaced. The chimneys were also taken down.



Plate 6
West elevation in 1983 before refurbishment work commenced.



Plate 7
West elevation in 2017. Note the two chimneys and external render have been removed.



Plate 8
The rear (south) elevation in 1967



Plate 9
Rear (south) elevation in 1983
The rear elevation was removed at ground level to provide vehicular access for fire tenders.



Plate 10
Rear (south) elevation in 2017. The overhanging section at first floor level was removed and the ground floor entrance was altered when the fire station was relocated.



Plate 11
East elevation in 1983

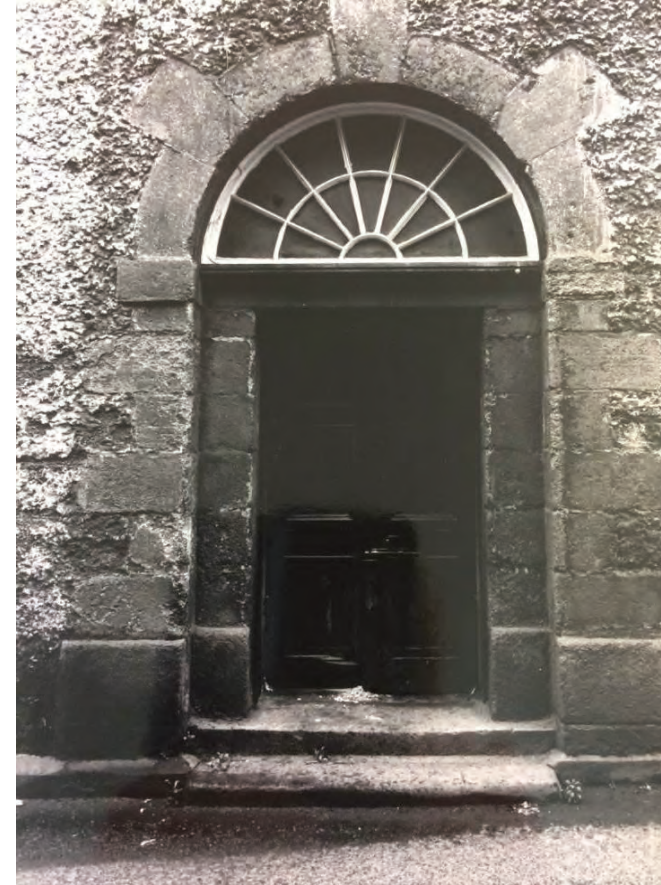


Plate 12
Original doorcase. The door and fanlight date to early 19th Century. The side piers were subsequently replaced with concrete in c.1983.



Plate 13
Doorcase on the west elevation



Plate 14
The ground floor space in 1983 in use as a fire station



Plate 15
The ground floor space in 2017 in use as an exhibition space



Plate 16
First floor space in 1983 looking north, before refurbishment works commenced. The balcony and four windows at second floor level were added in 1913.



Plate 17
First floor in 2017. Plasterwork, including cornice, was replaced in c.1984.



Plate 18
Room at first floor level in 1983



Plate 20
Historic cobbled floor east side



Plate 19
Room at first floor 2017



Plate 21
Original brick vaulting east side



Plate 22
Original external door surround and string course now incorporated into the interior of the building



Plate 23
Original external door surround now incorporated into the interior of the building



Plate 24
Staircase east side dating to 1980s.



Plate 25
Staircase north-east side, dating to 1980s.



Plate 26
Staircase and entrance lobby west side, dating to 1980s.



Plate 27
Doric cornice at first floor level is a recreation of the early 19th Century cornice.

2.3 Cartographic Record



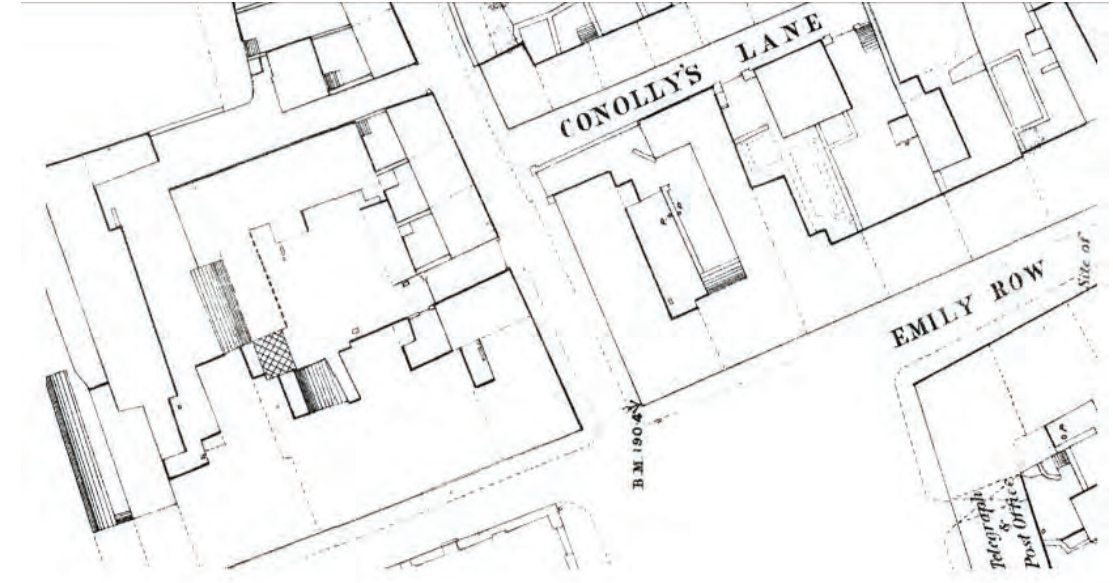
1752 – Extract from Noble & Keenan Map of Kildare.



1783 – Extract from Alex Taylor Map of Kildare.



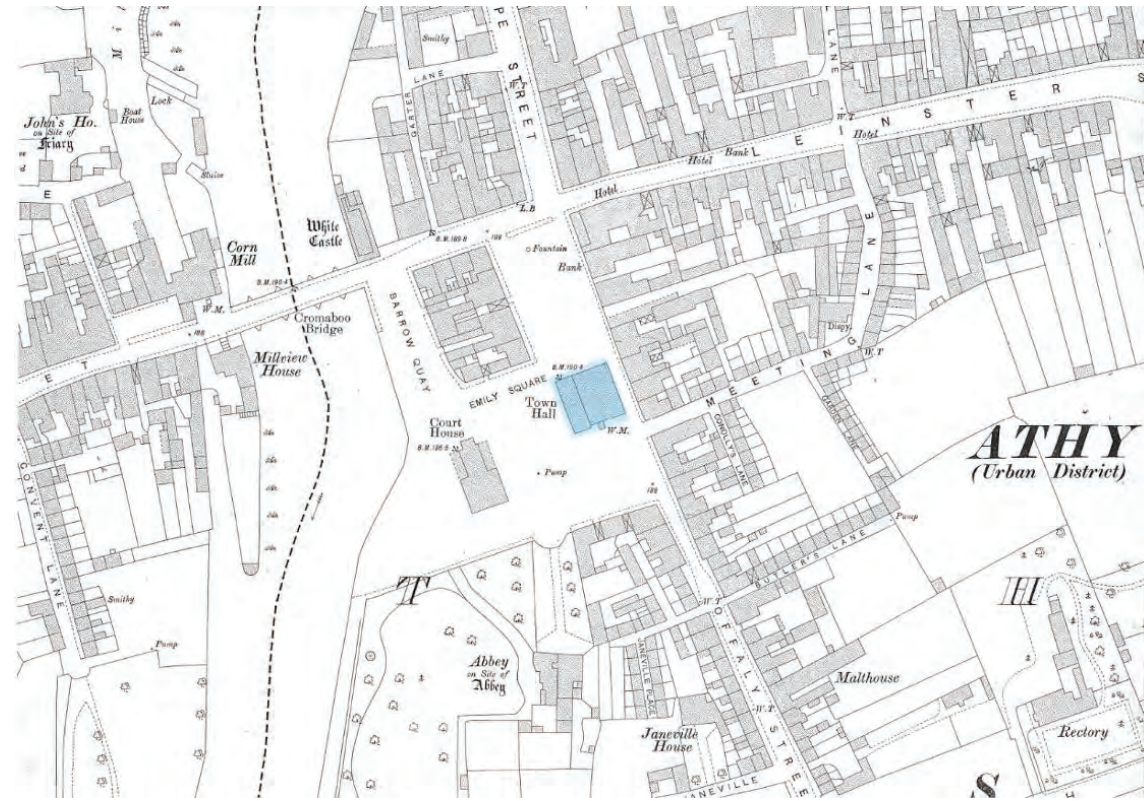
1826 – Extract from Sherrard, Brassington & Green, Survey of the Lordship of St. Johns, Co. Kildare, (National Library of Ireland) showing the Market House extended.



1872 – Ordnance Survey Map of Athy – Sheet 9, scale 1:500



1837 – Ordnance Survey Map of County Kildare – Sheet 35, scale 1:10,560

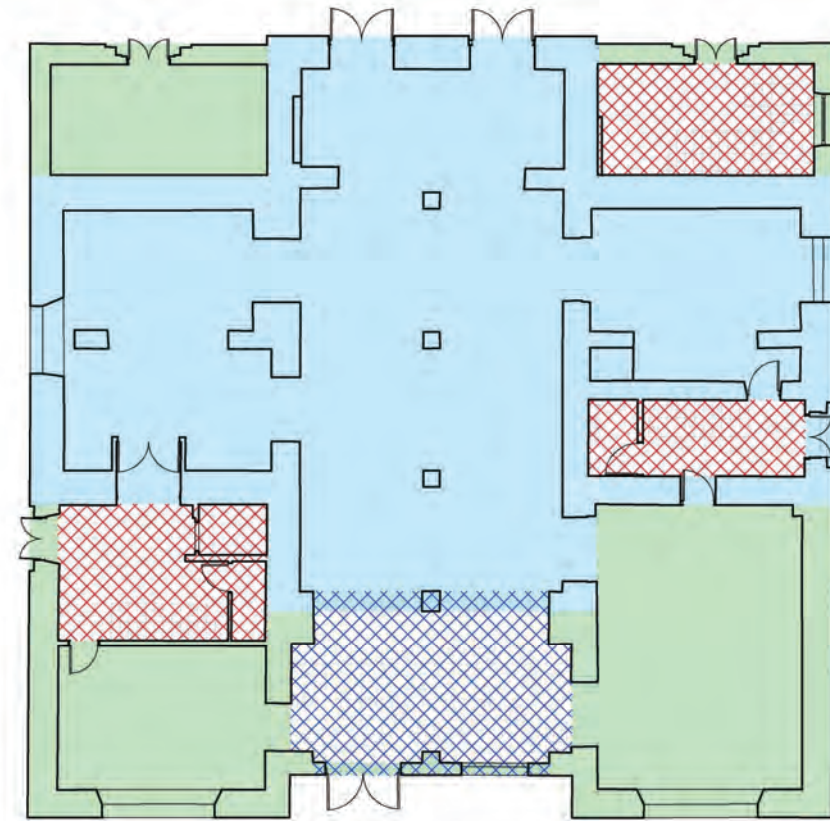


1907-8 – Ordnance Survey Map of Athy – Map 2, scale 1:1,056



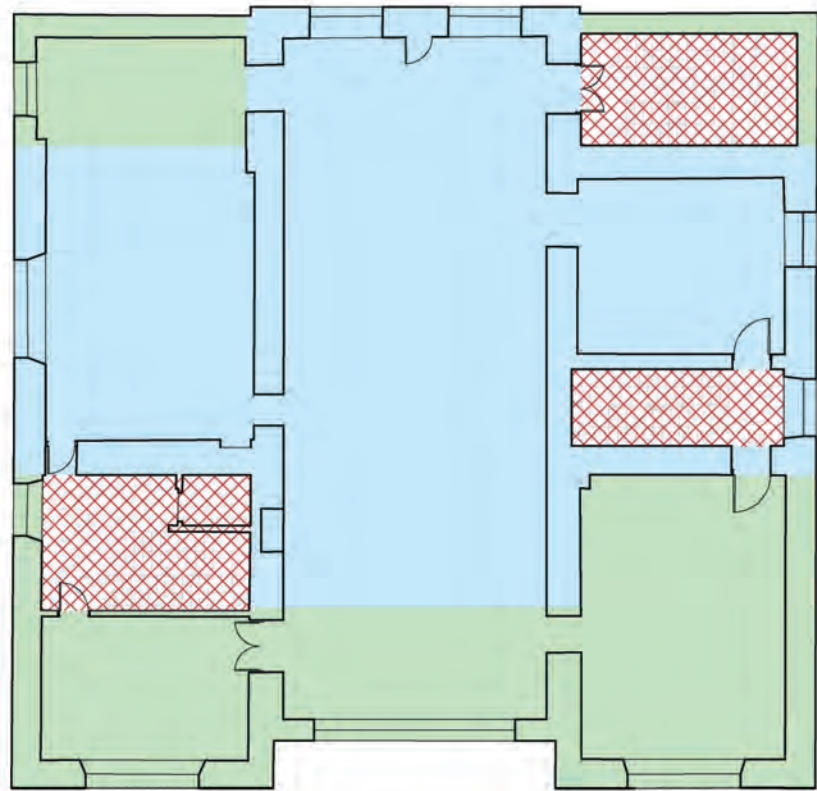
1939 (revised) – Ordnance Survey Map of Kildare – Sheet 35-9d, scale 1:1,250

2.4 Building Chronology



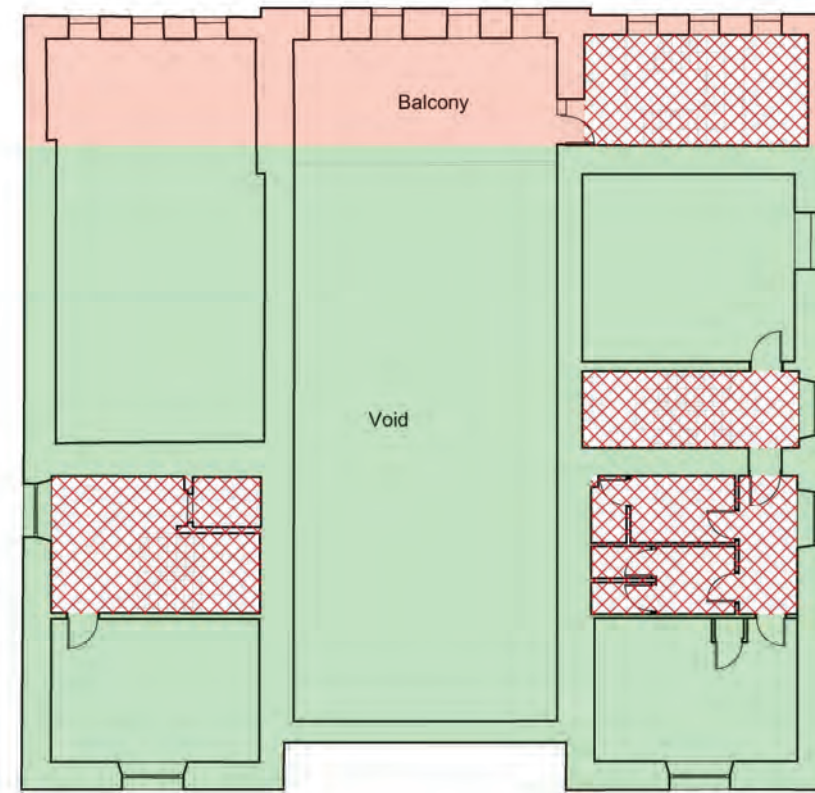
Ground Floor Plan

- Original mid 18th Century Footprint
- Early 19th Century Extension
- Early 20th Century Extension
- 1969 - Facade Alterations for use as a fire station
- 1983 - Stairs, Lift & WCs inserted



First Floor Plan

- Original mid 18th Century Footprint
- Early 19th Century Extension
- Early 20th Century Extension
- 1969 - Facade Alterations for use as a fire station
- 1983 - Stairs, Lift & WCs inserted



Second Floor Plan

- Original mid 18th Century Footprint
- Early 19th Century Extension
- Early 20th Century Extension
- 1969 - Facade Alterations for use as a fire station
- 1983 - Stairs, Lift & WCs inserted

3.0 STATEMENT OF SIGNIFICANCE

Athy Heritage Centre is a very important Palladian building, dating to the mid-18th Century. The original architect is unknown but may well have been designed by the office of Richard Castle, one of the leading architects of the time. It is a fine exemplar of a market building typology, reflecting the transition of Athy from village to a thriving 18th Century market town.

The building retains its overall form, salient features, external fabric and groin vaulted ground floor structure.

The building has been in continuous use since it was built in the mid-18th Century and has been extended and adapted, with a mostly harmonious interrelationship of styles.

It is located in a prominent position in the centre of the town. The building is the architectural focus of the main square and makes a very positive contribution to the urban character of Athy.

The building is of historic interest due to its association with its patron, the Duke of Leinster. The Duke of Leinster was an important historical figure and commissioned some of our finest 18th Century architecture, including Carton House and Leinster House.

It is more recently associated with the local man, Ernest Shackleton, the great Irish explorer.

The building could also be regarded as being of social interest. It has had a commercial and civic focus for the town since its inception. Uses varied from Market Hall, gathering space; Town Hall; Court House; Fire Station; Library and Heritage Centre.

4.0 SUMMARY OF PROPOSED WORKS

The proposed development will consist of:

- Alterations and extension to, and refurbishment of the Athy Heritage Centre. The building is a Protected Structure RPS Ref AY075. The building will house a Shackleton Museum and Experience, and the extension is a two storey 82m² structure housing a stairs to the south with removal of the associated part of the central bay of the south façade.
- Refurbishment of existing building, including repointing and cleaning of masonry and brickwork, repairs to windows and replacement where necessary, re-dressing of lead linings and repairs to roof.
- Reinstatement of 10 No. casement windows on North façade sympathetic to the original 1913 design.
- Provision of plant in attic space and associated vents to inner valleys of the roofs.
- Removal of existing 26m² mezzanine level and construction of a new 37m² mezzanine at second floor level.
- Removal of 2 No. existing stairways and one lift and associated structure, construction of a new lift and fire escape stairs to serve all floors.
- Provision of level access to entire ground floor from front entrance by raising ground floor internally.
- Removal of 1980's access ramp and steps to entrance at the West façade and replacement with new stone steps.
- Complete internal redecoration and new internal openings to allow improved circulation within the building.
- Site works associated with formation of new connections to existing public foul and surface water drainage, and existing utilities as required.
- Removal of 8 No. parking spaces to the rear of the building (Barrow Quay), provision of hard landscaping surrounding new extension and associated site works.

5.0 IMPACT ASSESSMENT

5.1 External Works

- a) *The building will house a Shackleton Museum and Experience, and the extension is a two storey 82m² structure housing a staircase to the south with removal of the associated part of the central bay of the south façade*
- b) *Refurbishment of existing building, including repointing and cleaning of masonry and brickwork, repairs to windows, re-dressing of lead linings and repairs to roof.*
- c) *Reinstatement of 10 No. casement windows on North façade sympathetic to the original 1913 design.*
- d) *Removal of 1980's access ramp and steps to entrance at the West façade and replacement with new stone steps.*

The proposed new extension to the rear, or south of the building and will be in the form of a glazed structure two storeys in height and resembling an iceberg or 'shard'. It will occupy the central bay of the existing building and will be two storeys in height.

Alterations required to the external building envelope:

South Elevation:

The new extension will require the removal of the central bay of the south elevation at ground floor and first floor levels.

North Elevation:

The two central entrance doors will be replaced with new metal gates.

The door to the right-hand side of the entrance will provide access to the boiler and plant room.

The glazing to the fanlight above this door will be removed to provide ventilation.

West Elevation:

The existing ramped access will be removed.

Façade Works:

Stone and brick facades to be repaired and repointed.

Windows are to be refurbished. Roofs are to be repaired rather than replaced.

Impact of External works on the historic building:

- a) **Impact of the proposed extension**
The proposed new extension will have a fundamental visual impact on the building and the on the immediate external environment, namely Barrow Quay.
The structure is designed in a contemporary idiom and is clearly different from the historic building.
Notwithstanding the prominence of the new extension, it is a small part of the overall building footprint; it does not detract from the balance of composition of the original building nor its traditional setting addressing Emily Square.

Should the glazed structure be removed in the future, the overall form and the setting of the existing building will remain intact.

The architectural form and extant 18th and 19th Century fabric are of key significance. The central bay of the South façade at ground and first floor levels will be removed to facilitate the new extension. The decision to locate the extension in this location was very much driven by the knowledge that this area has been altered in the mid and late 20th century to such an extent that and does not contain historic fabric. It has suffered from inappropriate

interventions and as a result this elevation currently presents a very poor façade onto Barrow Quay.

The proposal to open up the original entrance doors on the front (north) facade and replace existing doors and fanlights with metal gates will make a positive contribution to the understanding of the original function of the building as a Market House. The changes to the entrance doors should contribute to a sense of permeability and a better understanding of the original arcaded ground floor. The existing doors and fanlights date to the 1980s and so have no historic value.

- b) **Impact of the refurbishment of existing building**
Historic photographs show that the building was rendered in the past. The front elevation, facing onto Emily Square appears to have been the only façade that was not rendered. Photographs from 1983 show what appears to be a lime wash under a dashed finish. The original facades most likely had either a lime wash, shelter coat or wet dash lime finish. This would have provided a weathering coat and provided a uniformity to the rubble stone. With three centuries of change, the facades are a mix of rubble stone, dressed stone and brick infill. The front façade onto Emily Square will remain as a stone façade. The discussion to re-render three facades of the building with a shelter coat should be subject to sample trials on site.
In support of the use of a shelter coat; a shelter coat will allow for the texture of the brick and stone to be readable while also bringing a sense of uniformity to the elevations. All cut stone should be left exposed.
In support of retaining the rubble stone and brick facades without a render; the building is a landmark building in the centre of the town. There is a risk that if the building is rendered, it may appear too similar to the adjoining structures. The mix of materials tells the story of the evolution of the building that may be whitewashed if a shelter coat is applied.
Brick and stone:
The building will greatly benefit from being repointed in lime mortar.
Cleaning samples should be subject approved samples.
Repointing works for brick and stone should be subject approved samples.
Windows:
All existing windows will be repaired. The overall condition of the windows should be established before a commitment to repair rather than replace is made. Some of the windows installed in 1980s look to be in poor condition. The quality of the timber used should assessed before a final decision on repair or replacement of the windows is made.
- c) **Impact of reinstatement of 10 No. casement windows on North façade sympathetic to the original 1913 design:**
The original windows were casement windows with a top light as is evident from archival photographs. The reinstatement of the original style of windows would be a more honest approach and will also help in the understanding of the chronology of the building.
- d) **Impact of the removal of the external ramp:**
Removal of the external ramp will have a positive impact on the historic building and its relationship with its surroundings. The existing ramp is visually intrusive and no longer required. The design of the steps, selection of stone and type of finish should be subject to approval before construction commences.

5.2 Internal works

Alterations required to the interior:

- a) *Provision of level access to entire ground floor from front entrance by raising ground floor internally.*
- b) *Removal of 2 No. existing stairways and one lift and associated structure, construction of a new lift and fire escape stairs to serve all floors.*
- c) *New internal openings to allow improved circulation within the building.*
- d) *Removal of existing 26m² mezzanine level and construction of a new 37m² mezzanine at second floor level.*

Ground Floor:

Stairs and Lift:

The glazed extension occupies the south end of the building and incorporates an open staircase.

The existing staircase and lift to the west will be removed. The staircase on the east side will also be removed. They will be replaced with a new staircase and lift to the south-east of the building and a feature staircase within the new glazed extension. The existing staircase in the north-east corner will remain.

Floor Level:

The floor will be raised to provide level access to all areas. This includes lifting and relaying the cobbled floor on the east side.

WC:

New accessible WC will be provided at ground floor level.

First Floor:

At first floor level on the west side, a single exhibition room will be provided in place of the existing staircase and meeting room. This will be connected through a new central opening connecting it to a large exhibition space, currently a library space. A niche is in the location of the proposed opening.

The glazed extension continues to first floor and the open staircase is the main access to the first-floor exhibition room.

Second Floor:

At second floor level the balcony on the north end will be removed and a new balcony installed on the south end. This balcony provides a viewing platform over the main exhibition space incorporating the Shackleton cabin at first floor level.

The east side of the second floor will be adapted for staff offices and facilities.

Impact of the internal works on the historic building:

The building has been in use as a heritage centre, with a library at first floor level since the 1980s. While it has no doubt served the community well, the exhibition and the building look tired at this stage. There is a lack of clarity when entering the building and the overall form of the building is currently difficult to read. A revamp and reimagining of the building is to be welcomed.

- a) Level access:

The current arrangement of a ramp inside the entrance is unsatisfactory and adds clutter to the internal space. By providing a raised floor throughout, the floor below can remain intact without disturbance. The bases of the existing columns are quite substantial and so are not impacted upon by the rise in height of the floor.

The main area of concern is the cobbled floor. This floor is historic and is important in the understanding of the building's function as a market house. The following options could be considered;

- Leave the floor unaltered;
This will create a step within the building, which is not ideal but may be a tolerable solution. This floor will not be insulated etc. This may or may not be an issue.
 - Leave the floor unaltered and cover it to provide level access;
If the floor is covered, an important historic element remains intact but not visible to the users of the building, which would be a shame as it contributes greatly to the understanding of the building as a Market House.
The introduction of a glass floor would not be recommended as the level of intervention required to install a glass floor would cause damage to the existing fabric.
 - Raise the floor to the same level as the rest of the ground floor:
The floor would require to be recorded to archaeological standards; this would entail a fully measured drawn survey using a framed grid in addition to a photographic survey. The floor could then be lifted and re-laid to exactly match original. Note that the floor will not meet DAC standards and exceptions should be made, given the historic nature of the building.
- b) Replacement of staircases:
The earliest internal plan of the building is from the 1872 OS map. It shows two staircases on the east and one staircase on the west. The staircase to the west and the staircase to the north east would not have been original as they are both outside the footprint of the original cruciform plan.
All three staircases were replaced during the 1980s refurbishment work and there is no trace of historic joinery. The removal of the staircases and their replacement with two new staircases has a neutral impact on the historic value of the building.
 - c) New openings at first and second floor levels:
The proposed new layout of two interconnecting exhibition spaces improves the use of the first floor along the west side. These two spaces will be connected via a central opening in place of an existing niche. The current arrangement of a door in the corner of the room is unsatisfactory from an architectural perspective and out of scale with the room. There will be little loss of original fabric by providing an opening in place of an existing niche. However, it would be important to ensure that the architectural treatment respects the original niche.
On the east of the main space there are proposals to make further openings. There is some loss of historic fabric.
Two further openings are proposed to the east side. One of these is already a doorway and so there is no impact here. The other is a new opening and there will be loss of historic fabric as a result.
At second floor level, a further five openings are proposed to improve circulation. These modifications are required for the change in layout and function. Again, this will result in a loss of historic fabric. Loss should be minimised by creating door openings rather than removal of full height sections of wall.
 - d) Replacement of balcony at second floor:
This will result in the loss of a balcony that was added in 1913. It is unclear if this balcony was replaced in 1980s when much of the interior was gutted. The balcony is not of particular architectural or artistic interest. However, it tells the story of that phase of alteration within the building. It helps in the understanding of the introduction of a second

floor, with associated fenestration at this level. The loss of this balcony will have somewhat of a negative impact on the understanding of the interior of the building.

5.3 Sundry Works

- e) *Provision of plant in attic space and associated vents to inner valleys of the roofs.*

Impact of the interventions within the roof

The provision of plant in the attic space and vents to the inner valleys will ensure all openings and ductwork are concentrated within the roof space and hidden within the internal valleys. This ensures that no openings are required in the stone façade for ventilation or pipework.

- f) *Removal of 8 No. parking spaces to the rear of the building (Barrow Quay), provision of hard landscaping surrounding new extension and associated site works.*

Impact

Public realm improvements can only enhance the historic setting of the building and improve the urban context. These works are to be recommended and will have a positive impact on the building.

- g) *External Lighting:*

Minimal lighting is proposed to the principal façade. This will be located within the bell niche and possibly within the window openings at upper floor level.

Impact:

The full impact cannot be assessed until the lighting design is finalised but the approach of minimal lighting in key areas of the façade is an appropriate solution. Steps should be taken to ensure that no damage shall be caused to the stone or brickwork when fixing light fittings to the exterior. Fixings should be through mortar joints only.

- h) *Bell Niche:*

It is proposed to replace the existing wire mesh with a less obtrusive material. The impact of this can only be established when a final decision on material and finish is made and subject to approved samples on site.

- i) *Swift Boxes:*

Two Swift boxes measuring 150 x 150 x 980mm are proposed at high level above the window on the east façade. In addition, bat access slates will be provided on the inner facing slopes of the roof. These proposals are in accordance with Kildare Development Plan (2017-2023) Urban Green Infrastructure:

Policy GI 27 *Require all new developments to identify, protect and enhance ecological features by making provision for local biodiversity (e.g. through provision of swift boxes or towers, bat roost sites, green roofs, etc.) and provide links to the wider Green Infrastructure network as an essential part of the design process.*

Impact:

The location of the Swift boxes has been recommended by the environmental consultant and their location will have no negative impact on the historic structure. Appropriate steps should be taken to ensure that no damage shall be caused to the stone or brickwork when fixing the Swift boxes to the exterior. Fixings should be through mortar joints only.

6.0 SUMMARY AND CONCLUSIONS

Recommendations and Mitigation Measures

The building is of national importance, so any redevelopment must have regard for its architectural and urban significance.

The building has been changed and adapted throughout its history, with the late 20th Century changes being more destructive.

The external form and fabric have survived. The four significant phases of development can be identified. The rear (south) elevation has been altered in the relatively recent past to adapt the building for use as a fire station.

The interior was also significantly altered; The plan form has been retained, along with the very significant brick vaults and cobbled floor in the north-east corner. Much of the internal fabric was removed during works in the 1980s. All plasterwork, windows, doors, other joinery, staircases, etc were replaced.

The best way to preserve an historic building is by reusing it. The proposed new exhibition space ensures that the building continues in public use. The overall location, form and existing volumes are suitable for its proposed new phase.

The proposed extension to the rear of the building, while adding drama and attention to the building, does not overpower it. The footprint of the extension is Relative to the size of the building, it is small in footprint. It does not alter the form or massing of the historic building. The extension will not be visible from Emily Square or the main entrance. The extension is designed in a contemporary idiom, and so is honest in its architectural language. It is reversible in so much as if it were to be removed in the future, the overall form and massing of the existing historic building will remain as it was before the addition.

Within the building, there are changes to the interior. These modifications are necessary for the change of function. Most of these will have a positive impact on the building. Some have a negative impact. These include the removal of the balcony on the second floor and the loss of original fabric where new openings are required. However, these are relatively minor in terms of the overall proposal.

Mitigation measures should include a full repair of the building in line with best conservation practice. All works should be recorded, and the record placed with Kildare County Council and the Irish Architectural Archive.

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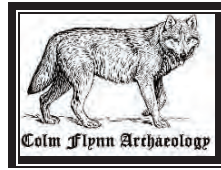
Photographic References:

Plates 1 & 2 : NLI Lawrence Collection Ref: L_ROY_07295

Plates 4 & 8: <http://www.athyphotos.gallery/town-hall.html>

Plates 6, 9, 11, 12, 14, 16 & 18: Irish Architectural Archive; (Geoff White) 7 Dec 1983

Appendix 4: Archaeological Impact Statement



WWW.COLMFLYNNARCHAEOLOGY.IE

Archaeological Impact Assessment Report

**Athy Heritage Centre & Museum Project
Emily Square,
Athy,
County Kildare**

September 2018

**Client: Reddy Architecture and Urbanism & Kildare County Council
Author: Colm Flynn**

SUMMARY

This report details the results of an archaeological impact assessment of a proposed development at Athy Heritage Centre & Museum, Emily Square, Athy, County Kildare.

The author of this report was commissioned by Reddy Architecture and Urbanism and Kildare County Council to carry out an archaeological impact assessment in association with the proposed development of a new extension to the southern facade of Athy Heritage Centre & Museum, by Kildare County Council in accordance with Part 8 of the Planning and Development Act 2000.

The proposed development of the extension includes the partial demolition of the southern façade of the existing building, removal of existing tarmac and concrete carpark and existing services, and construction of a new two storey glass shard inspired extension to rear accommodating stairs and lift with associated underground services. Some associated services works will take place in the environs of the exterior of the existing building. The internal works will include a new staircase (and removal of existing staircase), new toilets, new café and shop, new lift within the existing building, structural accommodation of artefacts on all floors, and upgrading of internal services including fire safety, and M & E services.

This report establishes the existing archaeological heritage of the proposed development location, and its' environs. Particular reference is given to the Historic Town of Athy (RMP No: KK035-022), which is protected by law under the National Monuments Acts (1930-2004). The report assesses all likely impacts the proposed development is deemed to have on the existing archaeology, and categorises the significance of these impacts.

This report concludes that the proposed development at Athy Heritage Centre & Museum, Emily Square, Athy, County Kildare, will have a slight impact on the archaeological heritage of Athy.

Mitigation in the form of advanced archaeological test trenching is proposed to ameliorate the risk of any impact the development may have on the subterranean archaeological heritage of Athy.

Construction stage monitoring of ground disturbance works (particularly services works) is recommended to mitigate the possible impact of the proposed development on the known archaeological heritage of Athy.

Once completed, the proposed development will contribute positively to the protection and promotion of the archaeological heritage of Athy.

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Plate 6 Showing existing cobbles in floor of interior of Athy Heritage Centre & Museum.

Plate 7 Archaeological artefacts contained within interior of Athy Heritage Centre and Museum.

Plate 8 Artists impression of completed Extension to Athy Heritage Centre & Museum (after Reddy Architecture).

1.0 INTRODUCTION

This report details the results of an archaeological impact assessment associated with the proposed development of a new extension at the south side of the existing Athy Heritage Centre & Museum situated in Emily Square, Athy, County Kildare (668272E, 693910N, see Figure 1-4 & Plate 1-3). This report assesses the possible and likely impacts that the proposed development may have on the existing archaeology. The research that forms the basis of this report is influenced by the publications 'Urban Archaeological Survey of County Kildare (Bradley, 1986), and the Journal of the County Kildare Archaeological Society and Surrounding Districts. Recommendations are contained within this report to ameliorate any impact the proposed development to the existing Athy Heritage Centre & Museum building may have on the archaeological heritage. This report was commissioned by Reddy Architecture and Urbanism and Kildare County Council to fulfil Part 8 Planning Requirement of the Planning and Development Act 2000.

2.0 THE PROPOSED DEVELOPMENT

The proposed development at Athy Heritage Centre & Museum will involve the partial demolition of the southern façade of the existing building, removal of existing tarmac and concrete carpark and existing services, and construction of a new two storey glass shard inspired extension to rear accommodating stairs and lift with associated underground services. Some associated services works will take place in the environs of the exterior of the existing building. The internal works will include a new staircase (and removal of existing staircase), new toilets, new café and shop, new lift within the existing building, structural accommodation of artefacts on all floors, and upgrading of internal services including fire safety, and M & E services (see Figure 6-7, Plate 1-8). The development will require some service works in Emily Square for proposed new services to tie into existing services, and the and removal of existing car park spaces at the rear of the building at Barrow Quay.

The proposed development is situated in the Zone of Notification to the National Monuments Service of the Department of Culture, Heritage and the Gaeltacht, as identified in the Urban Archaeological Survey of County Kildare.

3.0 METHODOLOGY

This report is an archaeological impact assessment of the proposed development of an extension to the Athy Heritage Centre & Museum, Emily Square, Athy, Co. Kildare (see Figures 6-7). The possible impacts that the development may have on the existing archaeology were assessed according to the following documents and guidelines:

- Transport Infrastructure Ireland (TII) (formerly National Roads Authority) Environmental Assessment Guidelines
- Guidelines on the Information to be contained in Environmental Impact Statements (EPA 2002, 2003, 2017)
- EIA Directive (2014/52/EU)
- Framework and Principles for the Protection of Archaeological Heritage (DAHG, 1999).

Any impacts that the proposed development may have on the existing archaeology were assessed as direct or indirect, and positive, negative or neutral in nature. The significance of each impact was judged depending on whether the impact was to the entirety or a portion of an archaeological site, or archaeological feature. Each impact was classified according to Environmental Protection Agency guidelines and was adjudged to be one of the following:

- Profound: this is when the proposed development would result in the complete or almost complete destruction of archaeology.
- Significant: this applies when a sensitive or high proportion of the archaeology will be damaged or destroyed by the proposed development.
- Moderate: this applies when the character or a small proportion of the existing archaeology will be damaged or destroyed.
- Slight: this applies when an effect causes noticeable changes in the character of the archaeology without affecting its entirities.
- Not significant: this applies when there will be no effect on the existing archaeology.
- Imperceptible: An effect capable of measurement but without significant consequences.
- Uncertain: this applies when the extent or nature of the impact on archaeological deposits is unknown.

During the site visit photographic records, notes and measurements were taken. The following archaeological and historical resources were utilised for this report:

Record of Monuments & Places (RMP)

The RMP is a list of archaeological monuments, generally predating AD1700, known to the National Monuments Service (NMS). This list was in many cases based initially on cartographic, documentary and aerial photographic sources. By inclusion in the RMP an archaeological site is protected by law

under the National Monuments Acts (1930-2004). Any works that may impact on an RMP site has to be approved by the NMS prior to the work commencing. Each entry in the RMP receives an individual identification number with a two letter prefix which denotes the county that the archaeological site is in (e.g. the RMP number for two grave-slabs contained within Athy Heritage Centre & Museum is (KD035-022016 & KD035-022017). The proposed development area is situated within the confines of the Historic Town of Athy (KD035-022), and is consequently afforded legal protection under the National Monuments Acts (1930-2004). The proposed development is situated in close proximity to the medieval site of the Dominican Friary (RMP No. KD035-022004). Appendix 2 lists the known archaeological sites within proximity of the proposed development, and provides appropriate mitigation measures to ameliorate any impact the proposed development may have on the known archaeology.

Topographical Files

The topographical files of the National Museum of Ireland were consulted for this report. The topographical files identify recorded stray archaeological artefacts that have been donated to or purchased by the State in accordance with National Monuments legislation. The files are given individual numbers, and are identified by townland, and county, and in urban locations, by street number, street, and townland. During the Barrow Drainage Works in the early and mid twentieth century several artefacts were recovered from the Barrow at Athy. These artefacts included 22 Stone Axeheads, 1 Bronze Axehead, 3 Bronze Looped Spearheads, 1 Bronze Socketed Dagger, and 2 Bronze Swords.

A list of the Topographical Files for the town of Athy, County Kildare, in which the development is situated, is included as Appendix 1 at the end of this report.

Archaeological Excavations Database (www.excavations.ie)

The Archaeological Excavations Database was consulted for this report. This database lists all archaeological excavations carried out in Ireland that were licensed under the National Monuments Acts. The Database is organised on a county by county basis, and allows for searches of individual addresses and street names in an urban context.

Approximately 60 archaeological excavations were previously carried out in Athy and are listed in on the website www.excavations.ie. A list of excavations previously carried out near the proposed development area is included in Appendix 3.

National Inventory of Architectural Heritage

The National Inventory of Architectural Heritage (NIAH) is an ongoing survey commissioned by Department of Arts, Heritage and the Gaeltacht. The NIAH aims to promote the appreciation of, and contribute to, the protection of the architectural heritage by systematically recording the built heritage on

a nation-wide basis. The proposed development at Athy Heritage Centre & Museum is contained in the NIAH (NIAH Reg. No. 11505332), where the building is described as being of 'regional interest'. A full list of the NIAH entries in proximity to the development area is contained in Appendix 4.

Athy Town Development Plan 2012-2018 & Athy Local Area Plan 2019-2025

The Athy Town Development Plan 2012-2018 and the draft Athy Local Area Plan 2019-2025 were consulted for this report.

The stated aim of the Athy Town Development Plan 2012-2018 is:

'To conserve, protect and enhance the architectural and archaeological heritage of Athy. To strike a reasonable balance between conservation and development objectives and continue to protect, conserve and enhance buildings, areas, structures, sites and features of special architectural, historical, archaeological, artistic, cultural, scientific, social or technical interest.' (Kildare Co Co, 2011 p141).

The Athy Town Development Plan 2012-2018 has been developed by Kildare County Council with the objective of ensuring sustainable development in Athy. The proposed development at Emily Sq, Athy is located with the Zone of Archaeological Potential for Athy as identified in the Athy Town Development Plan 2012-2018 (Kildare County Council, 2011), and therefore protected by law under the Planning and Development Act 2000.

Kildare County Development Plan 2017-2023

Kildare County Council have previously published the Kildare County Development Plan 2017-2023. This plan was consulted for this project. It contains a list of buildings called the Record of Protected Structures (RPS) which are protected by law under Part IV of the Planning and Development Act 2000. Developments which affect buildings on the Record of Protected Structures must be approved by the appropriate planning authority. The proposed works will take place at Athy Heritage Centre & Museum that is contained within the Record of Protected Structures (RPS No. AY075). A list of the RPS entries for Athy that are in proximity to the development area is contained in Appendix 4.

The stated objective of the Kildare County Development Plan 2017-2023 is:

'To ensure that development in the vicinity of a site of archaeological interest is not detrimental to the character of the archaeological site or its setting by reason of its location, scale, bulk or detailing and to ensure that such proposed developments are subject to an archaeological assessment. Such an assessment will seek to ensure that the development can be designed in such a way as to avoid or minimise any potential effects on the archaeological heritage.' (Kildare County Development Plan 2017-2023, p281).

The proposed development at Emily Square, Athy is located with the Zone of Archaeological Potential for Athy as identified in the Kildare County Development Plan 2017-2023 (Kildare County Council, 2016), and therefore protected by law under the Planning and Development Act 2000. Any developments proposed for within the Zone of Notification of Recorded Monuments must be submitted for review to the National Monuments Service of the Department of Culture, Heritage and the Gaeltacht.

The Urban Archaeological Survey:

The Urban Archaeology Survey was established in 1982 to record known information relating to Irish towns and to present it to the public. One of the main objectives was to produce a zone of archaeological potential, based on the available evidence, which could be used for planning purposes. Historical sources of information were compiled and known archaeology of the towns was evaluated. The Urban Archaeological Survey of County Kildare was prepared by John Bradley and was published in 1986 for the Office of Public Works, and was consulted for this report. The proposed development area is situated within the zone of archaeological potential of the historic town of Athy Co. Kildare, identified in the Urban Archaeological Survey of County Kildare (OPW, 1986).

Literary Sources

Various literary and online sources were consulted, a full list of which is provided in the bibliography. The journal of the Kildare Archaeological Society, and the journal of the RSAI was consulted for this report, and provided valuable information on the historical development of the study area.

Cartographic Sources

A wide range of maps were consulted, including the Down Survey (1650s), private surveyors maps from the 18th century, and Ordnance Survey maps dating from the mid-19th century onwards. A full list of consulted cartographic sources is provided in the bibliography (see Fig 2-3).

4 RECEIVING ENVIRONMENT

4.1 Location, Geology & Topography

The town of Athy Co. Kildare is situated in the Barony of Naragh and Reban West, at a fording point of the River Barrow, in a fertile plain, on the road from Kilcullen Co. Kildare to Castlecomer, Co. Kilkenny. Athy is situated on both sides of the River Barrow. The underlying bedrock of the area consists of carboniferous limestone. The name Athy is an Anglicisation of the name 'Atha Aei', which translates as ford of Aei', a legendary warrior reputed to have been slain in the area during a battle between the men

of Leinster and the men of Munster (Herity, p146). The proposed development will be situated on the southern side of an existing eighteenth to twentieth century building (Athy Heritage Centre & Museum) in an area currently used as a municipal carpark, in Emily Square, Athy, Co. Kildare (NGR 668272E, 693910N, see Figure 1-2 & Plate 1-4). The surrounding ground is even and flat, sloping slightly towards the River Barrow 60m to the west. The River Barrow is situated to the west of the proposed development area (see Plate 2), and runs from North to South through the town of Athy, bisecting the town into eastern and western sides. Athy presents as a busy market town with buildings and street plans dating to the post medieval and early modern periods.

4.2 Archaeological & Historical Background

Athy's long history of human settlement spans at least 2000 years. The location of Athy on a fertile plain, at a fording point across the Barrow has contributed to its development as a focal point for human settlement. Such was the significance of this fording area, that the neighbouring area of Rheban situated 4km to the north of Athy, is depicted on Ptolemy's second century map of Ireland.

Although no prehistoric sites are known from the town of Athy, the significance of this location in prehistory is attested by the number of artefacts retained from the Barrow Drainage Scheme. In total 22 Stone Axeheads, 1 Bronze Axehead, 3 Bronze Looped Spearheads, 1 Bronze Socketed Dagger and 2 Bronze Swords were recovered from the Barrow works (Bradley 1986, p47).

Athy's archaeological heritage is largely formed in the medieval period (1100-1550 AD), particularly during the 13th century expansion of the Anglo-Norman sphere of influence in Leinster, and the associated establishment of new religious communities. In 1175 the area was granted to Robert FitzRichard by Richard de Clare. By 1181 an Anglo-Norman settlement had been founded at Athy. By the 1250s the Crouched friars and the Dominican orders established abbeys in the townland of St John's on the banks of the River Barrow. The earliest written reference to the borough of Athy is in 1324 when 'Geoffrey de Hereford burgess of Athy' is referred to in Fiants. By the mid thirteenth century Athy had grown to include two priories, a parish church and a castle or gaol (ibid, p48). It is not known how large the 13th century medieval settlement was at Athy, although 14th century records indicate that there were 10 burgesses, and possibly a sizable community of betagh, and villeins.

Although documentary sources show the first reference to town walls in Athy in the early 16th century, it is highly likely that some form of town defences was erected by the Anglo-Normans in the 13th century. A 19th century document in the National Library of Ireland (NLI Ms. 16172) indicates the former location of some of Athy's town walls. Previous archaeological excavations and recent geophysical surveys (Earthsound Geophysics GPR Survey for Athy Heritage Committee) have also informed as to the route of the town walls in some locations. Although no upstanding masonry remains of the town defences

have been identified on the west side of Athy it is possible to surmise where the medieval town walls may have extended to, based on the layout of Duke St, St. John's Lane and Green Lane. It has been suggested by Bradley that the western part of medieval town of Athy was roughly square in plan, measured c. 200m N-S, c. 200m E-W, and had one gate, named 'Miss Helen's Gate', situated at the West end of Duke St (Bradley et al. 1986a, vol. 1, 48).

During the fourteenth century Athy like the rest of Ireland, experienced a period of economic decline. The Bruce Invasion of 1315 and the Black Death of 1348 put pressures on the authority of the Anglo-Norman rulers. Athy was attacked and burned in 1308, and again in 1374 by the O Mordha clan from Laois (Tresham 1828, 251: no.23). In 1485 Geróid Mór Fitzgerald VIII Earl of Kildare, built a castle at Athy as part of the re-establishment of Anglo-Irish rule of south Kildare following an order of the Lord Justice of Ireland (Bradley 1986, p24).

In 1515 Henry VIII granted a charter of incorporation to Athy. This gave the burgages of Athy the right to hold a weekly market, and to fortify the town with ditches and walls of stone and lime. This also granted the burgages of Athy customs and other incomes to pay for the construction and upkeep of the town walls and ditches (MacNiocaill 1964a, 182-5).

The 1659 census of Ireland records that Athy had 273 households, comprising 61 English (Protestant) and 212 Irish (Catholic) (Pender 1939, p403). This figure of 273 households indicates that there was a population of 1000-1500 in Athy in the middle of the 17th century. The lords of Athy are listed as Robert Preston Esq and Robert Weldon Esq, and Will Weldon. The principal Irish households and their numbers for the barony of Reban and Narragh are listed as follows: Burne, 24; Brin & Brinne, 5, Brenan, 17; Carroll, 09; Cullen, 07, Coneran, 05; Dullanie, 05; Dun, 15; Duide, 06; Dowling, 14; Doran, 05; McDerot, 05; Daniell, 06; Fitzgerrald, 07; Farrell, 08; Glascock, 05; Goine, 05; Hyland & Helan, 05; Hickie, 06; Kelly, 54; Keating, 05; Keaghoe, 06; Kinselagh, 05; Lalor, 19; Lyon, 05; Moore, 07; Malone, 05; Murphy, 27; Neale, 09; Toole, 05; Walsh, 08 (ibid, p404).

Historical sources provide information about the population in Athy in the nineteenth century. Samuel Lewis' Topographical Dictionary of Ireland states that Athy had 4494 inhabitants in 1837, living in 733 houses. The census of 1871 records Athy as having a population 4510.

Known Archaeological Sites

Of the nineteen known archaeological monuments and places included in the Record of Monuments and Places in Athy, eleven are situated east of the Barrow, and nine are within the area between Stanhope Place, Chapel Lane, and Offaly St or Butlers Lane. These sites are contained within the Zone of Archaeological Potential as identified in the Athy Town Development Plan 2012-2018. These nine are:

- KD035-024002 Early Castle (15th century, possibly superseded by Whites Castle)

- KD035-022004 Dominican Friary (dates to the mid 13th century). The location of this
- KD035-022002 Town Defences (probably dates to the 13th century; first reference in early 16th century)
- KD035-022005 Historic Town (dates to the mid 13th century)
- KD035-022010 Tower house 'Whites Castle' (dates to the 16 century)
- KD035-022016 Grave slab (13th century)
- KD035-022017 Cross slab (13th century)
- KD035-022018 Crucifixion Plaque (16-17th century)
- KD035-022023 Memorial Stone
- KD035-022024 Armorial Plaque

The two known archaeological sites in the east of Athy outside of this area are St. Michael's Church (RMP KD035-022014) and graveyard (RMP KD035-022015). Both of these sites date to the 13th century.

On the west side of the Barrow three known archaeological sites are situated in proximity to St. John's Lane, north of Duke St. These sites are contained within the Zone of Archaeological Potential as identified in the Athy Town Development Plan 2012-2018. These three known archaeological sites consist of:

- KD035-022006 Priory of St Thomas and Hospital of St. John (Crutched Friars, dates to 13th century).
- KD035-022019 Architectural Feature (13-14th century).
- KD035-022020 Graveslab 17th century.

Previous Archaeological Works

According to the online database www.excavations.ie over 60 archaeological excavations have been conducted in the town of Athy since the late 1990s. A list of excavations related to this development is contained in Appendix 3 at the end of this document.

In 2015 Earthsound Geophysics conducted a Ground Penetrating Radar (GPR) survey of Athy on behalf of the Athy Heritage Committee and Kildare Co Co. This survey identified evidence of the medieval town wall and/or ditch in several locations. Several features interpreted by Earthsound Geophysics as 'possible stone features' were identified at the rear of Athy Heritage Centre & Museum, within the proposed development area (see Fig 5).

5 SITE INSPECTION

A site inspection took place on Thursday 21st June 2018 in warm sunny conditions. The development site is situated at the rear (south) of Athy Heritage Centre & Museum, Emily Square, Athy, Co. Kildare (668272E, 693910N, see Figure 1-3 & Plate 1-5). The proposed development area is currently in use as a tarmac and concrete municipal carpark. A parking meter is situated immediately to the rear of Athy Heritage Centre & Museum. A concrete path with subterranean storm drains hugs the southern façade of the building. Both Athy Heritage Centre & Museum and Emily Square are depicted on the 1st Ed Ordnance Survey maps of Athy, that date to 1830s (see Fig 2).

Situated to the west of the proposed development site is Athy Courthouse (formerly Athy Tholsel / Exchange). This building dates to the mid nineteenth century and is contained in the Record of Protected Structures for Athy (RPS AY077). To the south and east of the proposed development at the sides of Emily Square are rows of eighteenth and nineteenth century buildings. Some of these buildings are depicted on the First Edition Ordnance Survey maps of the area (1830s), and are contained in the Record of Protected Structures (see Figs 2-4).

Athy Heritage Centre and Museum presents as an attractive eighteenth to twentieth century three storey building, originally built as market house and courthouse for Athy. The building was extended in the nineteenth century, and altered and renovated in the twentieth century.

The proposed development will require the partial demolition of the existing carpark to the south of Athy Heritage Centre & Museum. It is likely that subterranean services are situated under the tarmac of this carpark. The works will involve the partial demolition of the southern façade of Athy Heritage Centre & Museum. This part of the southern façade was rebuilt in the late twentieth century to facilitate fire brigade access, when the building was in use as a fire station.

Internal Works

The internal works will include a new staircase (and removal of existing staircase), new toilets, new café and shop, new lift within the existing building, structural accommodation of artefacts on all floors, and upgrading of internal services including fire safety, and M & E services (see Figure 6, Plate 1-8). Athy Heritage Centre & Museum was originally constructed in the eighteenth century, although several alterations and rebuilds took place in the nineteenth and twentieth centuries. It is not known if the existing building was constructed on the site of an earlier building. Existing eighteenth or nineteenth century cobbled flooring is visible in the interior of the building (see Plate 7). Several known archaeological features are currently stored within the interior of Athy Heritage Centre & Museum. These archaeological features are contained within the Record of Monuments and Places (RMP No. KD035-022016, KD035-022017 and KD035-022018) and consequently are protected by the National Monuments Acts (1930-2004) (see Plate 7). These artefacts are all grave stones, and originated in the

medieval church and graveyard of St. Michael's Parish Church (KD035-022014) situated to the east of Athy Heritage Centre & Museum.

6 ATHY HERITAGE CENTRE & MUSEUM DEVELOPMENT IMPACT ASSESSMENT

The proposed development at Athy Heritage Centre & Museum, Emily Square, Athy will involve demolition works of existing walls, doors, and internal floors, and removal of external concrete and tarmac paths and underlying services laying. Some of these works will impact on the existing ground, and the depth of these impacts will likely vary according to the nature of the design requirements.

The development area is within the Zone of Archaeological Potential for Athy. All of the construction works that result in ground disturbance have the potential to impact on archaeology. The geophysical survey previously conducted by Earthsound Geophysics identified possible stone features in the proposed development area (see Fig 5). No work has been carried out to identify the nature and extent of these possible stone features. The proposed external works will likely impact on these features. Existing services that are situated in the footpath to the immediate south of Athy Heritage Centre & Museum are likely to have impacted on any archaeology that was in this location. It is likely that some modern services are situated in the carpark area of the proposed development at Emily Sq.

The number of archaeological sites in the vicinity of the proposed development, and the developments proximity to the Dominican Friary site (KD035-022004) consequently means that the development poses a risk to unknown (subterranean) archaeology of Athy.

Once completed the proposed development will contribute positively to the protection (through promotion) of the archaeological heritage of Athy.

The impact level of the proposed development on the archaeological heritage of Athy is consequently characterised as *slight*.

7 RESULTS & CONCLUSIONS

Archaeological Impact Assessment

- The proposed development of the extension to the southern face of Athy Heritage Centre & Museum, Emily Square, Athy, will involve demolition, ground disturbance, and construction works in the interior and exterior of an eighteenth century building situated in the historic town of Athy (RMP KD035-022), and within the Zone of Notification for developments to the National Monuments Service of the Department of Culture, Heritage, and the Gaeltacht, and within the Zone of Archaeological Potential as identified in the Athy Town Development Plan (2012-2018) and the Kildare County Development Plan (2017-2023).
- Three known archaeological features are situated in the interior of Athy Heritage Centre & Museum (RMP KD035-022016, KD035-022017 and KD035-022018). Several known

archaeological sites are situated in the vicinity to the proposed development site at Emily Square, Athy.

- A geophysical survey carried out by Earthsound Geophysics identified possible stone features in the carpark to the south of Athy Heritage Centre & Museum. Some of these features are situated within the proposed development area, and are of unknown date, nature and extent.
- Any services tie-in works along the exterior of Athy Heritage Centre & Museum and any services works in Emily Square will potentially impact on unknown (subterranean) archaeology.
- Ground disturbance works within the interior of Athy Heritage Centre & Museum have the potential to impact on unknown (subterranean) archaeology.
- Internal works within Athy Heritage Centre & Museum have the potential to impact on the known archaeological features (grave stones) (KD035-022016, KD035-022017 and KD035-022018).

8 RECOMMENDATIONS & MITIGATION MEASURES

Due to the previously completed geophysical surveys and the existing ground conditions (reinforced concrete and stone slabs within the interior of the building), geophysical survey is not deemed a suitable mitigation measure, as it will be unlikely to establish the presence or absence of archaeological layers.

Pre-construction Stage Mitigation Measures

- Advanced archaeological test trenching should be carried out where the proposed development works for the extension impacts on the Back Square. Particular attention should be given to the location of the possible stone features identified in the geophysical survey carried out previously by Earthsound Geophysics. The locations of archaeological test trenches will be informed by the design (construction) impacts of the proposed extension. All service tie-ins external to the building along the Back Square, Barrow Quay, and Emily Square risk impacting on the archaeological heritage of Athy.

Construction Stage Mitigation Measures

- The construction of the existing building in the eighteenth century and subsequent extension in the nineteenth century likely disturbed the underlying soils and any archaeological features therein. No design stage drawings are currently available outlining the likely depth of impact of internal works within the existing building. All ground disturbance works within the interior of the building risk impacting on subterranean archaeology. Depending on the depth and extent of construction works within the interior of the existing building, archaeological monitoring of

ground disturbance works within the interior of the building for services, lifts and stairs, will be required, to mitigate the risk of impacting on subterranean archaeology.

- The three known archaeological features (grave stones) KD035-022016, KD035-022017 and KD035-022018 are protected by law under the National Monuments Acts. Consideration should be given to removing these artefacts from the works area, prior to the commencement of the construction. This should only take place following consultations with and the approval of the National Monuments Service and the National Museum of Ireland. Alternatively, appropriate protection barriers should be placed around the three known archaeological features (grave stones) KD035-022016, KD035-022017 and KD035-022018 prior to the commencement of works within the interior of the building.
- Should alterations be made to the scope of works, further archaeological assessment and mitigation measures may be required.

PLEASE NOTE: This report and accompanying recommendations are based on the figures of the proposed development area, as supplied by Reddy Architecture and Urbanism. Should any alterations take place, further assessment would be required to be carried out.

PLEASE NOTE: Recommendations are subject to approval by National Monuments Service of the Department of the Culture, Heritage & Gaeltacht.

Cartographic Sources

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National Monuments Service Archives

National Museum of Ireland Archives

www.logainm.ie

www.excavations.ie

APPENDIX 1 - CATALOGUE OF FINDS FROM TOWN OF ATHY FROM NATIONAL MUSEUM

TOPOGRAPHICAL FILES

Topographical File Number	Townland	Parish	Description	Other Info
IA/111/1981	Athy	Athy	Stone Crucifixion Plaque	
NMI W.7	Athy	Athy	Bronze Sword	
NMI P240	Athy	Athy	Bronze Sword	
1928:11	Athy	Athy	Bronze basal-looped spearhead	Barrow Drainage Scheme c.200 yards above Belview near site of old ford.
1928:700	Athy	Athy	Socketed bronze dagger	Barrow Drainage Scheme. Found in gravel while rebuilding Horse bridge on Barrow.
1928:702	Athy	Athy	Bronze spearhead	Barrow Drainage Scheme
1928:704	Athy	Athy	Iron pike-head	Dates to c. 1798
1930:1-2	Athy	Athy	20 Flat Stone Axes	Athy
1937:2428	Athy	Athy	Bronze Axehead	Athy town.
1937:2429	Athy	Athy	Slate Flake	Athy town.
1937:2461	Athy	Athy	Stone Axehead	
1937:3648	Athy	Athy	Stone Axehead	Barrow Drainage Scheme works.
1945:336-7	Athy	Athy	Two iron daggers (late sixteenth or early seventeenth century).	Found below street in sewer-digging.
-	Athy	Athy	22 Stone Axeheads, 1 Bronze Axehead, 3 Bronze Looped Spearheads, 1 Bronze Socketed Dagger, and 2 Bronze Swords.	Barrow Drainage Scheme works.
-	Athy	Athy	A pipe, piece of armour, sword and two cannon balls, and a skull with a cut on the right temple.	Referred to in NLI MS. 18857. Presented to Marquis of Kildare in 1847. Found 7 ft below present road level during sewer digging nearly opposite Shiell's Hotel.

APPENDIX 2 - CATALOGUE OF KNOWN ARCHAEOLOGICAL SITES

This catalogue details the archaeological sites recorded in the vicinity of the proposed development. It consists of three sites which are recorded in the Record of Monuments and Places (RMP) and the Urban Archaeological Survey (UAS). The catalogue entries provide locational information, a description, an outline of the potential impact of the development and recommendations towards the mitigation of this impact.

Archaeological RMP number / UAS number	Location	Description	Impact Assessment	Proposed Mitigation Strategy
KD035-022	Athy	Historic Town of Athy Co. Kildare. At a strategically important crossing point of the River Barrow. According to Bradley et al. (1986a vol. 1, 35), The placename 'Athy' is derived from 'Ath I', "the ford of Aei", a warrior killed here in legendary combat. The Anglo-Norman settlement at Athy appears to date from at least the mid 13th-century when two priories (Dominican: KD035-022004- and Fratres Cruciferi: KD035-022006-) and a church (St. Michael's: KD035-022014-) are known to have been in existence.	Slight	Targeted advanced Archaeological Test Trenching. Construction stage archaeological monitoring of works.
KD035-022002	Athy	Town Defences. Athy was founded by Anglo-Normans in the 13 th C. Some enclosing defensive elements are likely to have been erected then, although first references to defensive walls in Athy is in 1515.	Unknown	Targeted advanced Archaeological Test Trenching. Construction stage archaeological monitoring of works.

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Proposed Athy Heritage Centre & Museum Project
Athy, County Kildare

Archaeological RMP number / UAS number	Location	Description	Impact Assessment	Proposed Mitigation Strategy
KD035-022004	Emily Square, Athy	The Dominican Friary was established somewhere near the south end of modern day Emily Square, Athy circa 1250 by the Boisles or Ouganos (Wogans). It partially survived until the 19 th century.	Unknown	Targeted advanced Archaeological Test Trenching. Construction stage archaeological monitoring of works.
KD035-022016	Athy Heritage Centre & Museum	A graveslab. The lower half of a tapering slab (L 1.07m; Wth 0.42-0.53m; T 0.16m) is decorated in false relief with the shaft of a cross terminating in a fleur-de-lys. Probably 13th-century in date.	Imperceptible	Temporary removal and storage of graveslab, or appropriate protection barriers.
KD035-022017	Athy Heritage Centre & Museum	The upper half of a tapering slab (L 1.30m; Wth 0.52-0.60m; T 0.14m) is decorated with an incised fleur-de-lys cross, enclosing a lozenge shape in the cross-head. Probably 13th-century in date.	Imperceptible	Temporary removal and storage of graveslab, or appropriate protection barriers.
KD035-022018	Athy Heritage Centre & Museum	Graveslab. A small rectangular piece of limestone (L 0.28m; Wth 0.22m; T 0.055m) carries the crucifixion in false relief; the figure nailed to a Latin cross with splayed arms. The head is bent on to the right shoulder, the arms are stretched upwards and the figure is wearing an elaborate perizonium. Dates to the 16th/17th-century.	Imperceptible	Temporary removal and storage of graveslab, or appropriate protection barriers.
KD035-022010	East bank of Barrow at Leinster St.	Castle-tower house. A 15 th century tower house likely built by Gearoid Mor Fitzgerald VIII Earl of Kildare. Used as a garrison, gaol, and police station from 17 th to 19 th century.	No impact	N/A

APPENDIX 3 Previous Archaeological Excavations Within Study Area

Archaeological Licence Number	Location	Description
98E0211	13-14 Emily Row Athy, Co, Kildare	Excavations by Christine Grant were carried out in advance of building renovations. No archaeology was identified.
99E0221	Garter Lane Athy	Excavations by Martin Byrne at Garter Lane were carried out for a new apartment development. No archaeology was identified.
02E1338	8 Barrow Quay Athy	Excavations by Martin Byrne at 8 Barrow Lane were carried in advance of conservation of building renovations. No archaeology was identified.
03E1381	Garter Lane Athy	Excavations by Patrick Neary at Garter Lane were carried out in advance of a new development. No archaeology was identified.
03E1534	The Convent, Standhope St, Athy	Excavations by Martin Byrne at The Convent, Standhope St were carried out in advance of a new apartment development. No archaeology was identified.
06E0426	Whites Castle, Athy	Testing by Emma Devine in advance of a mixed development at Whites Castle identified a medieval and post medieval features.
07E0540	11 Standhope St, Athy	Testing by Dominic Delany in advance of a single house development identified no archaeology.

Appendix 4 Catalogue of Entries from NIAH & Record of Protected Structures within Development Area

NIAH Number	RPS Number	Location	Description and Date
11505332	AY075	Emily Sq, Athy	Early Georgian market and court house, c. 1745, originally two-storey T-plan, with open arcade. Extended to front and rear c. 1800, raised a storey in 1913, with structural alterations. Rear altered 1970, rebuilding and restoration 1983-1990, with most features repaired, replaced and replicated. Now in use as Athy Heritage Centre and Museum.
11505116	AY077	Emily Sq, Athy	Freestanding seven-bay two-storey Tudor Revival former corn exchange now in use as court house, built 1858. Single-storey open arcades to east and west sides, lower single-bay single-storey former porch to north end, two-storey judiciary rooms to south. Public toilets and social services office also.
11505335	AY123	6 Emily Square	Corner-sited end-of-terrace three-bay three-storey late Georgian house, c. 1800, with two-storey return with carriageway arch, c. 1900.
11505119	AY094	13 Emily Square	Terraced five-bay two-storey early Victorian house, c. 1840, with round-arched doorcase and matching carriageway arches to end bays. In use as a medical surgery. Stone fronted to rear.
11505120	AY0	14 Emily Square	Corner-sited end-of-terrace three-storey house with three-bays to Emily Row and two to Emily Square, c. 1840, with round-arched doorway. Retail outlet to ground floor with c. 1950 shopfront, single-bay two-storey annexe to Emily Square side.
-	AY193	18 Emily Square	House
11505325	-	19 Emily Square	Terraced three-bay two-storey house, c. 1820, with two-storey return and single-storey extension to rear. End-of-row four-bay two-storey stone coach house, c. 1850. Yard onto Meeting Lane with blockwork walls and metal gates.
-	AY192	20 Emily Square	Building

PLATES



Plate 1 Existing southern façade of Athy Heritage Centre & Museum, and external car park.



Plate 3 Showing existing services in proposed extension location, facing northwest.



Plate 2 Location of proposed extension to south of Athy Heritage Centre & Museum, facing North.



Plate 4 Close up of location of proposed extension, facing north.



Plate 5 Interior of Athy Heritage Centre and Museum.

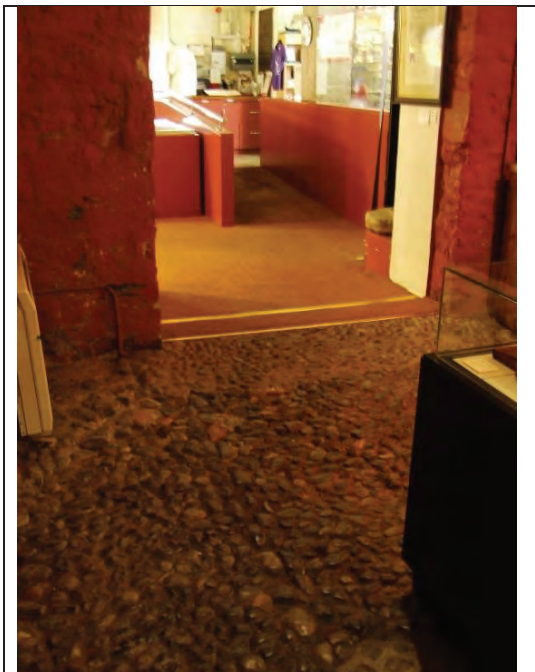


Plate 6 Showing existing cobbles in floor of interior of Athy Heritage Centre & Museum.



Plate 7 Archaeological artefacts contained within interior of Athy Heritage Centre and Museum.



Plate 8 Artists impression of completed Extension to Athy Heritage Centre & Museum (after Reddy Architecture).

Figures



Fig 1 Showing modern OS map and known archaeological sites (red dots) and sites on Record of Protected Structures (blue dots), and location of proposed excavation (green).



Fig 2 Extract from 1st Ed OS map of Athy (1830's) showing Athy Heritage Centre & Museum.

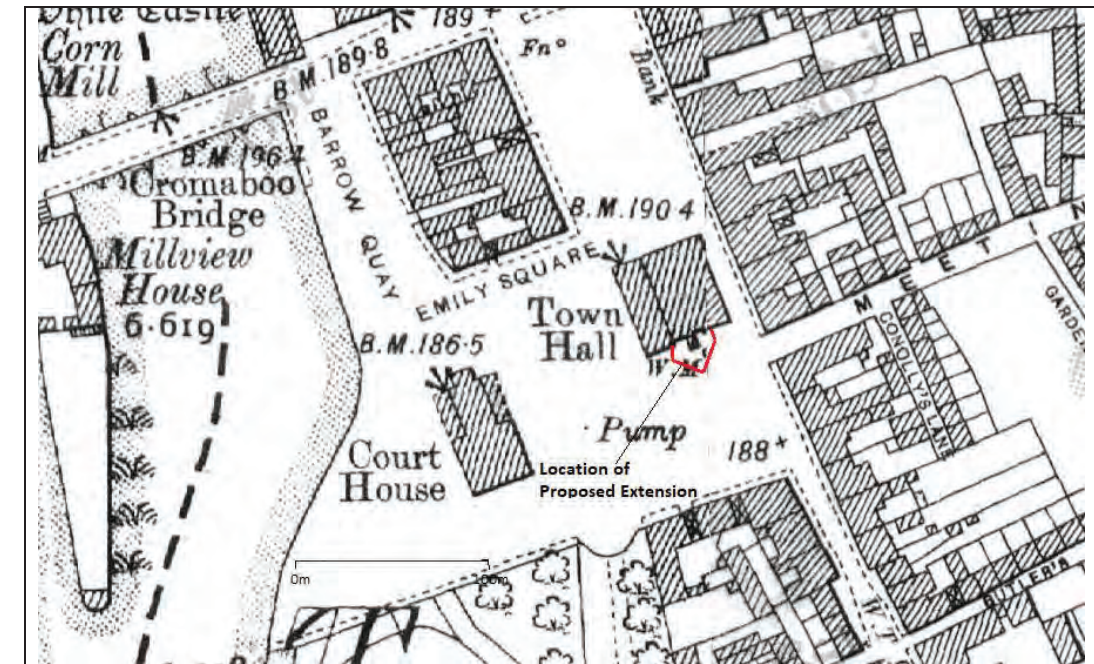


Fig 3 Extract from 3rd Ed OS Map of Athy (1900s) showing proposed development.

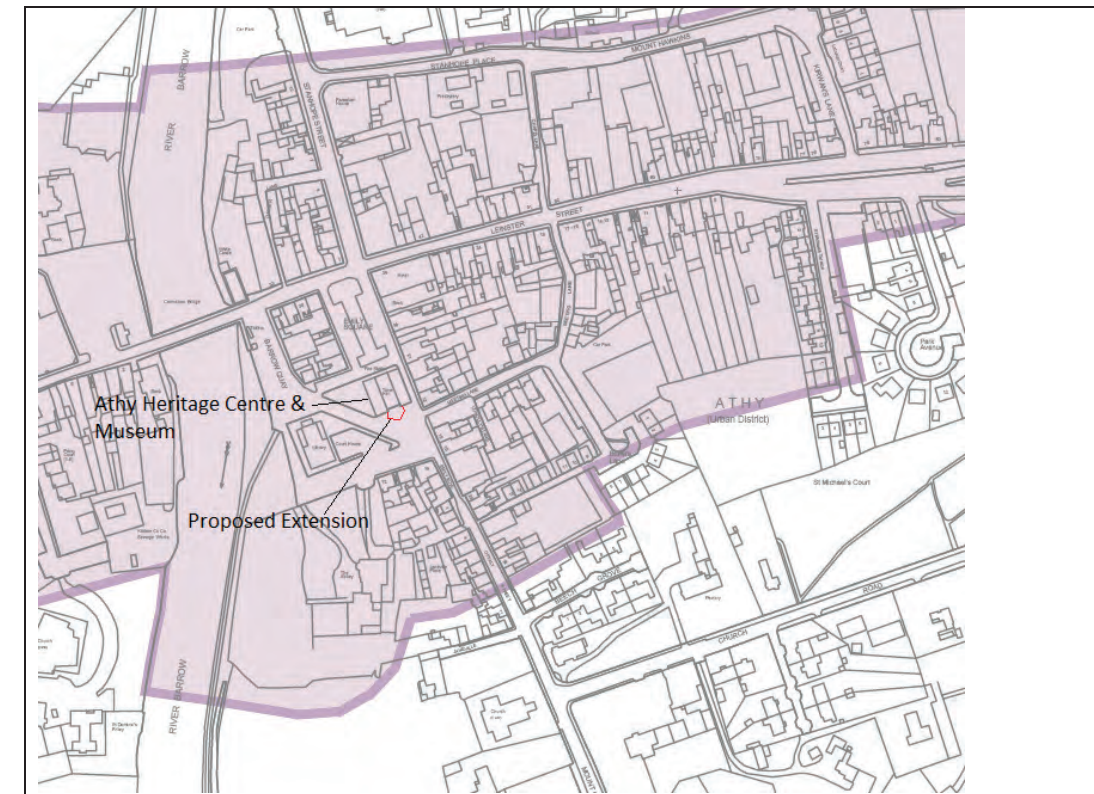


Fig 4 Extract of map showing Zone of Archaeological Potential for Athy (in purple area), from Athy Town Development Plan 2012-2018 and proposed development area.

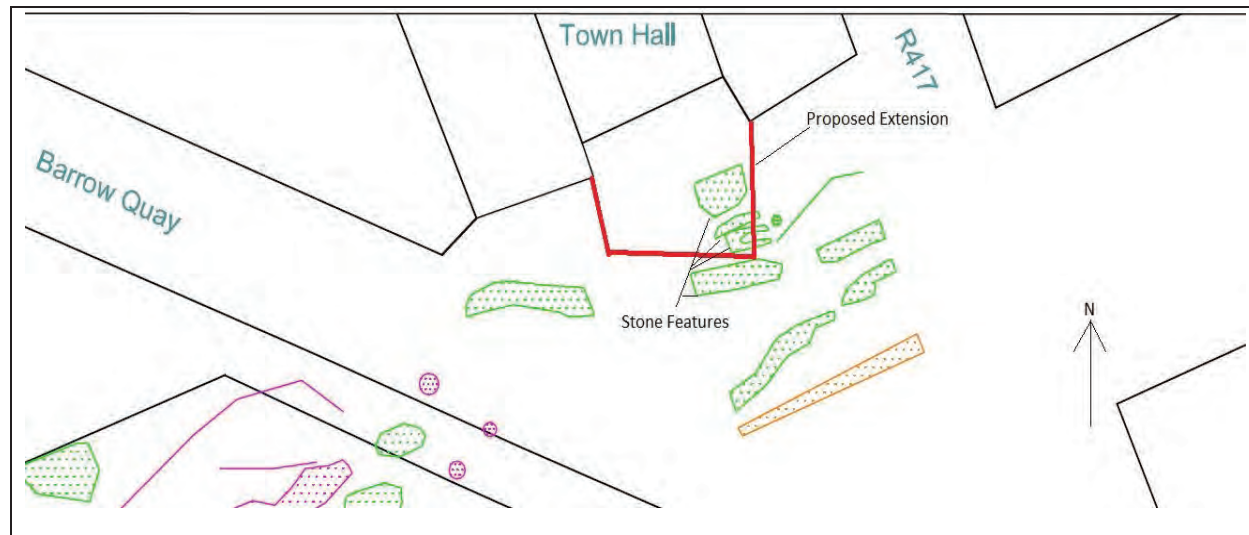


Fig 5 Showing extract from Earthsound Geophysics Survey of Athy and unknown stone features (in green), and outline of extension (in red).

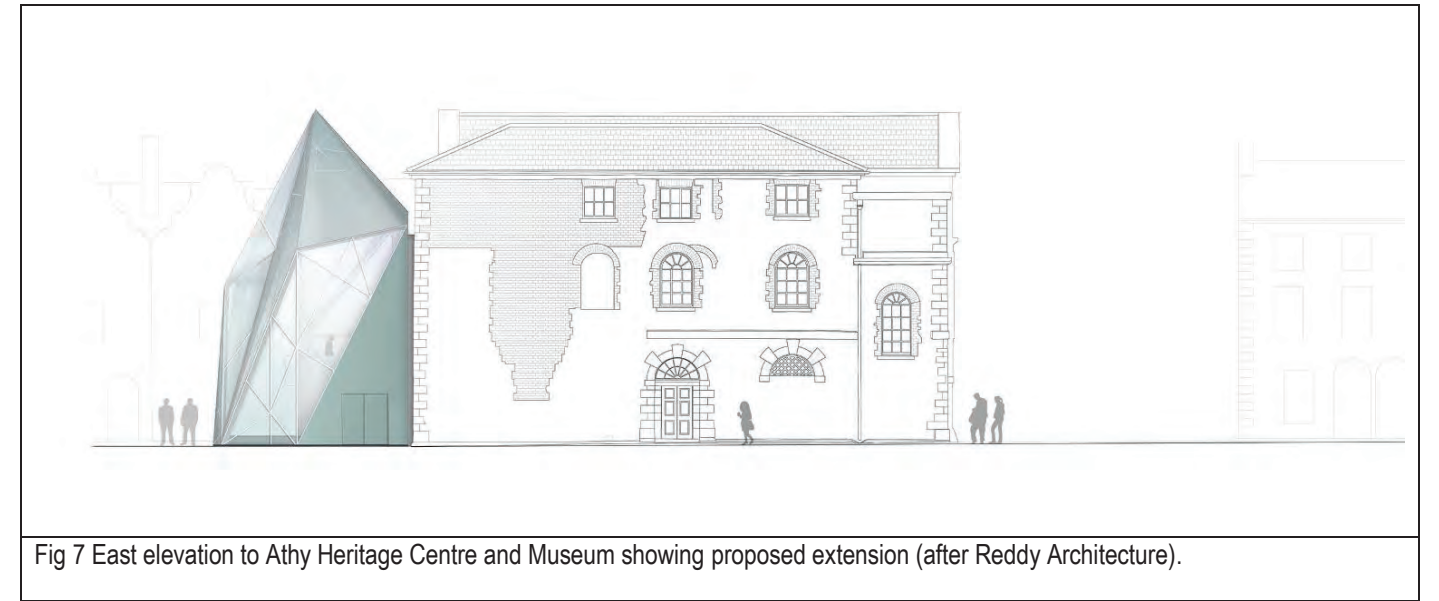


Fig 7 East elevation to Athy Heritage Centre and Museum showing proposed extension (after Reddy Architecture).

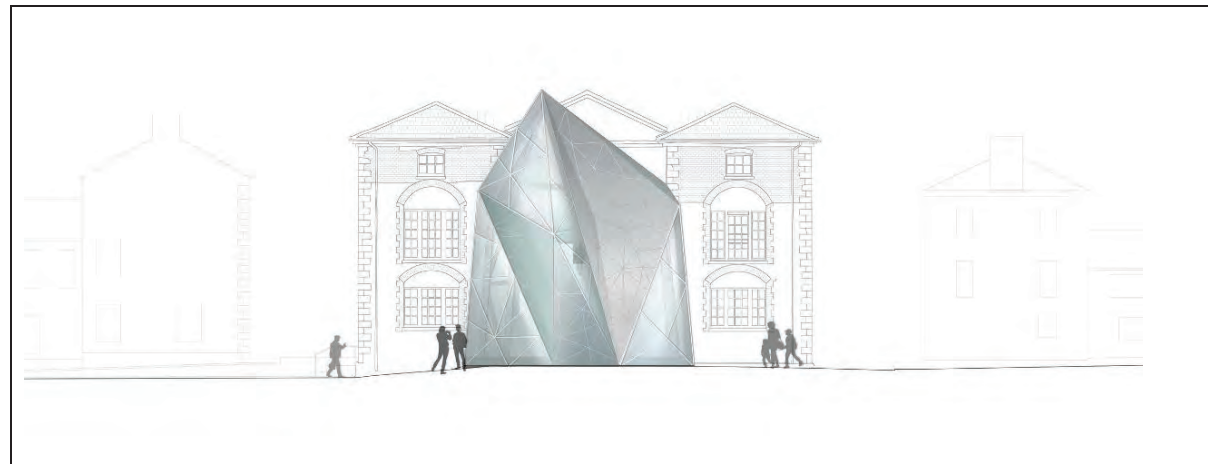


Fig 6 Proposed extension to Athy Heritage Centre and Museum (after Reddy Architecture).

Appendix 5: Civil Structural Report

**ATHY HERITAGE
CENTRE**
Proposed Redevelopment of
Athy Heritage Museum
Engineering Services
Design Report
(ESDR01)

September 2018



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DOCUMENT CONTROL SHEET

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	Document No.	181067-ESDR01							
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8.2 Conclusions	14

APPENDICES:

- Appendix A – CFRAM Athy Fluvial Flood Extents
- Appendix B – Site Layout Existing and Proposed
- Appendix C – Proposed Drainage Layout

1.0 INTRODUCTION**1.1 General**

- 1.1.1 This report has been prepared by MPA Consulting Engineers at the request of our client Kildare County Council and relates to the proposed development at Athy Heritage Centre.
- 1.1.2 The report contains information on the design of the site layout, foul drainage, storm water drainage systems, watermain and structural scheme for the proposed development.
- 1.1.3 The application relates to a site of approximately 0.95 hectares located in the centre of the Athy Town. All designs have been carried out to take account of the development currently proposed on site.
- 1.1.4 The design of the drainage systems has been carried out to take account of the Building Regulations, BS EN 752:2008 – Drain & Sewer Systems Outside Buildings, the Discharge Units Method of design in accordance with BS EN 12056-2:2000 – Gravity Drainage System and the requirements of Kildare County Council and in accordance with the Greater Dublin Strategic Drainage Study (GSDSDS).
- 1.1.5 The proposed foul system is a gravity fed system to the existing foul network which discharges into the existing combined public sewer network.
- 1.1.6 The proposed development is to utilise the existing watermain entering the development from the R417.

1.2 Site

- 1.2.1 The proposed development is located at the Athy heritage Centre and Museum at Athy Town Hall, Emily Square, Athy, Co. Kildare. The total site area for the application is approximately 0.95 hectares which abuts the existing Emily Square.
- 1.2.2 The topography of this site is relatively uniform with a minimum grade falling toward the River Barrow.
- 1.2.3 The site is accessed off the National route N78 via the R417 entering via the redeveloped Emily square and Barrow Key.



Figure 1-1 - Site Location (Source Google)

1.3 Geology

- 1.3.1 Based on the available Geological information available from past projects in the area, the ground is expected to comprise of made ground in the existing area of hardstanding, alluvial deposits, fluvial gravels, glacial gravels and boulder clay.
- 1.3.2 Subject to confirmation by sampling and testing, the made ground is likely to be classed as non-hazardous waste for the proposes of waste disposal and the natural soils are to likely to be classified as inert

2.0 FLOODING

2.1 General

- 2.1.1 The site is located adjacent to Emily square which is adjacent the N76 National road Athy, Co. Kildare. The river Barrow is located approximately 60 metres to the West of the site.
- 2.1.2 The area has been prone to flooding in the recent past and has a history of flooding. A strategic Flood Risk Assessment has been carried out for Athy in association with the development plan.
- 2.1.3 The site is elevated above the River. The proposed finished floor level of the proposed extension along the boundary nearest the river is approximately 55.20 metres AOD while the rivers 1 in 1000 year storm flooding event is 54.790 AOD as outlined in CFRAM map in appendix A.

2.2 Mapped Data

- 2.2.1 A review has been carried of the mapped data including the Ordnance Survey, the OPW Flood Hazard Mapping and the Catchment Flood Risk Assessment and Management (CFRAM) studies.

Historical Mapped Data

- 2.2.2 Following a review of the historic maps for the area including the OS 6-inch map and 25-inch it can be seen on these maps that there is no record of areas "Liable to Flood" See extract below.



Figure 2-1 - Historic 6-inch Map

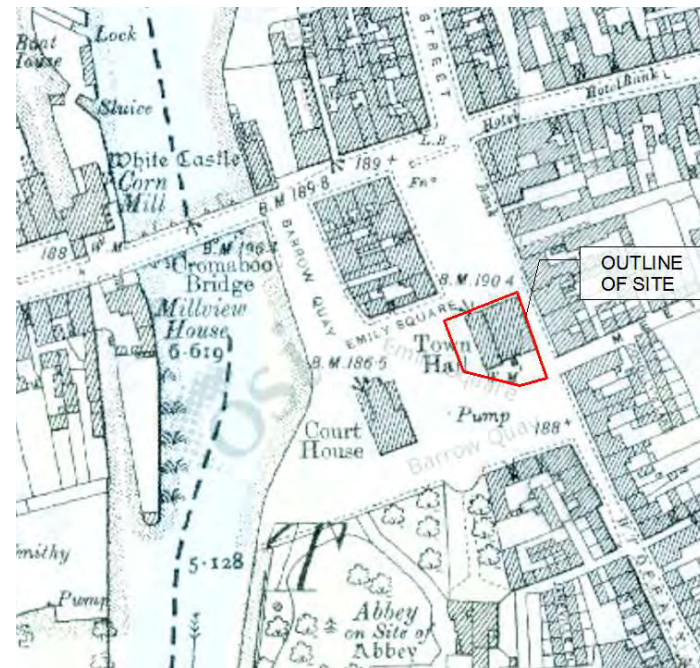


Figure 2-2 - Historic 25-inch Map

OPW Flood Hazard Mapping

- 2.2.3 As part of the National Flood Risk Management Policy, the OPW developed a web-based data set, which contains information concerning historical flood data and displays related mapped information.
- 2.2.4 After reviewing Flood Hazard Maps for the area, there is a recurring area affected by flooding to the West of the site. The area subject to flooding, adjacent to the river Barrow, is indicated in Figure 2-3.
- 2.2.5 The flooding occurs as a result of fluvial flooding due to heavy rainfall.

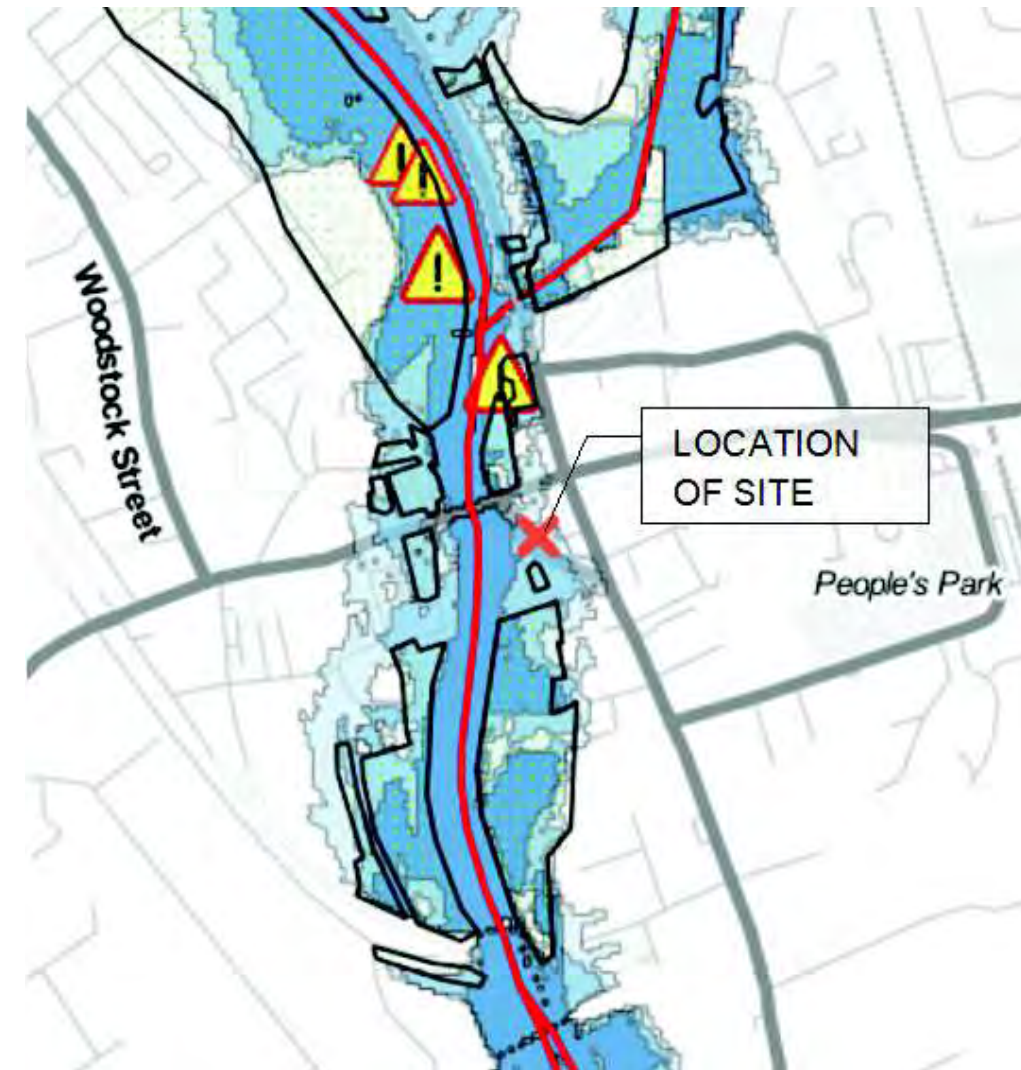


Figure 2-3 - OPW Flood Mapping Extract CFRAM Mapping

CFRAM Mapping

- 2.2.6 Catchment Flood Risk Assessment and Management (CFRAM) Studies carried out by the OPW are at the core of the national policy for flood risk management and the strategy for its implementation. Part of the CFRAM Studies is to assess flood risk, through the identification of flood hazard areas and the associated impacts of flooding.
- 2.2.7 The CFRAM studies consider coastal and fluvial flooding. The CFRAM map for the area is outline below.
- 2.2.8 The area of Athy is mentioned in the Strategic Flood Risk Assessment report and indicates an area not at risk of significant floods. The area is however noted as a probable area of further investigation.

- 2.2.9 The types of flooding can be identified in the extract delineating 1 in 100-year storm flooding in the dark blue ranging to the extreme event in light blue.
- 2.2.10 The site is outside the area of the recurring 1 in 100-year storm event flooding, but is within the extreme event denoted in light blue to the very West of the site which constitutes a public space area of hard landscaping.
- 2.2.11 The road level at these locations is approximately 54.20m AOD. The ground floor levels of the existing building are 54.95m to 55.07m AOD giving a minimum positive elevational difference of 0.75m.
- 2.2.12 From reviewing the Flood levels the finished floor level of the proposed extension is 55.200m AOD while the max height of flooding experiences is 54.790m AOD giving a positive elevation difference of 0.41m above the worst-case flood risk.
- 2.2.13 The proposed development does not intend to increase the volume of surface water which falls over the area of the existing site, only redistribute it to the existing surface water network.

3.0 TRANSPORT & ACCESS

3.1 General

- 3.1.1 Provision for the safety of existing and future road users is an important consideration in the design of any proposed development and this has been considered in detail during the redevelopment of Emily Square. This section outlines key road safety issues and how these have been addressed.

3.2 Emily Square Improvement Scheme (Not part of Project Scope)

- 3.2.1 Proposed road improvement adjacent to the site in Emily Square include the removal of 28 number parking spaces and change in the layout of the traffic flow with the creation of a one-way system.
- 3.2.2 The R417 from the junction of the N78 to the junction with Barrow Quay will become one-way southbound only. The access road along the front of the Old Town Hall will be closed off and access from Barrow Quay through the Front Square to the N78 will become one way northbound only and be limited to service vehicles.

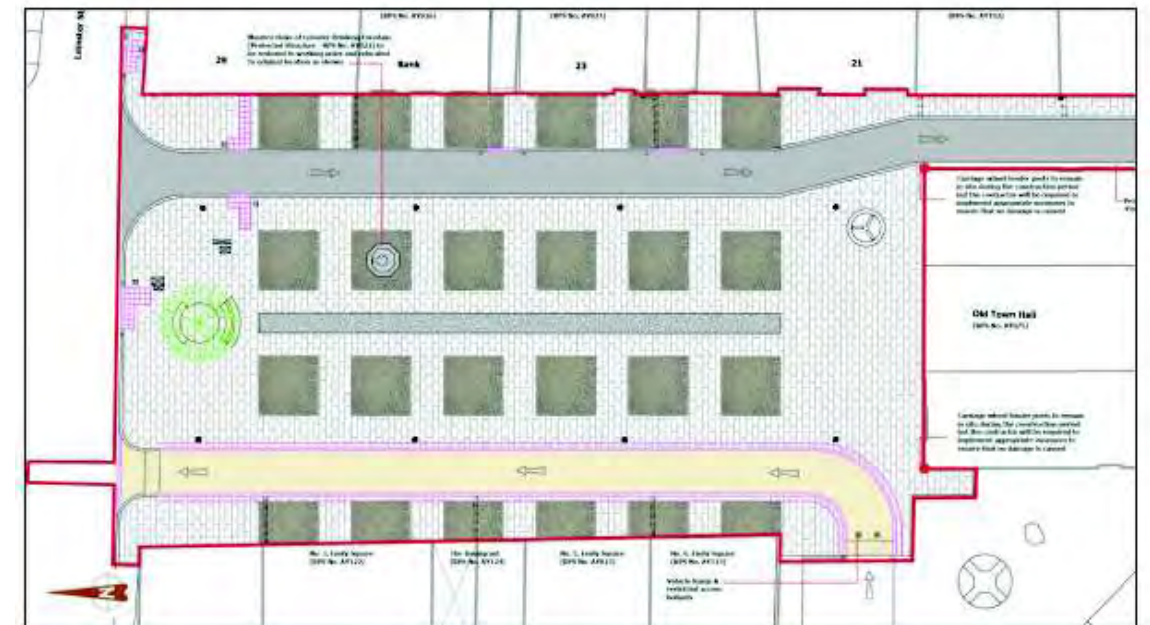


Figure 3- 1: Proposed Outline of the Emily Square Development (*Emily Square Part 8 Report*)

- 3.2.3 The recommended development plan compiled by WSP recommends the creation of a pedestrian priority Zone. An extract layout is shown in figure 3-2.

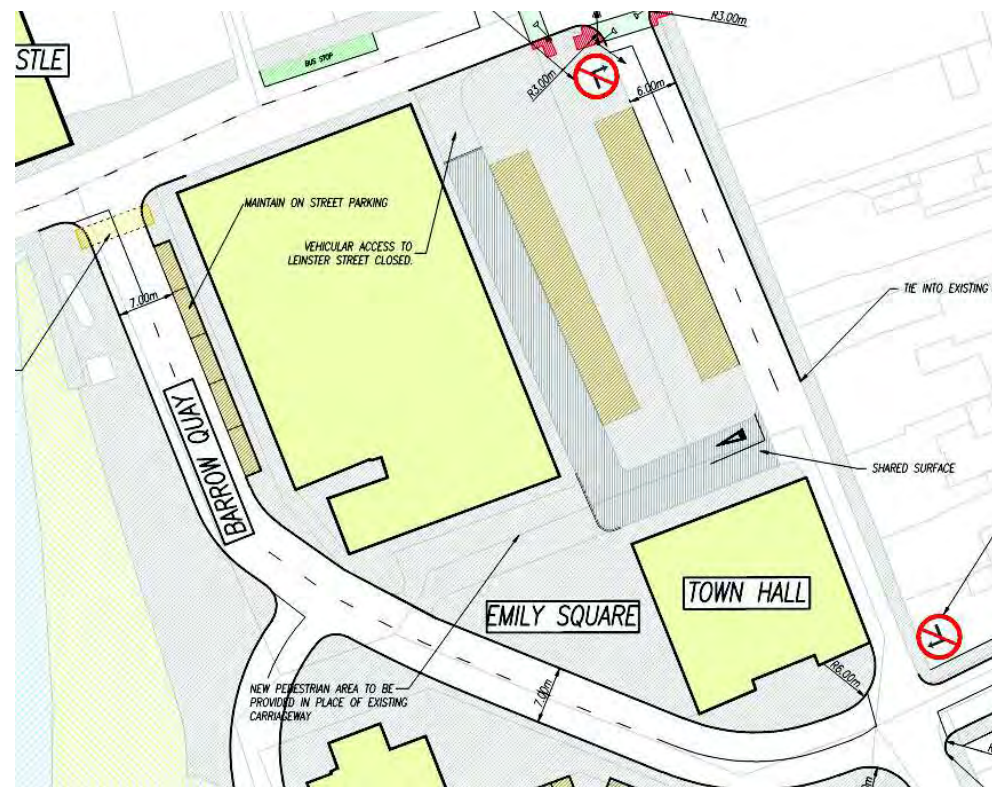


Figure 3- 2: Recommended Development for Emily Square (WSP Athy TMP 2009)

3.3 Proposed Access

Access

- 3.3.1 The proposed access to the site is primarily via the redeveloped Emily square and via Barrow Key road. Car parking has been outlined later in the report.
- 3.3.2 Athy Train station is an approximate 7-minute walk from the site and has regular trains between Dublin Heuston and Waterford at approximately 2 hrs intervals.
- 3.3.3 The main bus stop for Athy is located to the North of Emily Square which has regular busses from Cork to Dublin via private and national buses.

Parking Emily Square Improvement Scheme (Not part of Project Scope)

- 3.3.4 The existing town centre car parking provision has been examined previously in the Athy Traffic Management Strategy. This illustrated that there is an overall surplus of parking provision in the town centre and in close proximity to the Part 8 site.
- 3.3.5 Within the vicinity of the part 8 site there is approximately 97 existing medium-term and parking spaces which are divided into 18 number on Stanhope Street and 79 number on Barrow key.

- 3.3.6 Within a walking distance of the site there are three public car parks providing an additional 210 spaces off street. The sites are located within a 5 Minute walk of the site.
- 3.3.7 The proposed development would see the removal of 8 parking spaces to the rear of Athy Heritage Centre. This has a negligible impact on the overall network due to the surplus of car parking spaces in the area as outlined in the Athy Traffic Management Strategy.

4.0 STRUCTURE

4.1 General

- 4.1.1 This section provides an overview of the proposed works taking into the consideration the structural scheme design of the new extension to the Athy Heritage Centre and Museum.
- 4.1.2 The structural scheme is closely linked with the architectural works and should be read in conjunction with the Architects and other consultants reports and drawings.

4.2 Existing

- 4.2.1 The existing structure circa 1745 was originally a two-story T-Plan with an open arcade. Extended to the front and rear circa 1800 with an additional story added in 1913 with internal structural alterations. The South elevation underwent extensive alterations in the 1970's.
- 4.2.2 Restorations and partial rebuilding works were undertaken from 1983 to 1990, with most features repaired, replaced and replicated.
- 4.2.3 The perimeter walls are a stone construction with brick infill in localised areas. Internal walls appear to be of a masonry construction with a lath and plaster finish.
- 4.2.4 The first floor appears to be a brick vaulted floor with a timber floor finish. Upper floors appear to be timber joists with timber flooring. Further opening-up works would be required to confirm the build-up.

4.3 Internal Alterations

- 4.3.1 Internal alterations are limited to removal of lift, two access stairs, installation of a new lift core with stair, a new infill floor to the second floor, with the addition of new internal non-load bearing partitions.

4.4 Proposed Extension

- 4.4.1 The proposed construction is intended to be a primary steel frame supporting a secondary structural glazing system forming the intended expression.
- 4.4.2 The vertical structure has been designed with an initial worst-case wind loading of 1.7kN/m² applied to the surface area with an additional live load of 0.75kN/m² for access/maintenance. The ground floor (horizontal) has been designed for live load of 7.5kN/m², in accordance with BS EN 1991-1-1.
- 4.4.3 Due to the nature of the materials the supporting members of the structure have been designed with a limiting deflection of Span / 500 to limit the movement of the primary structure to a manageable tolerance for the secondary glazing system, which is to a specialist contractor design.

- 4.4.4 The structural principle of the design is based on a standalone structure with moment frames in the East to West direction with a braced frame in the north to south direction providing stability to the structure without relying on the existing structure.
- 4.4.5 The convergence of the steel frame from each of the main sections will form the apex of the structure.
- 4.4.6 The proposed foundation is to comprise of concrete ground beams connecting the base of the steel frames in both directions. It has been assumed for this stage that a pile foundation will be required pending completion of a geotechnical site investigation and archaeological test trenches as proposed in the archaeological impact statement.
- 4.4.7 The ground floor slab is a suspended concrete slab spanning between the ground beams pending completion of a geotechnical site investigation.
- 4.4.8 The glazed façade will be a specialist design/build item in structural glazing.

5.0 FOUL DRAINAGE SYSTEM

5.1 General

- 5.1.1 The existing building is serviced by existing Irish Water combined Sewer which has been outlined on the proposed drainage strategy plan 181067-C-002 – Proposed drainage layout.
- 5.1.2 With no change of use to the building, the proposed strategy is to utilise the existing foul system to cater for the foul discharge of the refurbished existing building.
- 5.1.3 The existing system is a gravity system discharging into the existing public combined sewer network on the R417.

6.0 STORM WATER MANAGEMENT SYSTEM

6.1 General

- 6.1.1 Currently the storm water from the roof and hardstanding area is collected via gullies to the perimeter of the building, which discharge into the combined sewer.
- 6.1.2 The proposed surface water solution for the glass extension to the rear of the building is via a combination of Aco drain Façade slot drain adjacent to the proposed structure, with down pipes servicing the new low pitch roof linking the glass structure to the existing masonry buildings.
- 6.1.3 The proposed extension will be constructed on a current area of hardstanding to the rear of the building encompassing an area of 71.4m². The existing hardstanding area drains to public surface water via gully inlets surrounding the existing structure.
- 6.1.4 There is no increase in storm water runoff due to the proposed development.

7.0 WATERMAIN

7.1 General

- 7.1.1 The existing building is served by an existing watermain connection which shall be maintained and utilised for the proposed development.

8.0 SUMMARY AND CONCLUSIONS

8.1 Summary

- 8.1.1 The Engineering Services Design Report (ESDR) which has been prepared by MPA Consulting Engineers at the request of our client, Kildare County Council, contains information regarding the flood assessment as well as the transport infrastructure, foul drainage, surface water management, watermain and the proposed structure to be constructed for the proposed refurbishment of the Athy Heritage Centre and Museum.
- 8.1.2 The design of access and local road network around the site have been extensively reviewed via the redeveloped Emily square which has been undertaken as separated development. Refer to planning application P82018.009 - Proposed Environmental Improvement Works to the front of Emily Square, Athy, Co. Kildare for further details.
- 8.1.3 The building is to utilise the existing foul network currently servicing the building.
- 8.1.4 The proposed foul system consists of gravity sewer which discharges into the existing combined public sewer network.
- 8.1.5 The surface water strategy for the site is to utilise the existing surface water drainage strategy employed on site with the additional façade slot drains to collate the surface water from the proposed extension.
- 8.1.6 The existing surface water system discharges into the combined sewer.
- 8.1.7 The water supply will be provided via the existing potable watermain connection already employed on the site.
- 8.1.8 The extent of alterations to the existing building are limited to the removal of a lift and two number stairs, creation of a new lift core and access stair, installation of a new infill floor to the second floor and creation of addition new internal non-load bearing walls.
- 8.1.9 The proposed construction of the extension is intended to be a primary steel frame supporting a secondary structural glazing system forming the intended expression.

8.2 Conclusions

- 8.2.1 In conclusion the proposed additional extension to the Athy Heritage Centre and Museum will have no adverse effect on the existing structure
- 8.2.2 The development is outside the recorded 1 in 100-year flooding event but is at minor risk for the 1 in 1000-year storm event due to the location of the building in proximity to the River. This is deemed acceptable due to rarity of the event and the possible future flood remediation strategy which could be undertaken in the Athy area.
- 8.2.3 The bedrock has not been identified in the available information and it is recommended that additional boreholes be carried out in the location of the proposed extension to determine ground build up and a suitable bearing stratum.
- 8.2.4 The report has outlined that there is no change of use of the structure and the existing Foul network would be sufficient to service the refurbished facilities on site pending confirmation of the networks existing condition.
- 8.2.5 As can be seen in the preceding information the surface water management system is to utilise the existing strategy with the addition of Aco slot drains to the surround of the extension to collect the surface water runoff and discharge as per the existing strategy.
- 8.2.6 The development intends to utilise the existing potable waters supply to the which currently services the building.

Appendix A

CFRAM Athy Fluvial Flood Extents

Appendix B

Site Plan Existing and Proposed

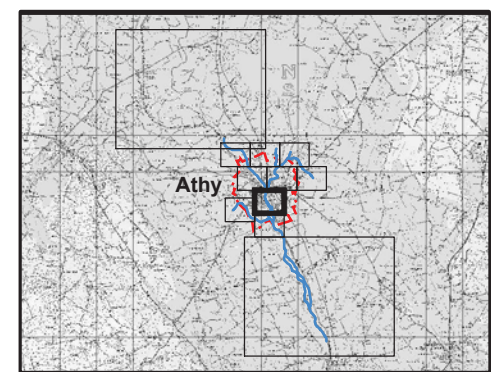
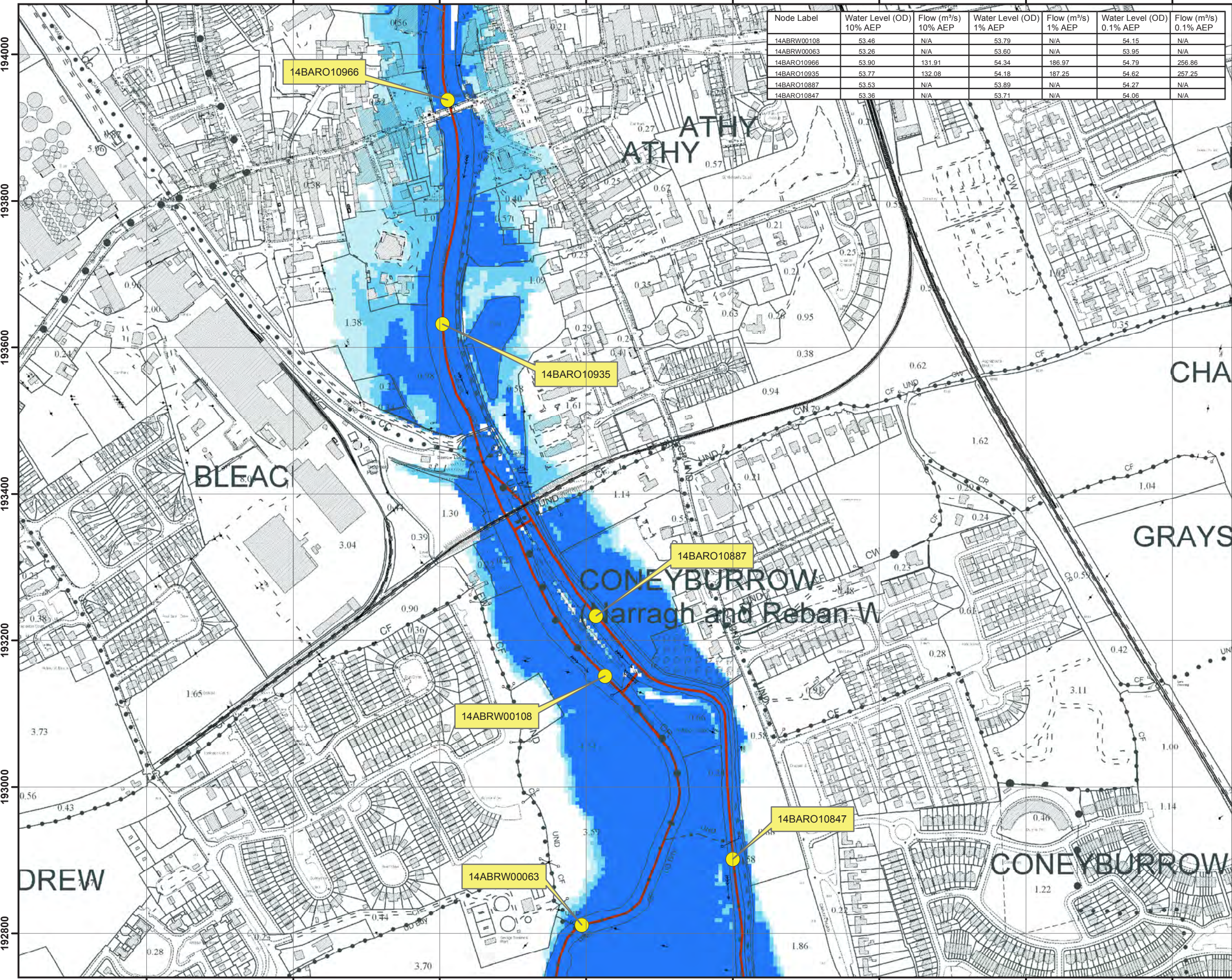
Appendix C

Proposed Drainage Plan

267800 268000 268200 268400 268600 268800 269000 269200

194000
193800
193600
193400
193200
193000
192800

Node Label	10% AEP		1% AEP		0.1% AEP	
	Water Level (OD)	Flow (m ³ /s)	Water Level (OD)	Flow (m ³ /s)	Water Level (OD)	Flow (m ³ /s)
14ABRW00108	53.46	N/A	53.79	N/A	54.15	N/A
14ABRW00063	53.26	N/A	53.60	N/A	53.95	N/A
14BARO10966	53.90	131.91	54.34	186.97	54.79	256.86
14BARO10935	53.77	132.08	54.18	187.25	54.62	257.25
14BARO10887	53.53	N/A	53.89	N/A	54.27	N/A
14BARO10847	53.36	N/A	53.71	N/A	54.06	N/A



IMPORTANT USER NOTE:
THE VIEWER OF THIS MAP SHOULD REFER TO THE DISCLAIMER, GUIDANCE NOTES AND CONDITIONS OF USE THAT ACCOMPANY THIS MAP.

- Legend**
- 10% Fluvial AEP Event
 - 1% Fluvial AEP Event
 - 0.1% Fluvial AEP Event
 - Modelled River Centreline
 - - - AFA Extents
 - Node Point
 - Node ID Node Label

FINAL

REV:	NOTE:	DATE:
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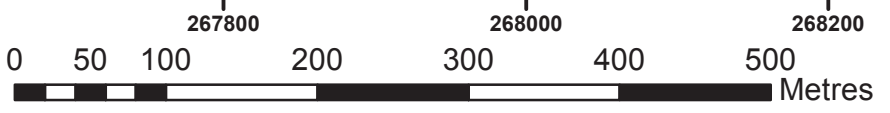


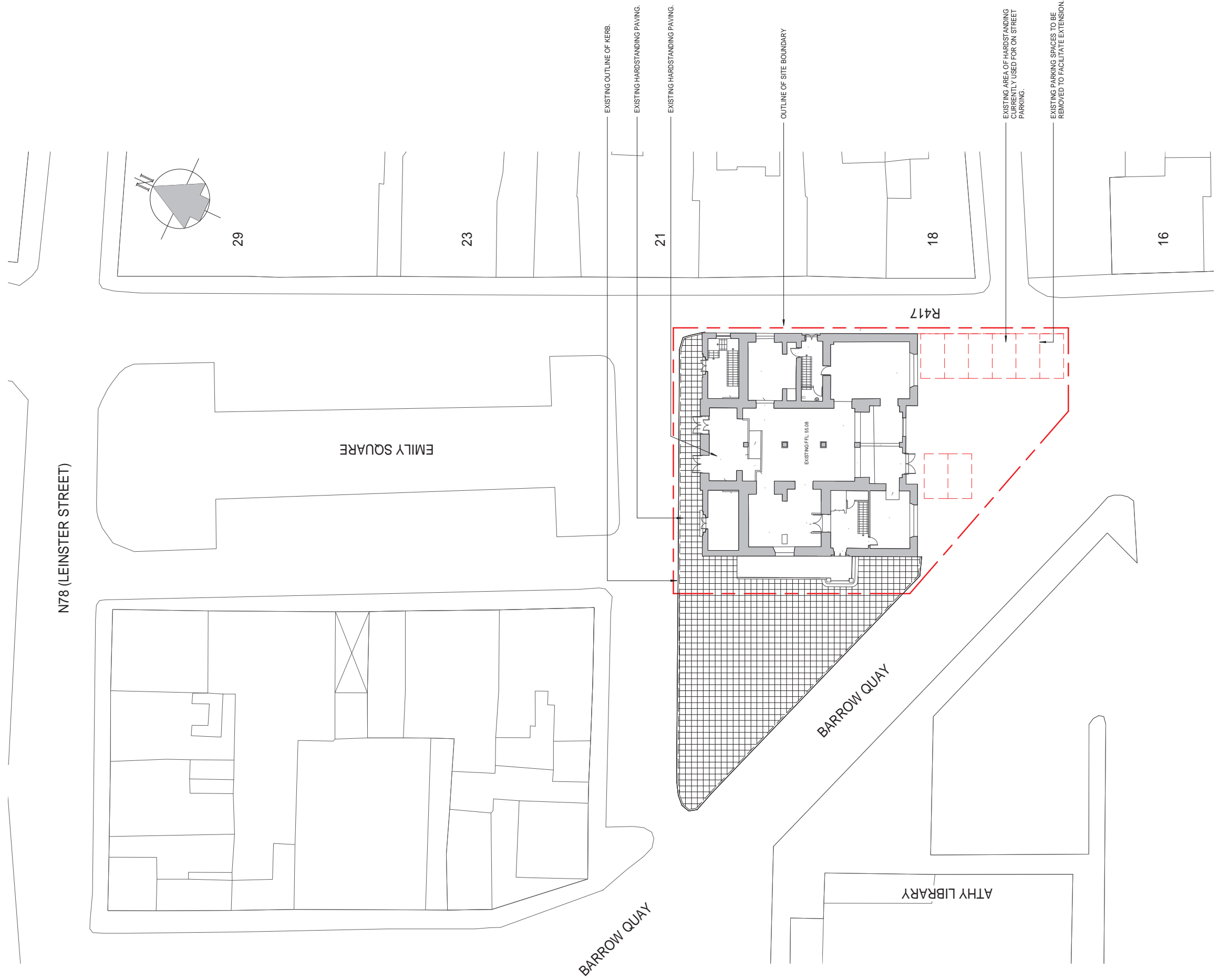
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E ireland@rpsgroup.com

Map:	
Athy Fluvial Flood Extents	
Map Type: EXTENT	
Source: FLUVIAL	
Map Area: HPW	
Scenario: CURRENT	
Drawn By : F.M.C.	Date : 18 July 2016
Checked By : T.D.	Date : 18 July 2016
Approved By : S.P.	Date : 18 July 2016
Drawing No. :	
O14ATY_EXFCD_F0_08	
Map Series : Page 8 of 11	
Drawing Scale : 1:5,000 @A3	





EXISTING SITE LAYOUT
1:200 @ A1

No.	Date	Description	Drawn	Checked	Approved

GENERAL NOTES:-

1. THIS DRAWING TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS & ENGINEERS DRAWINGS & SPECIFICATIONS.
2. DIMENSIONS SHALL BE USED UNLESS OTHERWISE SPECIFIED.
3. ALL DIMENSIONS SHALL BE VERIFIED ON DRAWINGS & ELEVATIONS WITH ARCHITECTURAL DRAWINGS PRIOR TO START OF CONSTRUCTION. ALL DISCREPANCIES TO BE NOTIFIED IN WRITING TO ENGINEERS & ARCHITECTS FOR RESOLUTION.
4. ALL DIMENSIONS ON DRAWINGS ARE IN MILLIMETRES UNLESS OTHERWISE NOTED.

ABBREVIATIONS:-

BTM BOTTOM
 C/C CENTRE TO CENTRE
 CTRS CENTRES
 SFL STRUCTURAL FLOOR LEVEL
 FFL FINISHED FLOOR LEVEL
 TOC TOP OF CONCRETE
 TPC TOP OF STEEL
 UNO UNLESS NOTED OTHERWISE

DRAWING NOTES:-
 REFER TO GENERAL NOTES DRAWING

DRAWING LEGEND:-

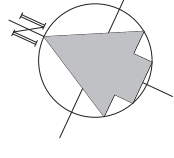
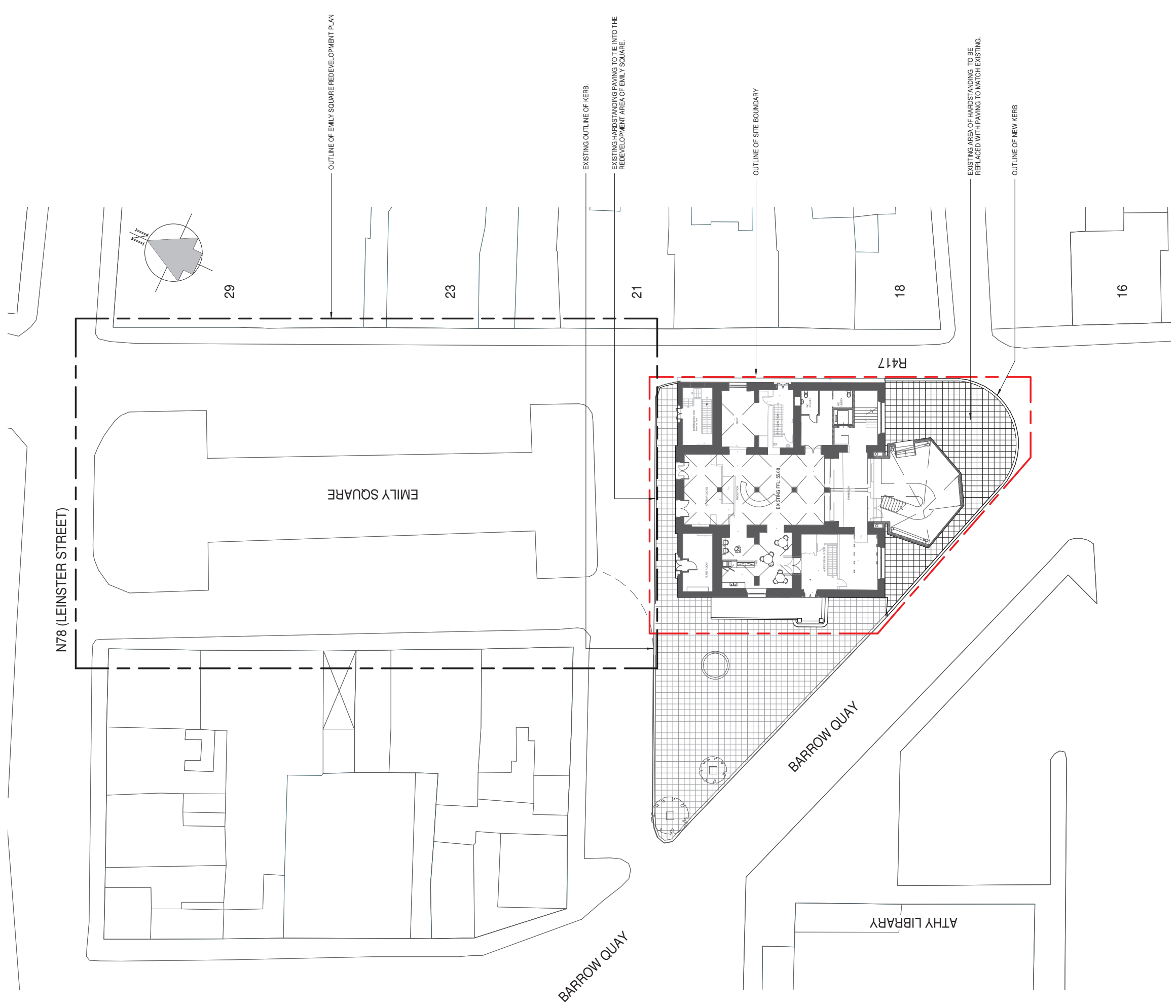
- SITE BOUNDARY OUTLINE
- EXISTING STRUCTURE
- EXISTING HARDSTANDING
- EXISTING PEDESTRIAN HARDSTANDING AREA

DRAFT

Client: KILDARE COUNTY COUNCIL
 Project: EXHIBITION SHACKLETON CABIN
 Drawing Title: ATHY HERITAGE CENTRE

mpa
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Project No: 181067
 Scale @ A1: As indicated
 Drawing No: 181067-C-001
 Checked: ZG
 Approved: ZG
 Date: 24.08.18



29

23

21

18

16

PROPOSED SITE LAYOUT
1:200 @ A1

Issue Register

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ABBREVIATIONS:-

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- TP TOP
- TOS TOP OF STEEL
- UNO UNLESS NOTED OTHERWISE

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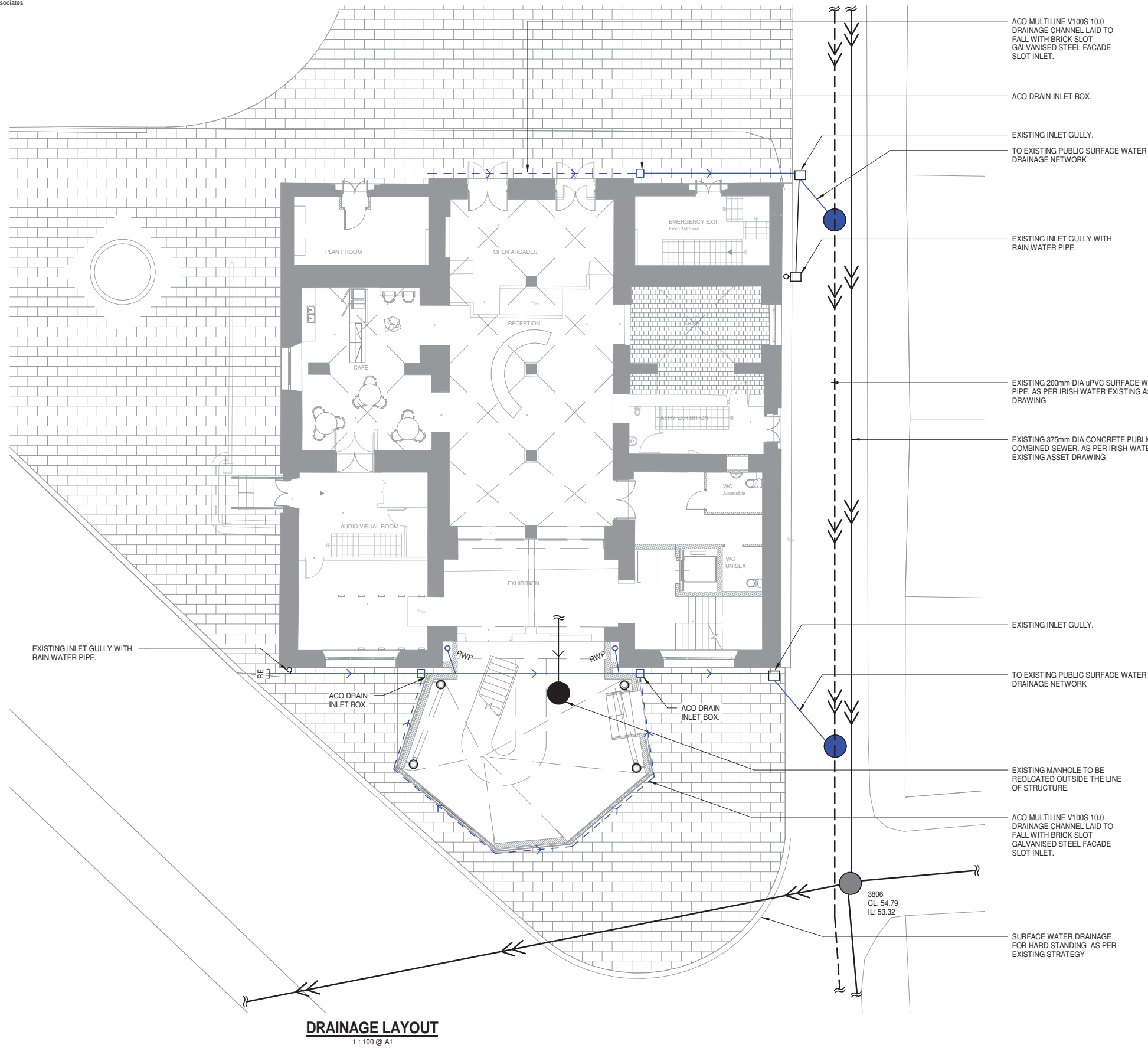
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- EXISTING STRUCTURE
- EXISTING PEDESTRIAN HARDSTANDING AREA
- PROPOSED PEDESTRIAN HARDSTANDING AREA

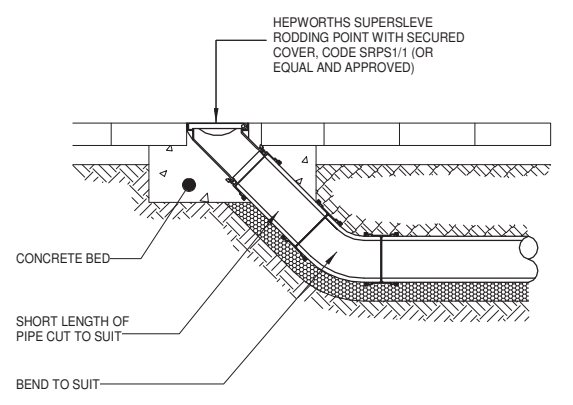
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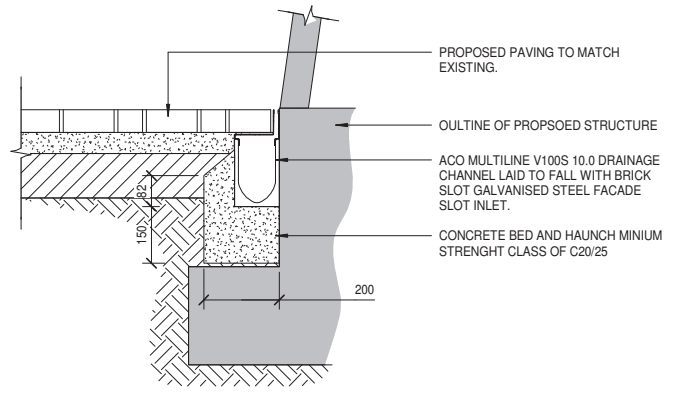
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Project: EXHIBITION SHACKLETON CABIN
Drawing Title: ATHY HERITAGE CENTRE
Drawing No: 181067
Project No: 181067
Scale: As indicated
Drawing No: 181067-C-002
Checked: ZG
Approved: ZG
Date: 24.08.18



DRAINAGE LAYOUT
1 : 100 @ A1



1 DETAIL
SCALE: 1 : 10



2 DETAIL
SCALE: 1 : 10

- ACO MULTILINE V100S 10.0 DRAINAGE CHANNEL LAID TO FALL WITH BRICK SLOT GALVANISED STEEL FACADE SLOT INLET.
- ACO DRAIN INLET BOX.
- EXISTING INLET GULLY.
- TO EXISTING PUBLIC SURFACE WATER DRAINAGE NETWORK
- EXISTING INLET GULLY WITH RAIN WATER PIPE.
- EXISTING 200mm DIA uPVC SURFACE WATER PIPE. AS PER IRISH WATER EXISTING ASSET DRAWING
- EXISTING 375mm DIA CONCRETE PUBLIC COMBINED SEWER. AS PER IRISH WATER EXISTING ASSET DRAWING
- EXISTING INLET GULLY.
- TO EXISTING PUBLIC SURFACE WATER DRAINAGE NETWORK
- EXISTING MANHOLE TO BE RELOCATED OUTSIDE THE LINE OF STRUCTURE.
- ACO MULTILINE V100S 10.0 DRAINAGE CHANNEL LAID TO FALL WITH BRICK SLOT GALVANISED STEEL FACADE SLOT INLET.
- 3806
CL: 54.79
IL: 53.32
- SURFACE WATER DRAINAGE FOR HARD STANDING AS PER EXISTING STRATEGY

Issue Register				
No.	Date	Description	Drawn	Checked/Approved

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 TOC TOP OF CONCRETE
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 TOS TOP OF STEEL
 UNO UNLESS NOTED OTHERWISE

DRAWING NOTES:-
 REFER TO GENERAL NOTES DRAWING

- DRAINAGE LEGEND:-**
- EXISTING DRAINAGE NETWORK OUTLINE
 - EXISTING PUBLIC SURFACE WATER LINE
 - EXISTING PUBLIC COMBINED FOUL WATER SEWER LINE
 - PROPOSED SURFACE WATER LINE.
 - PROPOSED ACO DRAIN FACADE SLOT.
 - PROPOSED ACO DRAIN FACADE SLOT.
 - PROPOSED ACO DRAIN FACADE SLOT INLET BOX.
 - PROPOSED RAIN WATER INLET PIPE
 - ⊕ PROPOSED RODDING EYE
 - EXISTING IRISH WATER MANHOLE

DRAFT

Client: KILDARE COUNTY COUNCIL
 Project: EXHIBITION SHACKLETON CABIN ATHY HERITAGE CENTRE
 Drawing Title: PROPOSED DRAINAGE LAYOUT
 Project No: 181067
 Drawing No: 181067-C-003
 Scale @ A1: As indicated
 Rev:
 Drawn: ZG
 Checked: ZG
 Approved: ZG
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Appendix 6: Mechanical & Electrical Report

MECHANICAL AND ELECTRICAL INSTALLATIONS SHACKLETON MUSEUM ATHY

Rev	Date	Purpose of Issue/Nature of Revision	Prepared by	Issue Authorised by
1	27.09.18	Planning	N.B	A.W



Mechanical and Electrical Installations

Introduction

Hayes Higgins have been engaged by Reddy Architecture to produce a report on the proposed Mechanical and Electrical installations for the redevelopment of the existing Athy Museum. As the Museum is a listed building any proposed installations need to be sympathetic to the existing architecture.

The building consists of a ground floor, first floor, second floor and attic. The attic layout will comprise pitched roofs with mechanical louvres to provide for the ventilation requirements for the space.

There is no basement on the project. The electrical meter room is located at the front of the building on Emily Square. As the building is currently electrically heated there is no boiler room.

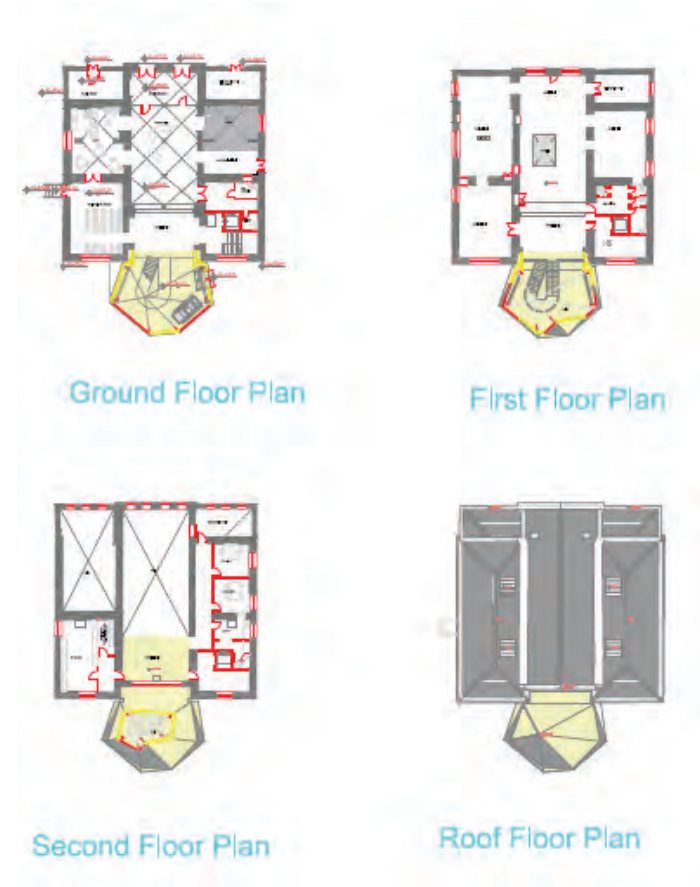


Figure 1 – Proposed Site

General

The design criteria will be in accordance with the recommendations of the following: -

- 1) C.I.B.S.E. Guides.
- 2) Statutory Undertakings Regulations.
- 3) Building Regulations
- 4) BS 7671 - Electrical Regulations.
- 5) The Water Regulations
- 6) HVCA Maintenance Guides.
- 7) NHBC Guidelines
- 8) Health & Safety Authority (HSA) Guidance.
- 9) BS 5839 (Fire Alarm Systems)
- 10) BS 62305 (Lightning Protection systems)
- 11) BS 5266 BSEN 1838 (Emergency Lighting Systems)
- 12) The requirements of Building Control (including Fire Officer)
- 13) BS 9999 fire precautions in the design, construction and use of the building.
- 14) Gas Safety (Installation and Use) Regulations.
- 15) BS EN 81 Safety rules for the construction and installation of lifts

Temperature and Humidity Conditions

External design temperatures: -

The design winter dry bulb temperature shall be $-3\text{ }^{\circ}\text{C}$, 100% saturated for thermal heat loss calculations for the Museum elements. Design summer dry bulb temperature shall be $30\text{ }^{\circ}\text{C}$.

Internal design conditions

	Temperature ($^{\circ}\text{C}$) Winter (Note 1)	Temperature ($^{\circ}\text{C}$) Summer	Humidity (%RH)
Exhibition Rooms	$21 \pm 2\text{ }^{\circ}\text{C}$	$22 \pm 2\text{ }^{\circ}\text{C}$	45-65
Main Foyer	$18 \pm 2\text{ }^{\circ}\text{C}$	$22 \pm 2\text{ }^{\circ}\text{C}$	45-65
Café	$18 \pm 2\text{ }^{\circ}\text{C}$	$22 \pm 2\text{ }^{\circ}\text{C}$	Maintained
Toilets	$18 \pm 2\text{ }^{\circ}\text{C}$	No Cooling	Uncontrolled

Infiltration

The following infiltration rates shall be used in the calculation of heating loads:

INFILTRATION RATES	
Area	Infiltration Rate (air changes per hour)
Exhibition	1.5
Foyer	1.5
Kitchens	10
Entrance Halls	1.5
Toilets	10

Noise

Environmental Noise Criteria

The M&E systems will be designed such that levels of M&E noise are achieved to reach the external environmental noise criteria, defined by the Acoustic Consultant.

Internal Noise Criteria

In the absence of an acoustic report, the following assumptions have been made in relation to the M&E systems:

The M&E systems will be designed such that levels of M&E noise are achieved in the areas defined. This includes noise from M&E systems dedicated to each area, noise intrusion from M&E noise sources (i.e. noise from external plant via windows) and structure borne noise from M&E sources.

NOISE RATING RESIDENTIAL & LANDLORD	
Area served	(Assumed) Room noise criteria (NR)
Exhibition Rooms	NR 30
Main Foyer	NR 40
Cafe	NR 45
Toilets	NR 40
Halls	NR 40

Sustainability

NZEB/BER

According to Article 2 of the Energy Performance Building Directive recast (EPBD), a Near Zero Energy Building (NZEB) ‘...means a building that has a very high energy performance, as determined in accordance with Annex I. The nearly zero or very low amount of energy required should be covered to a very significant extent by energy from renewable sources, including energy from renewable sources produced on-site or nearby’.

This definition can be split into two elements. The first element establishes that the energy performance has to be very high and determined in accordance to Annex I.

The second element provides guiding principles to achieve this very high performance by covering the resulting low amount of energy to a very significant extent by energy from renewable energy sources.

2HP’s approach to buildings is the same as the two elements mentioned. It firstly looks to improve the energy efficiency of the building before looking to the renewable systems.

Currently in line with the new Part L we are not required to comply with NZEB but 2HP will take a design approach where possible to comply with it. This should provide an overall energy solution to cater for the needs and age of the building.

Energy Management

2HP will take a design approach where possible to comply with the new Part L requirements. This should provide an overall energy solution to cater for the needs and age of the building.

It is recommended that the following be looked at to improve the energy usage within the building

A number of proposals will be presented for energy efficiency upgrades that could be applied to the building:

- Windows are single glazed and a number of them show signs of disrepair. It is recommended to either
 - Restore the existing windows which would improve the thermal performance of them.
 - Leave the windows as is but provide draught proofing where there is none
- Attic Insulation
- Main entrance doors are being replaced with gates with a new internal glazed partition.
- All existing lighting will be replaced with high efficiency LED fittings selected in according to the specific performance and aesthetic requirements of the space.
- Due to the building being of historical construction, it is recommended to carry out an air tightness test and improve where possible
- Heat recovery air handling plant
- Standard controls for mechanical and electrical systems to provide overall management of the systems.
- All new elements in the new extension only will have double glazing.
- New floor to the ground floor extension area complete with insulation and screed. Underfloor heating pipes will be placed under the new floor layout

Utilities

ESB

Existing ESB supply with the meter and board upgraded to current standards.

Eir

Eir/Virgin services are available in the street and ducting can be provided to cater for the buildings needs

Gas

Gas Networks Ireland have gas lines within the vicinity of the area. Further investigation required to confirm the supply can be extended to the facility.



Mechanical

Heating Plant

The renewable contribution requirements set out by NZEB and the BER do not apply to this building due to the age and the fact the external is not undergoing any major upgrades.

The existing heating system will be replaced with a new boiler and radiator system with underfloor heating throughout the ground floor.

The new heating system will be designed to a maximum efficiency providing a best practice solution inline with the NZEB requirements.

Radiators will be selected to suit the overall architecture and age of the building.

Ventilation Plant

Ventilation will be a standard supply and extract system providing humidity control to ventilate the space to maintain the artifacts and keep them free from moisture.

The air handling plant will be located within the roof space supported via the roof truss

Both air handling units will be made to suit the requirements of the space within the roof. Access and a walking platform will provide access in around the AHU.

Humidity control will be key to maintaining the artifacts. Humidity shall be controlled via an air handling plant via a spray humidifier or pulse heating.

The system will have a heat recovery wheel or run around coil with a modulating damper to control the influx of air to maintain humidity and provide free cooling or heating in winter or summer.

Due to the size of the AHUs, the fans are controlled by CO (Carbon Monoxide) and humidity sensors. The humidity sensors will maintain humidity between 45 and 65 relative RH.

Temperature sensors will be strategically located around the space to maintain the space temperature at a constant to limit the moisture in the air.

Ventilation shall be provided to the space via ductwork and supply grilles.

Each air handling unit will come complete with a VSD(Variable Speed Drive) modulating the speed in line with the temperature or humidity requirements of the internal space

General extract shall be used in the café and toilet areas with louvres at roof level. Toilet extract shall be controlled using run-on timers switched by motion detectors.

Cold water

An existing Irish Water supply into the building will be utilized for the changes within the floor space

Hot Water

Localized hot water feeds with under sink instantaneous hot water shall be provided under sink to provide localized hot water to all outlets

Above Ground Drainage

The above ground drainage system shall be installed to the satisfaction of Building Control; the complete above ground foul drainage system will include all soil, ventilation, waste and overflow pipework installations to serve the sanitary facilities.

All drainage pipework shall be boxed out and insulated to reduce noise.

GAS

Where gas is used this will have gas leak detection, CO detection and a slam shut valve. These will detect any gas or CO and cut off the source of gas. The system will be also be protected by a link to the fire alarm. The system will comply with IS 813 and IS 820.

Fire Extinguishers

Fire extinguishers shall be provided throughout in line with the fire safety certificate and IS 291.

Electrical

LV Supply

Electrical intake will be at 400V through a new meter panel and main switchboard located in the existing meter room. This panel will be considerably smaller than the ones it replaces due to modernisation and the omission of storage heating.

The distribution board will feed sub-boards on each floor, serving the internal spaces, plantrooms and external lighting.

Sub-mains cabling will be installed on tray concealed in risers.

Final circuit wiring will be contained in conduit and trunking where concealment is possible. Where conservation measures dictate that this is not possible consideration will be given to using twin-and-earth or NYMJ cable without containment

Where new lighting is installed it will be sympathetic to the existing and proposed architecture.

Data Communications

A storeroom or lockable cupboard will house the Eir Krone box and Communications cabinet. If required, space will also be provided for a cable TV lockbox

Electrical riser Cupboards

Electrical riser cupboard will be provided in the core and will also house sub-distribution boards and Eir and cable TV junction boxes (if required)

Locations for the internal riser cupboards will be determined to limit cable runs and architectural impact.

Protective Services

A new fully addressable L1 fire alarm system will be provided in all areas in accordance with IS3218: 2013

Emergency lighting will be provided in all areas in accordance with IS3217:2013.

Carbon monoxide sensors will be provided in the café and a carbon monoxide sensing system will be linked to the ventilation system.

Access control will be provided on all external doors and internal doors as required. All access controlled doors will be linked to

the fire alarm system such that they release in the event of a fire.

Power and fire alarm interface units shall be provided for all smoke curtains in line with the fire cert requirements.

Lighting

Internal and external lighting will be low energy LED lighting and will utilise daylight and presence control in common areas to maximise energy savings.

Lightning Protection

A risk assessment shall be carried out in accordance with IS EN 62305 and an appropriate lightning protection system will be provided.

Intruder Alarm

The intruder alarm will be upgraded in line with client operational requirements.

Lifts

A machine room-less traction lift will be provided in accordance with the new standards IS EN 81-20 and BS EN 81-50

Appendix 7: Appropriate Assessment Screening Report

Report for the purposes of Appropriate Assessment Screening

as required under Article 6(3) of the Habitats Directive
(Council Directive 92/43/EEC)

Proposed Adaptation of the Existing Athy Heritage Centre into a Dedicated Shackleton Museum and Experience in Athy, County Kildare

Prepared by: Moore Group – Environmental Services

12th September 2018



On behalf of
Kildare County Council

Client	Kildare County Council
Project	Proposed Adaptation of the Existing Athy Heritage Centre into a Dedicated Shackleton Museum and Experience in Athy, County Kildare
Title	Report for the purposes of Appropriate Assessment Screening Proposed Adaptation of the Existing Athy Heritage Centre into a Dedicated Shackleton Museum and Experience in Athy, County Kildare

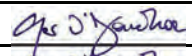
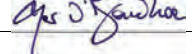
Project Number	18186	Document Ref	18186 Shackleton Museum Athy AAS1 Rev1.docx
Revision	Description	Author	Date
Rev0	Issued for client review	G. O'Donohoe 	28 th August 2018
Rev1	Minor edits	G. O'Donohoe 	12 th September 2018
Moore Archaeological and Environmental Services Limited			

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Appendix A – Finding of No Significant Effects Report

1. Introduction

1.1. General Introduction

This report contains information required for the competent authority to undertake an Appropriate Assessment (AA) process on the effects of a Project consisting of adaptation of the existing Athy Heritage Centre (a Protected Structure AY075, NIAH Reg. No. 11505332), into a dedicated Shackleton Museum and Experience, in Athy, County Kildare.

Screening is the process that addresses and records the reasoning and conclusions in relation to the first two tests of Article 6(3):

- i) whether a plan or project is directly connected to or necessary for the management of the site, and
- ii) whether a plan or project, alone or in combination with other plans and projects, is likely to have significant effects on a Natura 2000 site in view of its conservation objectives.

If the effects are deemed to be significant, potentially significant, or uncertain, or the screening process becomes overly complicated, then the process must proceed to Stage 2 (AA). Screening should be undertaken without the inclusion of mitigation, unless potential impacts clearly can be avoided through the modification or redesign of the plan or project, in which case the screening process is repeated on the altered plan or project.

When screening the project, there are two possible outcomes:

- the project poses no risk of a significant effect and as such requires no further assessment; and
- the project has potential to have a significant effect (or this is uncertain) and AA of the project is necessary.

This report has been prepared by Moore Group - Environmental Services for Kildare County Council and assesses the potential for the proposed development to impact on sites of European-scale ecological importance in accordance with Articles 6(3) and 6(4) of the Habitats Directive. The report was compiled by Ger O'Donohoe (B.Sc. Applied Aquatic Sciences (GMIT, 1993) & M.Sc. Environmental Sciences (TCD, 1999)) who has over 20 years' experience in environmental impact assessment and has completed numerous Appropriate Assessment Screening Reports and Natura Impact Statements in terrestrial and aquatic habitats.

The report assesses the potential for the proposed development to impact on sites of European-scale ecological importance. It is necessary that the Project has regard to Article 6 of the Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora (as amended) (referred to as the Habitats Directive). This is transposed into Irish Law by the European Communities (Birds and Natural Habitats) Regulations, 2011 (S.I. 477) (referred to as the Habitats Regulations).

1.2. Legislative Background - The Habitats and Birds Directives

The Habitats Directive (Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora) is the main legislative instrument for the protection and conservation of biodiversity in the EU. Under the Directive Member States are obliged to designate Special Areas of Conservation (SACs) which contain habitats or species considered important for protection and conservation in a European Union context.

The Birds Directive (Council Directive 79/409/EEC as codified by Directive 2009/147/EC), is concerned with the long-term protection and management of all wild bird species and their habitats in the EU. Among other things, the Directive requires that Special Protection Areas (SPAs) be established to protect migratory species and species which are rare, vulnerable, in danger of extinction, or otherwise require special attention.

Special Areas of Conservation (SACs) designated under the Habitats Directive and Special Protection Areas, designated under the Birds Directive, form a pan-European network of protected sites known as Natura 2000. The Habitats Directive sets out a unified system for the protection and management of SACs and SPAs.

Articles 6(3) and 6(4) of the Habitats Directive set out the requirement for an assessment of proposed plans and projects likely to affect Natura 2000 sites.

Article 6(3) establishes the requirement to screen all plans and projects and to carry out a further assessment if required (Appropriate Assessment (AA)):

Article 6(3): *“Any plan or project not directly connected with or necessary to the management of the site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subjected to an appropriate assessment of its implications for the site in view of the site’s conservation objectives. In light of the conclusions of the assessment of the implications for the site and subject to the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public.”*

Article 6(4): *“If, in spite of a negative assessment of the implications for the site and in the absence of alternative solutions, a plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature, Member States shall take all compensatory measures necessary to ensure that the overall coherence of the Natura 2000 is protected. It shall inform the Commission of the compensatory measures adopted. Where the site concerned hosts a priority natural habitat type and/or a priority species the only considerations which may be raised are those relating to human health or public safety, to the beneficial consequences of primary importance for the environment or, further to an opinion from the Commission, to other imperative reasons of overriding public interest.”*

This Report for Screening is a documentary record of the Appropriate Assessment process on the effects of a Project consisting of adaptation of the existing Athy Heritage Centre, into a dedicated Shackleton Museum and Experience, in Athy, County Kildare, referred to in this case as the Project.

2. Methodology

The Commission’s methodological guidance (EC, 2002) promotes a four-stage process to complete the AA and outlines the issues and tests at each stage. An important aspect of the process is that the outcome at each successive stage determines whether a further stage in the process is required.

Stages 1-2 deal with the main requirements for assessment under Article 6(3). Stage 3 may be part of Article 6(3) or may be a necessary precursor to Stage 4. Stage 4 is the main derogation step of Article 6(4).

Stage 1 Screening: This stage examines the likely effects of a project either alone or in combination with other projects upon a Natura 2000 site and considers whether it can be objectively concluded that these effects will not be significant.

Stage 2 Appropriate Assessment: In this stage, there is a consideration of the impact of the project with a view to ascertain whether there will be any adverse effect on the integrity of the Natura 2000 site either alone or in combination with other projects or plans, with respect to the site’s structure and function and its conservation objectives. Additionally, where there are predicted impacts, an assessment of the potential mitigation of those impacts.

Stage 3 Assessment of Alternative Solutions: This stage examines alternative ways of implementing the project that, where possible, avoid any adverse impacts on the integrity of the Natura 2000 site.

Stage 4 Assessment where no alternative solutions exist and where adverse impacts remain: Where imperative reasons of overriding public interest (IROPI) exist, an assessment to consider whether compensatory measures will or will not effectively offset the damage to the sites will be necessary.

To ensure that the Project complies fully with the requirements of Article 6 of the Habitats Directive and all relevant Irish transposing legislation, Moore Group compiled this report for screening of the Project on behalf of Kildare County Council to determine if Stage 2 AA is required.

2.1. Guidance

The AA has been compiled in accordance with guidance contained in the following documents:

- Appropriate Assessment of Plans and Projects in Ireland - Guidance for Planning Authorities. (Department of Environment, Heritage and Local Government, 2010 rev.).
- Appropriate Assessment under Article 6 of the Habitats Directive: Guidance for Planning Authorities. Circular NPWS 1/10 & PSSP 2/10.
- Assessment of Plans and Projects Significantly Affecting Natura 2000 sites: Methodological Guidance on the Provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC (European Commission Environment Directorate-General, 2001); hereafter referred to as the EC Article Guidance Document.
- Managing Natura 2000 Sites: The Provisions of Article 6 of the Habitat's Directive 92/43/EEC (EC Environment Directorate-General, 2000); hereafter referred to as MN2000.

2.2. Data Sources

- Sources of information that were used to collect data on the Natura 2000 network of sites are listed below:
- Ordnance Survey of Ireland mapping and aerial photography available from www.osi.ie and Google Earth and Bing aerial photography 1995-2018.
- Online data available on Natura 2000 sites as held by the National Parks and Wildlife Service (NPWS) from www.npws.ie including; the Natura 2000 network Data Form; Site Synopsis; Generic Conservation Objective data;
 - Online database of rare, threatened and protected species,
 - Publicly accessible biodiversity datasets.
- Status of EU Protected Habitats in Ireland. (National Parks & Wildlife Service, 2013),
- Relevant Development Plans and Local Area Plans in neighbouring areas.

3. Description of the Project

This report presents a screening report for a Project consisting of adaptation of the existing Athy Heritage Centre (a Protected Structure AY075, NIAH Reg. No. 11505332), into a dedicated Shackleton Museum and Experience, in Athy, County Kildare.

The proposed development will include:

- Adaptation of the existing Athy Heritage Centre (a Protected Structure AY075, NIAH Reg. No. 11505332) with a GFA of 87m², into a dedicated Shackleton Museum and Experience.
- Partial removal of the central South façade bay and construction of a two storey 100m² extension to the South façade.
- Refurbishment of existing building consisting of repointing and cleaning of masonry and brickwork, repairs to windows, re-dressing of lead linings, repairs to roof.
- Provision of plant in attic space and associated vents to inner valleys of the roofs.
- Removal of existing 26m² mezzanine level and construction of a new 37m² mezzanine.
- Removal of 2 No. existing stairways and 1 No. lift, construction of 1 No. new lift and fire escape stairs to serve all floors.
- Construction of a new level ground floor over the existing sloped and uneven floor providing level ground floor access.
- Removal of access ramp to entrance at the West façade.
- Site works associated with formation of new connections to existing public foul and surface water drainage, and existing utilities as required.
- Removal of 8 No. parking spaces to the rear of the building (Barrow Quay), provision of hard landscaping surrounding new extension.

The location of the proposed development is presented in Figure 1 and the site boundary on recent aerial photography is presented in Figure 2.

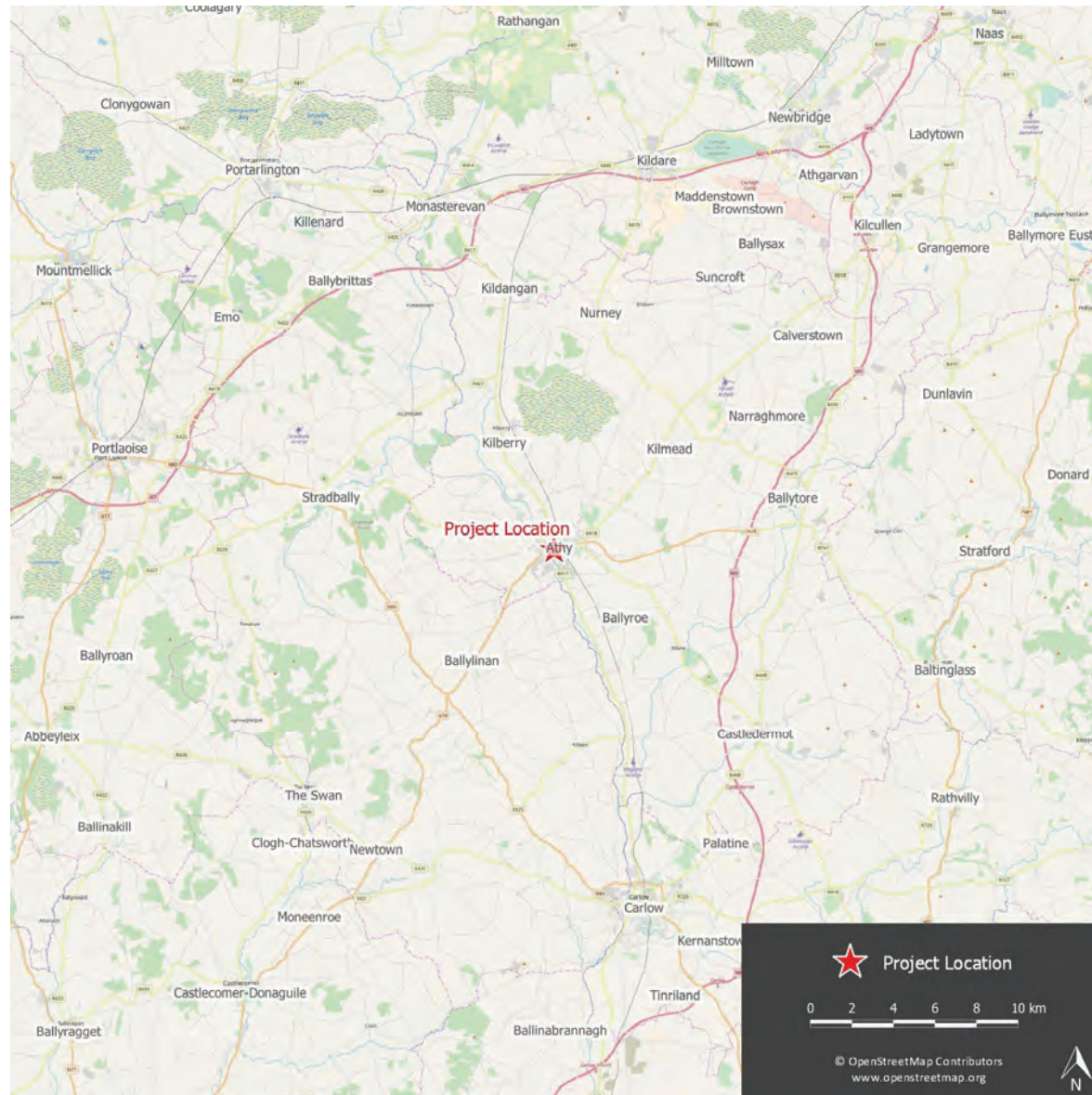


Figure 1. Showing the Project location in Athy, County Kildare.

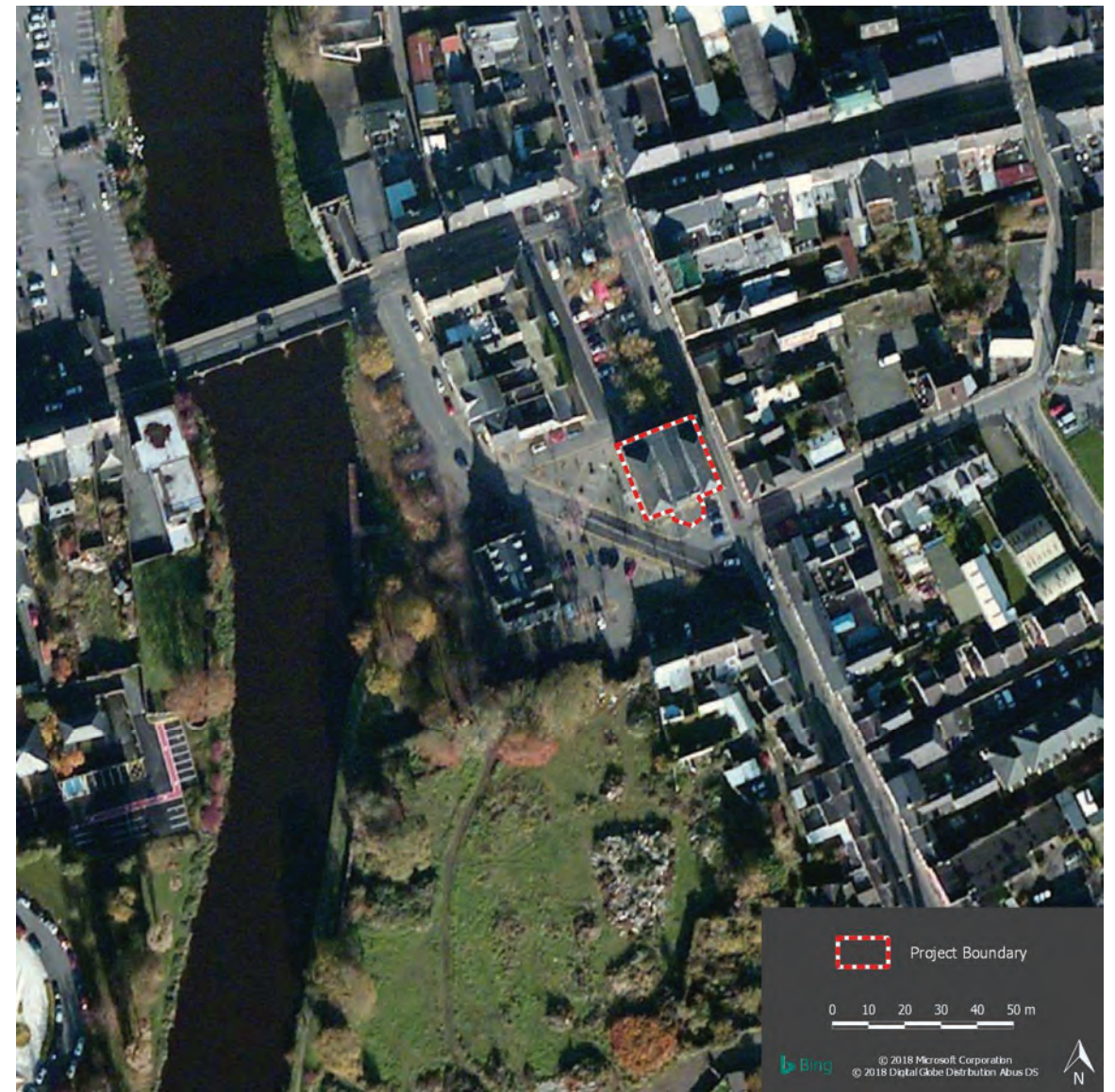


Figure 2. Showing the Project site boundary on recent aerial photography.

4. Identification of Natura 2000 Sites

4.1. Description of European Sites Potentially Affected

Departmental guidance suggests an assessment of European sites within a zone of impact of 15 km which can be revised depending on the nature and location of the proposed development and the connectivity with European sites.

A zone of impact may be determined by connectivity to the Project in terms of:

- Nature, scale, timing and duration of works and possible impacts, nature and size of excavations, storage of materials, flat/sloping sites;
- Distance and nature of pathways (dilution and dispersion; intervening ‘buffer’ lands, roads etc); and
- Sensitivity and location of ecological features

The Project is located within the urban environment of Athy, in County Kildare, approximately 70m to the east of the River Barrow and River Nore SAC (Site Code 002162) (Figure 5). Ballyprior Grassland SAC (Site Code 002256) is located approximately 9.7 km to the west, but on elevated ground, with no potential connectivity to the Project (Figure 4). The only European site downstream of the Project is the Lower River Suir SAC (Site Code 002137), which is located at the confluence of the River Barrow and the River Suir, approximately 80km to the south of the Project.

European sites that are located within 15 km of the Project are listed in Table 1.

Table 1 European Sites located within 15km of the Project.

Site Code	Site name	Distance (km)
002162	River Barrow and River Nore SAC	0.07
002256	Ballyprior Grassland SAC	9.67

Details of the qualifying interests of the River Barrow and River Nore SAC (Site Code 002162) are listed in Table 2 below, and Site Synopses are available from the NPWS metadata website. Spatial boundary data on the Natura 2000 network was extracted from the NPWS website on the 27th of August 2018.

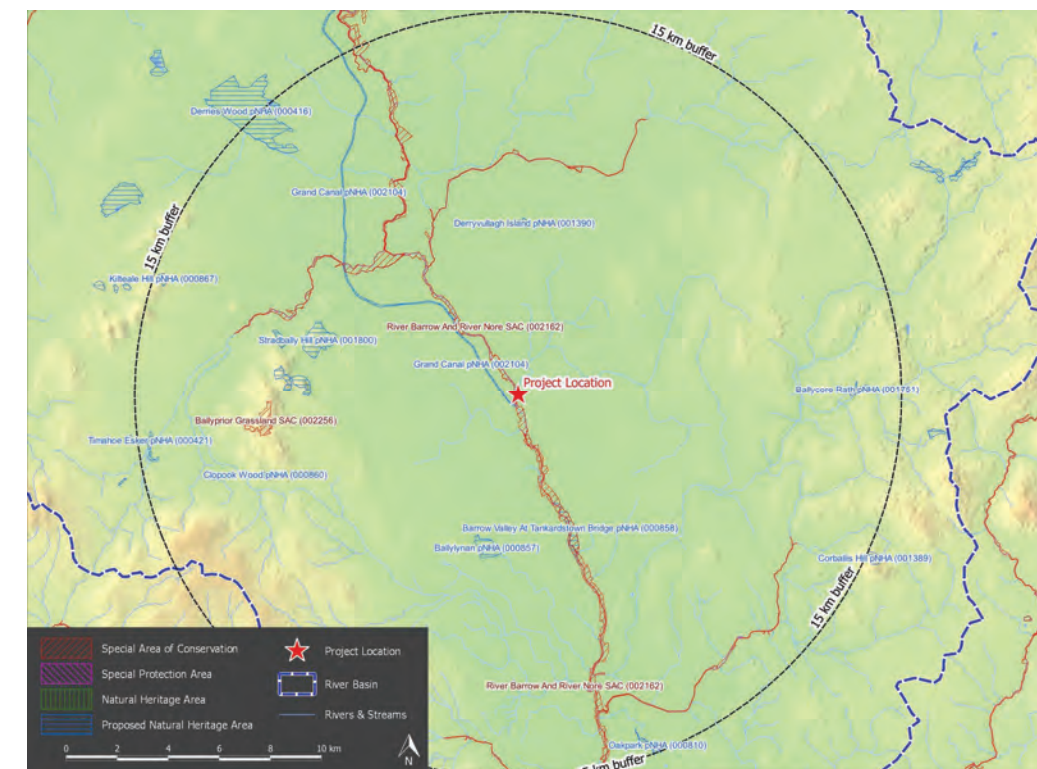


Figure 3. Showing European sites and NHAs/pNHAs located within 15km of the Project.

Table 2 SACs located within the potential zone of impact of the Project (*indicates priority habitat).

Site Code	Site Name	Qualifying Interests
002162	River Barrow and River Nore SAC	<p>Species:</p> <ul style="list-style-type: none"> 1016 Desmoulin's whorl snail <i>Vertigo moulinsiana</i> 1029 Freshwater pearl mussel <i>Margaritifera margaritifera</i> 1092 White-clawed crayfish <i>Austropotamobius pallipes</i> 1095 Sea lamprey <i>Petromyzon marinus</i> 1096 Brook lamprey <i>Lampetra planeri</i> 1099 River lamprey <i>Lampetra fluviatilis</i> 1103 Twaite shad <i>Alosa fallax</i> 1106 Atlantic salmon (<i>Salmo salar</i>) (only in fresh water) 1355 Otter <i>Lutra lutra</i> 1421 Killarney fern <i>Trichomanes speciosum</i> 1990 Nore freshwater pearl mussel <i>Margaritifera durrovensis</i> <p>Habitats:</p> <ul style="list-style-type: none"> 1130 Estuaries 1140 Mudflats and sandflats not covered by seawater at low tide 1310 <i>Salicornia</i> and other annuals colonizing mud and sand 1330 Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>) 1410 Mediterranean salt meadows (<i>Juncetalia maritimi</i>) 3260 Water courses of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation 4030 European dry heaths 6430 Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels 7220 * Petrifying springs with tufa formation (<i>Cratoneurion</i>) 91A0 Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles 91E0 * Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i>, <i>Alnion incanae</i>, <i>Salicion albae</i>)



Figure 4. Detailed view of European sites and NHAs/pNHAs in the vicinity of the Project

4.2. Conservation Objectives of the Natura 2000 Sites

4.2.1. River Barrow and River Nore SAC (002062) - Version 1; 19th July 2011

The following Conservation Objectives are set out for the River Barrow and River Nore SAC. Specific attributes, measures and targets are presented in the relevant Conservation Objectives documents and will be addressed in more detail if required after potential impacts have been determined.

1016 Desmoulin's whorl snail *Vertigo moulinsiana*

To maintain the favourable conservation condition of Desmoulin's whorl snail in the River Barrow and River Nore SAC.

1029 Freshwater pearl mussel *Margaritifera margaritifera*

The status of the freshwater pearl mussel (*Margaritifera margaritifera*) as a qualifying Annex II species for the River Barrow and River Nore SAC is currently under review. The outcome of this review will determine whether a site-specific conservation objective is set for this species. Please note that the Nore freshwater pearl mussel (*Margaritifera durrovensis*) remains a qualifying species for this SAC.

1092 White-clawed crayfish *Austropotamobius pallipes*

To maintain the favourable conservation condition of White-clawed crayfish in the River Barrow and River Nore SAC.

1095 Sea lamprey *Petromyzon marinus*

To restore the favourable conservation condition of Sea lamprey in the River Barrow and River Nore SAC.

1096 Brook lamprey *Lampetra planeri*

To restore the favourable conservation condition of Brook lamprey in the River Barrow and River Nore SAC.

1099 River lamprey *Lampetra fluviatilis*

To restore the favourable conservation condition of River lamprey in the River Barrow and River Nore SAC.

1103 Twaite shad *Alosa fallax*

To restore the favourable conservation condition of Twaite shad in the River Barrow and River Nore SAC.

1106 Atlantic salmon (*Salmo salar*) (only in fresh water)

To restore the favourable conservation condition of Salmon in the River Barrow and River Nore SAC.

1130 Estuaries

To maintain the favourable conservation condition of Estuaries in the River Barrow and River Nore SAC.

1140 Mudflats and sandflats not covered by seawater at low tide

To maintain the favourable conservation condition of the Mudflats and sandflats not covered by seawater at low tide in the River Barrow and River Nore SAC.

1310 *Salicornia* and other annuals colonizing mud and sand

To maintain the favourable conservation condition of *Salicornia* and other annuals colonizing mud and sand in the River Barrow and River Nore SAC

1330 Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*)

To restore the favourable conservation condition of Atlantic salt meadows in the River Barrow and River Nore SAC.

1355 Otter *Lutra lutra*

To restore the favourable conservation condition of Otter in the River Barrow and River Nore SAC.

1410 Mediterranean salt meadows (*Juncetalia maritimi*)

To restore the favourable conservation condition of Mediterranean salt meadows in the River Barrow and River Nore SAC.

1421 Killarney fern *Trichomanes speciosum*

To maintain the favourable conservation condition of Killarney Fern in the River Barrow and River Nore SAC.

1990 Nore freshwater pearl mussel *Margaritifera durrovensis*

To restore the favourable conservation condition of the Nore freshwater pearl mussel in the River Barrow and River Nore SAC.

3260 Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitriche-Batrachion* vegetation

To maintain the favourable conservation condition of Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitriche-Batrachion* vegetation in the River Barrow and River Nore SAC.

4030 European dry heaths

To maintain the favourable conservation condition of European dry heaths in the River Barrow and River Nore SAC.

6430 Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels

To maintain the favourable conservation condition of Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels in the River Barrow and River Nore SAC.

7220 * Petrifying springs with tufa formation (*Cratoneurion*)

To maintain the favourable conservation condition of Petrifying springs with tufa formation (*Cratoneurion*) in the River Barrow and River Nore SAC.

91A0 Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles

To restore the favourable conservation condition of Old oak woodland with *Ilex* and *Blechnum* in the River Barrow and River Nore SAC.

91E0 * Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion*, *Alnion incanae*, *Salicion albae*)

To restore the favourable conservation condition of Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion*, *Alnion incanae*, *Salicion albae*) in the River Barrow and River Nore SAC.

4.3. Assessment Criteria

4.3.1. Examples of Direct, Indirect or Secondary Impacts

In order to identify those sites that could be potentially affected, it is necessary to describe the Natura 2000 site in the context of why it has been designated i.e. in terms of its Qualifying Interests and the environmental and ecological conditions that maintain the condition of these features. The underpinning conditions that are required to maintain the 'health' of these features are listed in Table 3 below.

Table 3 Qualifying Interests and Key environmental conditions supporting site integrity.

Qualifying Interests	Key environmental conditions supporting site integrity	Current Threats to Qualifying Interests
* Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i> , <i>Alnion incanae</i> , <i>Salicion albae</i>)	Riparian/lacustrine habitat prone to flooding.	Grazing, Invasive Species, Drainage, Planting of nonnative conifers, felling of native tree species.
Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>)	Marine and groundwater dependent. Medium sensitivity to hydrological change. <i>maritimae</i>)	Overgrazing; erosion; invasive species, particularly common cordgrass (<i>Spartina anglica</i>); infilling and reclamation.

Qualifying Interests	Key environmental conditions supporting site integrity	Current Threats to Qualifying Interests
	Changes in salinity and tidal regime. Overgrazing, erosion and accretion.	
Brook Lamprey (<i>Lampetra planeri</i>)	Surface water dependent Highly sensitive to hydrological change.	Channel maintenance, barriers, passage obstruction, gross pollution and specific pollutants.
Desmoulin's whorl snail (<i>Vertigo moulinsiana</i>)	Stable wetland water table. Emergent vegetation. Groundwater supply.	Climate Change, Flooding, Urbanisation (Habitat Encroachment, Pesticides, Fertilised, Grazing, Undergrazing, Afforestation, Stock Feeding, Burning, Peat Extraction, Communications Networks, Paths & Tracks, Walking/horse riding & non-motorised vehicles, Water Pollution, Landfill, Drainage, Modifying structures of inland watercourses.
Estuaries	Surface and marine water dependent. Low sensitivity to hydrological changes. Aquaculture, fishing and pollution.	Aquaculture, fishing, dumping of wastes and water pollution.
European dry heaths	Dry heaths occur on a range of slopes, in both upland and lowland areas, though most usually on slopes of 5-20° or more, often on upper slopes of hills and mountains, and are usually reported as being concentrated towards the drier south and east of the country.	Overgrazing, Abandonment of pastoral systems, General Forestry management, Forestry planting, Burning, Fertilisation, Agricultural improvement, Sand and gravel extraction
Freshwater Pearl Mussel (<i>Margaritifera margaritifera</i>)	Surface water dependent Highly sensitive to hydrological change Very highly sensitive to pollution.	Poor substrate quality due to increased growth of algal and macrophyte vegetation as a result of severe nutrient enrichment, as well as physical siltation.
Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels	Habitats are formed on gleyed soils, rich in nutrients, sand, silty and sand-silty ones with a high ground water level. Usually these nitrophilous communities are located in the form of the narrow strips near riverbeds and channels and occupy a small area.	Change of hydrological regime, adjustment of river channels, expansion of neophyte species, farming.
Killarney fern (<i>Trichomanes speciosum</i>)	Sensitive to desiccation and are not adapted to reduce or control water loss.	Human disturbance, Grazing, Woodland clearance, Natural processes such as wind felling of trees, competition from other plants, unusual weather conditions such as a prolonged frost or drought, and rock falls, Modifications to hydrology, Water pollution by nitrogenous waste,
Kingfisher (<i>Alcedo atthis</i>)	Marine/freshwater food availability. Undisturbed soft substrate riparian nest sites. Regularity of extreme weather. Water quality.	Disturbance from riverside recreation, loss of nest sites due to bankside interference. Loss of riparian scrub and woodland.
Mediterranean salt meadows (<i>Juncetalia maritimi</i>)	Marine and groundwater dependent. Sensitivity to hydrological change. Changes in	Overgrazing; erosion; invasive species, particularly common cordgrass (<i>Spartina anglica</i>); infilling and reclamation.

Qualifying Interests	Key environmental conditions supporting site integrity	Current Threats to Qualifying Interests
	salinity and tidal regime. Overgrazing, erosion and accretion	
Mudflats and sandflats not covered by seawater at low tide	Surface and marine water dependent. Low sensitivity to hydrological changes. Aquaculture, fishing and pollution.	Aquaculture, fishing, dumping of wastes and water pollution.
Nore freshwater pearl mussel (<i>Margaritifera durrovensis</i>)	Surface water dependent Highly sensitive to hydrological change Very highly sensitive to pollution.	Poor substrate quality due to increased growth of algal and macrophyte vegetation as a result of severe nutrient enrichment, as well as physical siltation.
Old sessile oak woods with Ilex and Blechnum in the British Isles	Changes in management. Changes in nutrient or base status. Introduction of alien species.	The introduction of alien species; sub-optimal grazing patterns; general forestry management; increases in urbanisation and human habitation adjacent to oak woodlands; and the construction of communication networks through the woodland.
Otter (<i>Lutra lutra</i>)	Prey availability. Water Quality. Riparian vegetation for breeding sites. Unhindered passage along waterways.	Decrease in water quality: Use of pesticides; fertilization; vegetation removal; professional fishing (including lobster pots and fyke nets); hunting; poisoning; sand and gravel extraction; mechanical removal of peat; urbanised areas; human habitation; continuous urbanization; drainage; management of aquatic and bank vegetation for drainage purposes; ; and canalization or modifying structures of inland water course.
* Petrifying springs with tufa formation (Cratoneurion)	Groundwater dependent. Highly sensitive to hydrological changes. Changes in nutrient or base status.	Peat or turf cutting; arterial drainage; local drainage; water abstraction and agricultural reclamation.
River Lamprey (<i>Lampetra fluviatilis</i>)	Surface water dependent Highly sensitive to hydrological change.	Channel maintenance, barriers, passage obstruction, gross pollution and specific pollutants.
Salmon (<i>Salmo salar</i>) (only in fresh water)	Surface water dependent Highly sensitive to hydrological change	Numerous threats impact upon this species. Some of these include: cultivation, pesticides; fertilization; pollution; water pollution; biocenotic evolution; accumulation of organic material; eutrophication; over-fishing; forest-related pressures; parasites.
Sea Lamprey (<i>Petromyzon marinus</i>)	Surface water dependent Highly sensitive to hydrological change.	Obstructions to movement; gross pollution; and specific pollutants.
<i>Salicornia</i> and other annuals colonizing mud and sand	Marine water dependent. Medium sensitivity to hydrological change. Changes in salinity and tidal regime. Infilling, reclamation, invasive species.	Invasive Species; erosion and accretion.
Twaite shad (<i>Alosa fallax</i>)	Surface water dependent Sensitive to hydrological change	Threats include: pesticides; fertilization; pollution; water pollution; accumulation of organic material; eutrophication; forest-related pressures.
Water courses of plain to montane levels with the Ranunculion fluitantis and Callitriche-Batrachion vegetation	Surface and groundwater dependent. Highly sensitive to hydrological changes. Highly sensitive to pollution.	Eutrophication; overgrazing, excessive fertilisation; afforestation; and the introduction of invasive alien species.

Qualifying Interests	Key environmental conditions supporting site integrity	Current Threats to Qualifying Interests
White-clawed Crayfish (<i>Austropotamobius pallipes</i>)	Surface water dependent. Highly sensitive to hydrological change, Very highly sensitive to pollution.	Introduction of diseases transmitted by introduced American crayfish.

4.3.2. Ecological Network Supporting Natura 2000 Sites

An analysis of the proposed Natural Heritage Areas and designated Natural Heritage Areas in terms of their role in supporting the species using Natura 2000 sites was undertaken. It was assumed that these supporting roles mainly related to mobile fauna such as mammals and birds which may use pNHAs and NHAs as “stepping stones” between Natura 2000 sites.

Article 10 of the Habitats Directive and the Habitats Regulations 2011 place a high degree of importance on such non-Natura 2000 areas as features that connect the Natura 2000 network. Features such as ponds, woodlands and important hedgerows were taken into account during the rest of the AA process.

There are several proposed Natural Heritage Areas downstream of the Project, however, all are associated with the River Barrow and, for purposes of this screening report, the River is dealt with under its higher conservation status as a Special Area of Conservation.

5. Identification of Potential Impacts & Assessment of Significance

The Project is not directly connected with or necessary to the management of the sites considered in the assessment and therefore potential impacts must be identified and considered.

5.1. Potential Impacts

This section uses the information collected on the sensitivity of each Natura 2000 site and describes any likely significant effects of implementation of the Project. This assumes the absence of any controls, conditions or assumption mitigation measures.

The likely significant effects of the Project are presented in Table 4, both in isolation and potentially in combination with other plans and projects.

There would be no direct impacts on the River Barrow European site and there would be no habitat loss or fragmentation as a result of the proposed development. Having considered direct impacts and ruling them out, indirect impacts are then considered in terms of source-vector pathways, in particular hydrological connectivity.

Considering a potential worst-case scenario the Project would have to result in a significant detrimental change in water quality in River Barrow either alone or in combination with other projects or plans as a result of indirect pollution. The effect would have to be considered in terms of changes in water quality which would affect the habitats or food sources for which the River Barrow SAC species are designated.

The potential for significant adverse effects on European sites is unlikely due to the following:

- The scale of the proposed Project; which consists of alterations and an extension to an existing building in the urban environment of Athy; and
- The proposed development is to be connected to existing Irish Water sewers for both foul water and surface water for the duration of its operation phase.

5.2. Assessment of Potential Cumulative Effects

Cumulative impacts or effects are changes in the environment that result from numerous human-induced, small-scale alterations. Cumulative impacts can be thought of as occurring through two main pathways: first, through persistent additions or losses of the same materials or resource, and second, through the compounding effects as a result of the coming together of two or more effects.

As part of the Screening for an Appropriate Assessment, in addition to the proposed works, other relevant projects and plans in the region must also be considered at this stage. This step aims to identify at this early stage any possible significant in-combination or cumulative effects / impacts of the proposed development with other such plans and projects on the Natura 2000 sites.

The Kildare Council Planning webpage was reviewed for planning applications which were granted permission within the last three years. The search indicates that Kildare County Council has received 232 planning applications in the last three years that contain 'Athy' in their address details. Further investigation of the Council's planning mapping shows that there have been numerous applications finalised in the vicinity of the Project (these are indicated with white filled squares in Figure 6), however there is no way to ascertain which of these relate to recent planning applications, within the last three years.

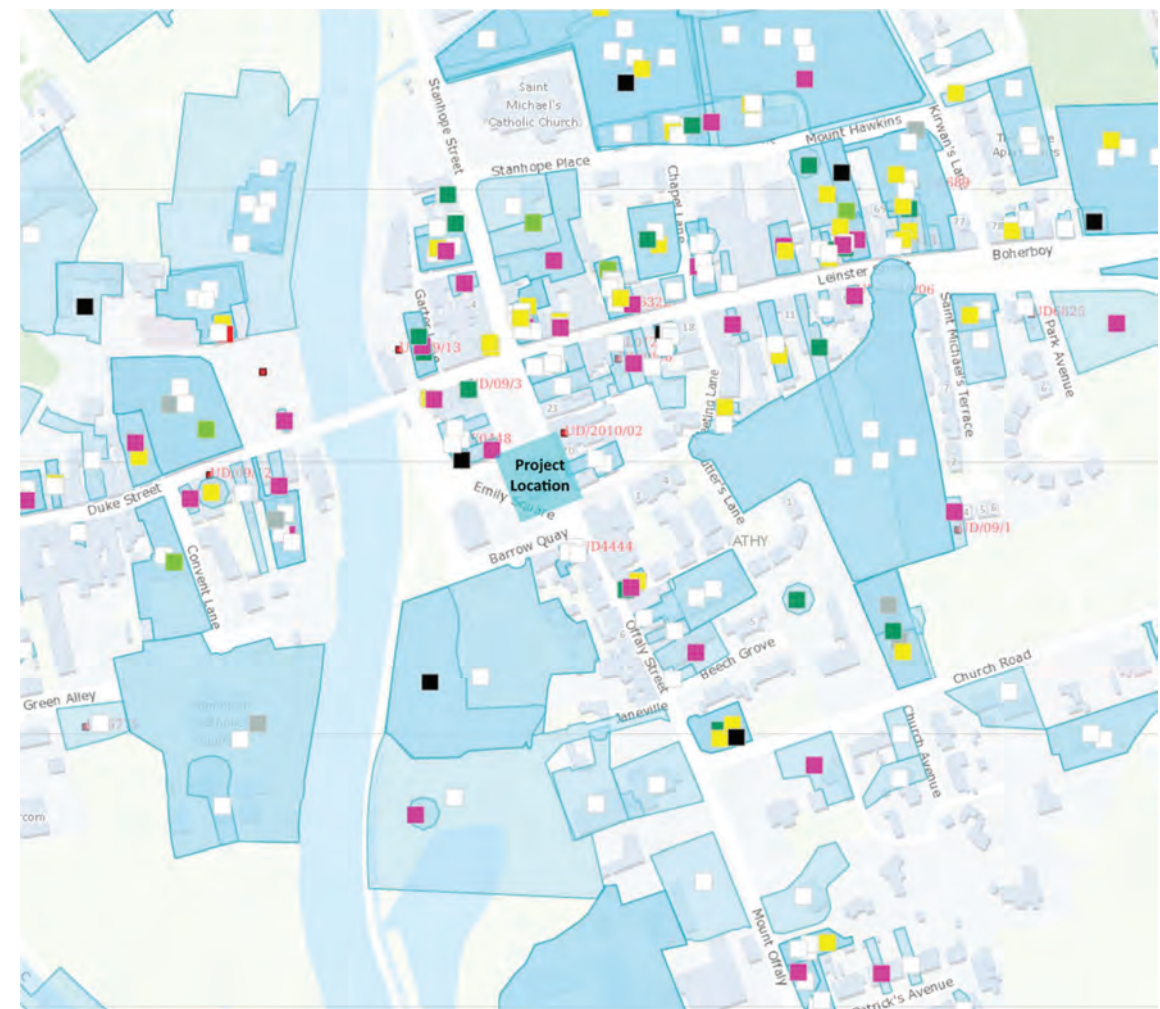


Figure 5. Screen grab from Kildare County Council planning web mapping.

In-combination effects are unlikely given the scale of the proposed Project, which consists of alterations and an extension to an existing building in the urban environment of Athy, and that the proposed development is to be connected to existing Irish Water sewers for both foul water and surface water for the duration of its operation phase.

The Kildare County Development Plan in complying with the requirements of the Habitats Directive requires that all projects and plans that could affect the Natura 2000 sites in the same zone of impact of the Project site would be initially screened for Appropriate Assessment and if requiring Stage 2 AA, that appropriate employable mitigation measures would be put in place to avoid, reduce or ameliorate negative impacts. In this way any, in-combination impacts with Plans or Projects for the development area and surrounding townlands in which the development site is located, would be avoided.

Any new applications for the Project area will be assessed on a case by case basis by Kildare County Council which will determine the requirement for AA Screening as per the requirements of Article 6(3) of the Habitats Directive.

Table 4 Outlining the potential impacts in the absence of mitigation of the Project.

Site	Potential Direct Impacts e.g. Habitat Loss	Potential Indirect Impacts e.g. alteration to hydrological regime	Surface or Groundwater Contamination	Disturbance to Protected Species (Habitats Directive Annex II & IV)	Stage 2 AA Required
002162 River Barrow and River Nore SAC	No	No	No	No	No

6. Screening Statement

Potential source vector pathways have been addressed in considering the hydrological connectivity between the Project and the River Barrow and River Nore SAC. Were the development to proceed, there would be no direct impact on the River Barrow or its associated European site and so potential indirect impacts are then considered.

The potential for significant adverse effects on European sites is unlikely due to the following:

- The scale of the proposed Project; which consists of alterations and an extension to an existing building in the urban environment of Athy;
- The proposed development is to be connected to existing Irish Water sewers for both foul water and surface water for the duration of its operation phase.

It has been objectively concluded by Moore Group Environmental Services that:

1. The Project is not directly connected with, or necessary to the conservation management of the European sites considered in this assessment.
2. The proposed development is unlikely to indirectly, significantly affect the Qualifying interests or Conservation Objectives of the European sites considered in this assessment.
3. The Project, alone or in combination with other projects, is not likely to have significant effects on the European sites considered in this assessment in view of their conservation objectives.
4. It is possible to rule out likely significant impacts on any European sites considered in the assessment.
5. It is possible to conclude that there would be no significant effects, no potentially significant effects and no uncertain effects if the Project were to proceed.

It is the view of Moore Group Environmental Services that it is not necessary to undertake any further stage of the Appropriate Assessment process.

A finding of no significant effects report is presented in Appendix A in accordance with the EU Commission's methodological guidance (European Commission, 2001).

7. References

Department of the Environment, Heritage and Local Government (2010) Guidance on Appropriate Assessment of Plans and Projects in Ireland (as amended February 2010).

European Commission (2000) Managing Natura 2000 sites: the provisions of Article 6 of the 'Habitats' Directive 92/43/EEC.

European Commission Environment DG (2001) Assessment of plans and projects significantly affecting Natura 2000 sites: Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC. European Commission, Brussels.

European Commission (2007) Guidance document on Article 6(4) of the 'Habitats Directive' 92/43/EEC: Clarification of the concepts of: alternative solutions, imperative reasons of overriding public interests, compensatory measures, overall coherence and opinion of the Commission. European Commission, Brussels.

NPWS (2013) The Status of EU Protected Habitats and Species in Ireland. National Parks and Wildlife Service, Department of the Environment, Heritage and Local Government, Dublin.

NPWS (2011) Conservation Objectives: River Barrow and River Nore SAC 002162. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

Appendix A

FINDING OF NO SIGNIFICANT EFFECTS REPORT

Finding no significant effects report matrix

Name of project or plan

Proposed adaptation of the existing Athy Heritage Centre (a Protected Structure AY075, NIAH Reg. No. 11505332), into a dedicated Shackleton Museum and Experience, in Athy, County Kildare.

Name and location of the Natura 2000 site(s)

The Project is located within the urban environment of Athy, in County Kildare, approximately 70m to the east of the River Barrow and River Nore SAC (Site Code 002162). Ballyprior Grassland SAC (Site Code 002256) is located approximately 9.7 km to the west, but on elevated ground, with no potential connectivity to the Project. The only European site downstream of the Project is the Lower River Suir SAC (Site Code 002137), which is located at the confluence of the River Barrow and the River Suir, approximately 80km to the south of the Project.

Description of the project or plan

This report presents a screening report for a Project consisting of adaptation of the existing Athy Heritage Centre (a Protected Structure AY075, NIAH Reg. No. 11505332), into a dedicated Shackleton Museum and Experience, in Athy, County Kildare.

The proposed development will include:

- Adaptation of the existing Athy Heritage Centre (a Protected Structure AY075, NIAH Reg. No. 11505332) with a GFA of 87m², into a dedicated Shackleton Museum and Experience.
- Partial removal of the central South façade bay and construction of a two storey 100m² extension to the South façade.
- Refurbishment of existing building consisting of repointing and cleaning of masonry and brickwork, repairs to windows, re-dressing of lead linings, repairs to roof.
- Provision of plant in attic space and associated vents to inner valleys of the roofs.
- Removal of existing 26m² mezzanine level and construction of a new 37m² mezzanine.
- Removal of 2 No. existing stairways and 1 No. lift, construction of 1 No. new lift and fire escape stairs to serve all floors.
- Construction of a new level ground floor over the existing sloped and uneven floor providing level ground floor access.
- Removal of access ramp to entrance at the West façade.
- Site works associated with formation of new connections to existing public foul and surface water drainage, and existing utilities as required.
- Removal of 8 No. parking spaces to the rear of the building (Barrow Quay), provision of hard landscaping surrounding new extension.

Is the project or plan directly connected with or necessary to the management of the site(s)

No

Are there other projects or plans that together with the projects or plan being assessed could affect the site

The Kildare Council Planning webpage was reviewed for planning applications which were granted permission within the last three years. The search indicates that Kildare County Council has received 232 planning applications in the last three years that contain 'Athy' in their address details. Further investigation of the Council's planning mapping shows that there have been numerous applications finalised in the vicinity of the

Project (these are indicated with white filled squares in Figure 6), however there is no way to ascertain which of these relate to recent planning applications, within the last three years.

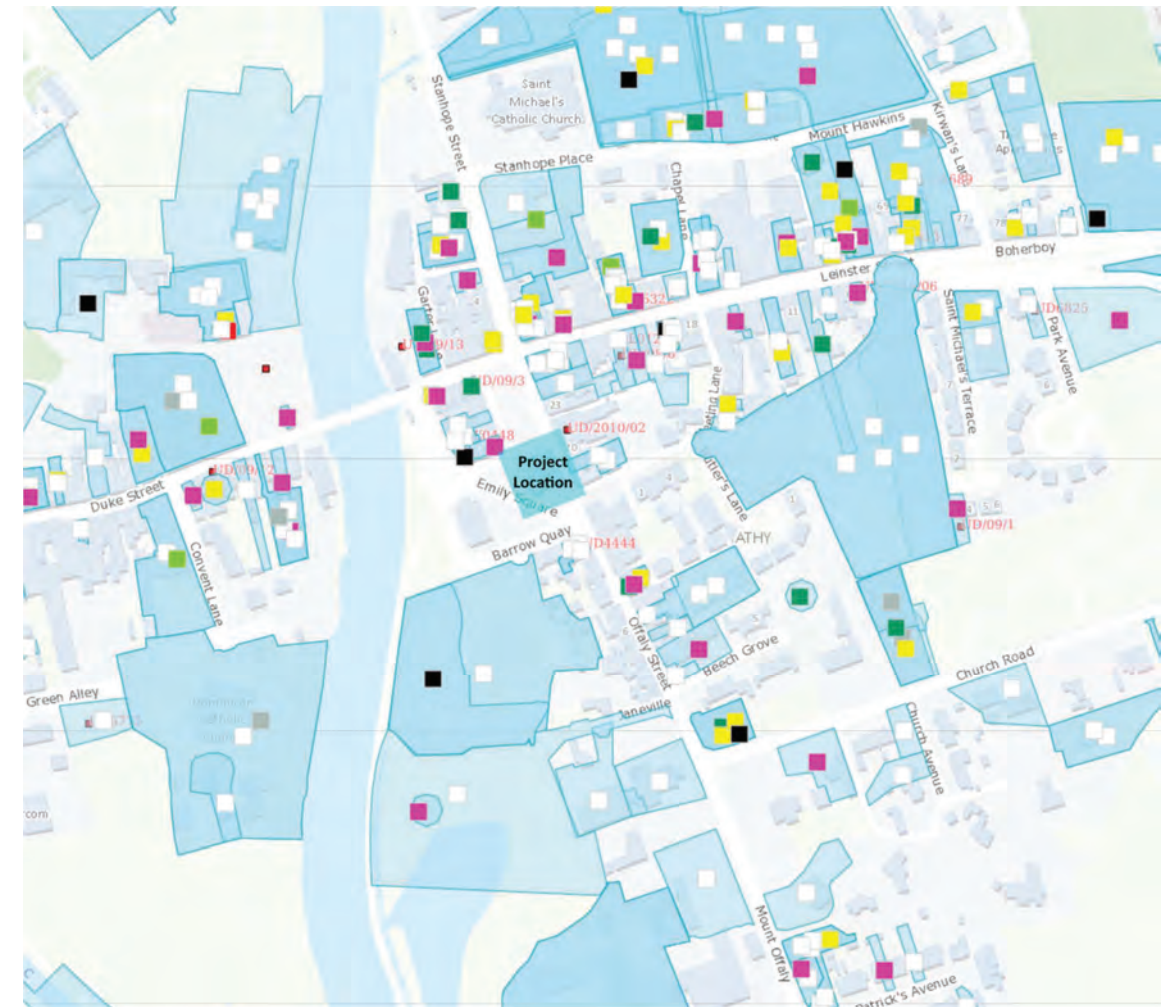


Figure 6. Screen grab from Kildare County Council planning web mapping.

In-combination effects are unlikely given the scale of the proposed Project, which consists of alterations and an extension to an existing building in the urban environment of Athy, and that the proposed development is to be connected to existing Irish Water sewers for both foul water and surface water for the duration of its operation phase.

The Kildare County Development Plan in complying with the requirements of the Habitats Directive requires that all projects and plans that could affect the Natura 2000 sites in the same zone of impact of the Project site would be initially screened for Appropriate Assessment and if requiring Stage 2 AA, that appropriate employable mitigation measures would be put in place to avoid, reduce or ameliorate negative impacts. In this way any, in-combination impacts with Plans or Projects for the development area and surrounding townlands in which the development site is located, would be avoided.

Any new applications for the Project area will be assessed on a case by case basis by Kildare County Council which will determine the requirement for AA Screening as per the requirements of Article 6(3) of the Habitats Directive.

THE ASSESSMENT OF SIGNIFICANCE OF EFFECTS

Describe how the project or plan (alone or in combination) is likely to affect the Natura 2000 site.

Considering a potential worst-case scenario the Project would have to result in a significant detrimental change in water quality in River Barrow either alone or in combination with other projects or plans as a result of indirect pollution. The effect would have to be considered in terms of changes in water quality which would affect the habitats or food sources for which the River Barrow SAC species are designated.

Explain why these effects are not considered significant.

The potential for significant adverse effects on European sites is unlikely due to the following:

- The scale of the proposed Project; which consists of alterations and an extension to an existing building in the urban environment of Athy; and
- The proposed development is to be connected to existing Irish Water sewers for both foul water and surface water for the duration of its operation phase.

List of agencies consulted: provide contact name and telephone or e-mail address

The requirement for Appropriate Assessment Screening was determined through pre-planning discussion with Kildare County Council.

Response to consultation

N/A.

DATA COLLECTED TO CARRY OUT THE ASSESSMENT

Who carried out the assessment

Moore Group Environmental Services.

Sources of data

NPWS database of designated sites at www.npws.ie

National Biodiversity Data Centre database <http://maps.biodiversityireland.ie>

Level of assessment completed

Desktop Assessment.

Where can the full results of the assessment be accessed and viewed

Kildare County Council Planning Section.

OVERALL CONCLUSIONS

Potential source vector pathways have been addressed in considering the hydrological connectivity between the Project and the River Barrow and River Nore SAC. Were the development to proceed, there would be no direct impact on the River Barrow or its associated European site and so potential indirect impacts are then considered.

The potential for significant adverse effects on European sites is unlikely due to the following:

- The scale of the proposed Project; which consists of alterations and an extension to an existing building in the urban environment of Athy;
- The proposed development is to be connected to existing Irish Water sewers for both foul water and surface water for the duration of its operation phase.

It has been objectively concluded by Moore Group Environmental Services that:

1. The Project is not directly connected with, or necessary to the conservation management of the European sites considered in this assessment.

2. The proposed development is unlikely to indirectly, significantly affect the Qualifying interests or Conservation Objectives of the European sites considered in this assessment.
3. The Project, alone or in combination with other projects, is not likely to have significant effects on the European sites considered in this assessment in view of their conservation objectives.
4. It is possible to rule out likely significant impacts on any European sites considered in the assessment.
5. It is possible to conclude that there would be no significant effects, no potentially significant effects and no uncertain effects if the Project were to proceed.

It is the view of Moore Group Environmental Services that it is not necessary to undertake any further stage of the Appropriate Assessment process.

Appendix 8: EIA Screening Declaration

EIA Screening Determination For Part 8 Development

This assessment is carried out in accordance with the requirements of Article 120 and Schedule 7A of the Planning and Development Regulations 2001 (as amended).

Development: Re-development of Athy Heritage Centre – Shackleton Museum, Emily Square.

Location: Emily Square, Athy, Co. Kildare.

Assessment : The criteria listed in Schedule 7A of the Planning and Development Regulations 2001 (as amended) are highlighted in the text boxes below.

1. *A description of the proposed development, including in particular-*
 - a. *A description of the physical characteristics of the whole proposed development and, where relevant, of demolition works, and*
 - b. *A description of the location of the proposed development, with particular regard to the environmental sensitivity of geographical areas likely to be effected.*

The proposed development is the renovation and restoration of a Protected Structure located on Emily Square in Athy town centre. A small contemporary extension is proposed to the rear. Demolition works are minor in nature and refer to the removal of internal stairs, fixtures and fittings. The building is located in Athy town centre and is surrounded by commercial and civic uses.

2. *A description of the aspects of the environment likely to be significantly affected by the proposed development.*

The development is to facilitate a museum in an existing public building. Having regard to the nature of the use and works proposed, it is not anticipated that the development will give rise to any significant effects on the environment.

3. *A description of any likely significant effects, to the extent of the information available on such effects, of the proposed development on the environment resulting from-*
 - a. *The expected residues and emissions and the production of waste, where relevant, and*
 - b. *The use of natural resources, in particular soil, land, water and biodiversity.*

The proposed development is not a type which produces waste, residue or emissions of note, nor is it the type of development which uses natural resources, to give rise to any significant effects on the environment.

An Appropriate Assessment Screening Report has been prepared for the proposed development and it concludes that the development is unlikely to significantly affect the qualifying interests or conservation objectives of European Sites. A Natura Impact Statement therefore is not required.

Screening Determination

Having regard to the nature of the works proposed which is the restoration and modest extension of an existing building, and to the intended use of the building as a public museum, it is not considered that the proposed development will give rise to any significant effects on the environment and the preparation of an Environmental Impact Assessment Report is not required.

Signed:

Jane O'Reilly
A/Senior Executive Planner
Kildare County Council
10th January 2019

Appendix 9: Bat and Swift Surveys



BAT SURVEY AND ASSESSMENT

FOR

THE ATHY HERITAGE CENTRE IN EMILY SQUARE, CO. KILDARE

PREPARED FOR

KILDARE COUNTY COUNCIL

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Project Reference:		180204			
Rev.	Status	Author	Reviewed By	Approved By	Issue Date
D01	Draft	AC	AC	AC	27/09/18

1. Introduction

Scott Cawley Ltd. was commissioned to undertake swift surveys and provide advice in connection with same for the proposed re-development of the Heritage Centre in Athy, Co. Kildare.

2. Legal Protection and Conservation Status

Currently there are nine species of bat known to breed in Ireland, while two other species have been recorded on a single occasion (See **Table 1**).

Table 1 – Bat species in Ireland: Status and distribution

Species	Status	Distribution
Common pipistrelle <i>Pipistrellus pipistrellus</i>	Resident	Widespread
Soprano pipistrelle <i>Pipistrellus pygmaeus</i>	Resident	Widespread
Nathusius' pipistrelle <i>Pipistrellus nathusii</i>	Resident	Widespread
Leisler's bat <i>Nyctalus leisleri</i>	Resident	Widespread
Brown long-eared bat <i>Plecotus auritus</i>	Resident	Widespread
Whiskered bat <i>Myotis mystacinus</i>	Resident	Widespread
Natterer's bat <i>Myotis nattereri</i>	Resident	Widespread
Daubenton's bat <i>Myotis daubentonii</i>	Resident	Widespread
Lesser horseshoe bat <i>Rhinolophus hipposideros</i>	Resident	Restricted to the western seaboard
Brandt's bat <i>Myotis brandtii</i>	Vagrant	Single confirmed record from Co. Wicklow
Greater horseshoe bat <i>Rhinolophus ferrumequinum</i>	Vagrant	Single confirmed record from Co. Wexford

All species and their roost sites are strictly protected under both European and Irish legislation including:

- *Wildlife Act 1976 and Wildlife (Amendment) Act, 2000;*
- *European Communities (Birds and Natural Habitats) Regulations, 2011;* and
- *Council Directive on the Conservation of Natural Habitats and of Wild Flora and Fauna 1992 (Council Directive 92/43/EEC).*

It is an offence under Section 23 of the *Wildlife Acts* and under Section 51 of the *European Communities (Birds and Natural Habitats) Regulations, 2011* to kill a bat, to interfere with, damage or destroy the breeding or resting place of a bat species, or to deliberately disturb bats, particularly during their periods of breeding, rearing, hibernation and migration. Under the *European Communities (Birds and Natural Habitats) Regulations 2011* it is not necessary for damage or destruction of bats' breeding sites or resting places to be deliberate for an offence to occur. Given that unintentional damage or destruction of bats' breeding sites or resting places gives rise to an offence under the legislation, there is an onus of due diligence on property owners and anyone proposing to carry out works, to avoid any such damage or destruction.

As a signatory to the EUROBATS Agreement (Agreement on the Conservation of Populations of European Bats, 1994), Ireland is required to protect their habitats and important feeding areas from

damage or disturbance. All Irish bat species are listed in Appendix II of the Bern Convention (1979), as species requiring protection.

All but two of Ireland's bat species are listed as "least concern" in the Ireland Red List No. 3: Terrestrial Mammals (Marnell et al., 2009). The two species that are an exception to this are Leisler's bat ("near threatened") and Brandt's bat ("data deficient") (Marnell et al., 2009). Leisler's bat was assigned its status on the basis of Ireland's importance as the world stronghold for the species (Mitchell-Jones et al., 1999). The status of the Greater horseshoe bat in Ireland is not yet determined as only one record has been confirmed.

3. Site Overview

The building is located in Athy, Co. Kildare (approximate centroid Grid Reference: S 68324 93893) and is an 18th century three storey building of stone and brickwork with three pitched slate roofs. The building is currently in use as a heritage centre. The building is located in the centre of Athy town to the east of the River Barrow, on Emily Square. Photos are provided in Appendix A.

4. Characteristics of the Proposed Development

Full details of the proposed development are provided in the part VIII application documentation. In brief, the proposed development will involve renovation and extension of the existing building to include:

- Alterations and extension to, and refurbishment of the Athy Heritage Centre. The building is a Protected Structure RPS Ref AY075. The building will house a Shackleton Museum and Experience, and the extension is a two storey 82m² structure housing a stairs to the south with removal of the associated part of the central bay of the south façade.
- Refurbishment of existing building, including repointing and cleaning of masonry and brickwork, repairs to windows and replacement where necessary, re-dressing of lead linings, and repairs to roof.
- Reinstatement of 10 No. casement windows on North façade sympathetic to the original 1913 design.
- Provision of plant in attic space and associated vents to inner valleys of the roofs.
- Removal of existing 26m² mezzanine level and construction of a new 37m² mezzanine at second floor level.
- Removal of 2 No. existing stairways and one lift and associated structure, construction of a new lift and fire escape stairs to serve all floors.
- Provision of level access to entire ground floor from front entrance by raising ground floor internally.
- Removal of 1980's access ramp and steps to entrance at the West façade and replacement with new stone steps.
- Complete internal redecoration and new internal openings to allow improved circulation within the building.
- Site works associated with formation of new connections to existing public foul and surface water drainage, and existing utilities as required.
- Removal of 8 No. parking spaces to the rear of the building (Barrow Quay), provision of hard landscaping surrounding new extension and associated site works.

5. Survey Methodology

A survey was undertaken by Aebhín Cawley BSc. CEnv. MCIEEM and Sarah Robertson BSc. on the 28th and 29th August 2018. The surveys included a visual internal and external inspection of the building during daylight hours on 28th August 2018, followed by an evening bat activity survey on 28th August 2018 and pre-dawn bat activity survey on 29th August 2018.

Sunset on 28th August 2018 was 20:26 and the evening activity survey commenced at 20:00 and finished at 22:30. Sunrise on 29th August 2018 was 06:33 and the morning activity survey commenced at 05:00. These survey times are in accordance with the Bat Conservation Trust’s guidance *Bat Surveys for Professional Ecologists – Good Practice Guidelines* (Collins, 2016).

Bat activity is usually detected by the following signs:

- Bat droppings (these will accumulate under an established roost or under access points);
- Insect remains (under feeding perches);
- Oil (from fur) and urine stains;
- Scratch marks; or,
- Bat corpses.

5.1 Survey Limitations

Weather conditions on the night of survey were ideal with a temperature during the evening survey of 15 degrees Celsius and a temperature during the morning survey of 9 degrees Celsius and posed no limitation to survey results.

The survey was undertaken late in the season when many maternity roosts would have already dispersed and involved a single night of survey. The Bat Conservation Trust’s *Bat Surveys for Professional Ecologists – Good Practice Guidelines* (Collins, 2016) recommends that buildings with high potential (which the Heritage Centre building is deemed to have) have a minimum of three separate survey visits, with at least one being a dusk emergence and one being a dawn re-entry survey, with surveys being separated at least two weeks apart, between May and September with at least two of the surveys being between May and August. The guidelines consider a dawn survey that takes place immediately after a dusk survey to be a single survey. Surveys can confidently rule out presence of bats if none are found present following the level of survey recommended in the guidelines. However a lesser survey effort cannot definitively rule out the presence of bats and that is the case in this instance. The survey limitations have been addressed by the recommendations made in this report.

Only one of the three attic spaces was accessible for internal inspection. Internal inspections can often overcome other survey limitations as significant maternity roosts will often be readily visible during internal inspections. However in this case internal inspection could not overcome the survey limitation.

5.2 Site Evaluation and Assessment Criteria

The assessment criteria outlined in Table 2 below are derived from Collins (2016), and are used for the assessment of the site in terms of its suitability for bats.

Table 2 – Assessment criteria for potential suitability of proposed development sites for bats, derived from similar criteria in *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (Collins, 2016).

Suitability	Description of Roosting Habitat	Commuting and Foraging Habitats
Negligible	Negligible habitat features on site likely to be used by roosting bats	Negligible habitat features on site likely to be used by commuting or foraging bats
Low	A structure with one or more potential roost sites that could be used by	Habitat that could be used by small numbers of commuting bats such as a gappy hedgerow or un-vegetated stream, but

	individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions ¹ and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity or hibernation). A tree of sufficient size and age to contain PRFs but with none seen from the ground or features seen with only very limited roosting potential.	isolated, i.e. not very well connected to the surrounding landscape by other habitat. Suitable, but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in a parkland situation) or a patch of scrub
Moderate	A structure or tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only – the assessments in this table are made irrespective of species conservation status, which is established after presence is confirmed).	Continuous habitat connected to the wider landscape that could be used by bats for commuting such as lines of trees and scrub or linked back gardens. Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.
High	A structure or tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats in a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat.	Continuous habitat connected to the wider landscape that could be used by bats for commuting such as lines of trees and scrub, hedgerows. Linked back gardens, river valleys, streams and woodland edge. Habitat that is connected to the wider landscape that could be used by foraging bats such as trees scrub, grassland or water. Site is close to and connected to a known roost.

6. Desktop Data and Consultation

Anna Collins from the Kildare Bat Group was contacted by phone and she provided invaluable information and advice which was gratefully received. The local knowledge of bats in Athy as provided can be summarized as follows. Seven species of bats have been recorded along the River Barrow within Athy town including Common and Soprano pipistrelles, Natterer’s, Whiskered, Daubenton’s, Brong long-eared and Leisler’s. High levels of bat activity have been recorded within and adjacent to a greenfield property immediately south of the Heritage Centre site. It is suspected that the stone wall which forms the property boundary along the River Barrow is likely to support roosting bats, as is a bridge just further south where a manmade lake drains to the River Barrow.

7. Survey Results

The Heritage Centre building is an 18th century three storey building of stone and brickwork with three pitched slate roofs. There are relatively few visible gaps in stonework and roof slates, however due to the height of the building not all areas were fully visible. Within the one attic space which was accessible there is thick fibreglass insulation on the attic floor but none under the roof felt. The roof appears to be in relatively good condition with no obvious gaps or entry points within the one accessible attic space.

¹ For example in terms of temperature, humidity, height above ground level, light levels or levels of disturbance.

The nature and age of the building and the stone, brick and slate materials would suggest that if access were possible for bats it would be highly suitable for them.

No evidence of bats was noted during inspection of the attic and there was no other evidence of presence of bats in any of the other storeys of the building which are all in active use.

In summary, in accordance with the criteria in Table 2, the Heritage Centre building is considered to be highly suitable for roosting bats with the structure being surrounded by habitat (mainly in the form of the River Barrow) that is highly suitable for commuting and foraging bats. There is lighting within Emily Square and the car parking area on the southern side of the building which might act as a deterrent to bats.

8. Activity Survey Results

Date	Species	First Call	Last Call	Sunrise	Sunset
28 th August 2018	Soprano pipistrelle	21:34	21:34	N/A	20:26
28 th August 2018	Common pipistrelle	21:36	22:11	N/A	20:26
28 th August 2018	Pipistrelle species	21:57	22:07	N/A	20:26
29 th August 2018	Soprano pipistrelle	05:38	05:39	06:33	N/A

There was no bat activity at all recorded adjacent to the Heritage Centre building. No bats were recorded emerging from the building post-sunset and no bats were recorded re-entering pre-dawn. The activity survey also took in a transect along the east bank of the River Barrow from the bridge at White's Castle for a stretch approximately 150m south. Common and Soprano pipistrelle activity was noted along this stretch of the river with the main activity being adjacent to the greenfield site with boundary stone wall referred to above in Section 6, and low level activity (likely to be no more than one or two individuals) of Common pipistrelle on the river at the bridge adjacent to White's Castle.

9. Conclusions and Recommendations

No evidence of bats was noted in the Heritage Centre itself and no bats either emerged from or returned to the building during the activity surveys. Bats are present in the general area with activity noted on the River Barrow and usage of the river by seven species being known. There was no activity recorded immediately adjacent to the Heritage Centre either on Emily Square or the car parking to the south of the building. It may be that they are deterred from using these areas by existing lighting.

Although the level of surveys undertaken does not meet the recommended standard for being able to definitively rule out the presence of bats in buildings, based on the level of survey work undertaken and their findings it is considered extremely unlikely that bats are using the Heritage Centre. It is possible to confirm based on the level of survey undertaken that there is no significant sized maternity roost within the building. A possibility of a small number of bats being present, earlier in the season, however could not be definitively ruled out.

It is likely that the existing lighting surrounding the Heritage Centre building as well as the good condition of the roof with little or no gaps or access points accounts for a lack of a significant maternity bat roost in the building. Other than this the building would be ideal for bats.

Given the proposals to undertake significant renovation and extension works to the building which could impact on a small bat roost if present within the building, the following is recommended.

It is recommended that prior to any such works which could affect bats (i.e. any works to roofs, eaves, gutters or exterior walls/brick/stonework at the upper level of the building) commencing, additional surveys by an appropriately qualified and experienced bat worker are undertaken to confirm presence/absence of bats in the building. These surveys should include a minimum of two surveys

with at least one being a dusk emergence and one being a dawn re-entry survey, with surveys being separated at least two weeks apart, between May and September. Should these additional surveys not detect any usage of the building by bats it can then be taken that the building does not support roosting bats and in that case there will be no seasonal restriction to works required.

However if bats are confirmed then works which could affect bats (i.e. any works to roofs, eaves, gutters or exterior walls/brick/stonework at the upper level of the building) must not be undertaken within the breeding season (i.e. April to September) to avoid conflicting with the breeding period for bats and to comply with legislation protecting bats. In the event bats are confirmed as being present then a derogation licence will be required from the NPWS to permit works to a confirmed bat roost.

If the additional surveys confirm bats are present then any existing entry points should be preserved by any proposed works i.e. any entry points should be left *in situ* preserved undisturbed. This may require gaps to be left open and positioning of gutters, lead flashing and tiles to be retained as they are. Where existing features (e.g. slates, lead flashing, gutters etc.) have to be removed and replaced, then the new materials should be placed to match the existing access points.

Additional recommendations and mitigation measures necessary may be recommended depending on the results of the additional bat survey.

It has also been recommended that a number of bat access slates (e.g. Habitat Bat Access Slate or similar) are included within the roof to provide long term secure roosting opportunities for bats.

While it is outside of the remit of the proposed works on the Heritage Centre, it is noted that there are additional proposals for Emily Square and the surrounding area and there may be opportunities as part of those proposals to modify the existing lighting and to provide more planting which may be more beneficial for bats.

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**APPENDIX A
PHOTOS**



Front northern elevation of building



Emily Square – taken from front of building



Rear southern elevation of building



River Barrow – survey transect taken along eastern bank, White’s castle in distance



Accessible attic space with insulation visible



Accessible attic space showing beams and roof felt in good condition.



SWIFT REPORT

FOR THE ATHY HERITAGE CENTRE IN EMILY SQUARE, CO. KILDARE

**PREPARED FOR
KILDARE COUNTY COUNCIL**

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1. Introduction

Scott Cawley Ltd. was commissioned to undertake swift surveys and provide advice in connection with same for the proposed re-development of the Heritage Centre in Athy, Co. Kildare.

The Common Swift *Apus apus*, is a summer migrant that breeds throughout Europe and much of Asia, and winters in southern Africa. In recent decades, Swift numbers have been in decline throughout many parts of their range. In Ireland, the most recent Bird Atlas 2007 - 2011 shows there has been a 26% loss in range since 1970 and a severe decline in abundance since 1990 (Balmer *et al.* 2013), while the latest Countryside Bird Survey data shows a 39% decline between 2008 and 2013 (Crowe *et al.* 2014). As a result, Swift is now of conservation concern in Ireland, and is Amber-listed (Colhoun *et al.* 2013). Reasons for their decline remain unknown, but it is thought that the loss of available nest sites due to the renovations of old buildings and the impacts of climate change could be significant factors.

All wild bird species are protected under the *Wildlife Acts 1976-2012* which makes it is an offence to injure wild birds, to wilfully disturb nesting birds, or to wilfully take, remove, destroy, injure or mutilate their eggs or nests. In line with legal protection offered to swift.

Kildare County Council's Heritage Officer requested that advice be sought regarding whether swifts are nesting in the building and on the inclusion of swift boxes on the building.

2. Site Overview

The building is located in Athy, Co. Kildare (approximate centroid Grid Reference: S 68324 93893) and is an 18th century three storey building of stone and brickwork with three pitched slate roofs. The building is currently in use as a heritage centre. The building is located in the centre of Athy town to the east of the River Barrow, on Emily Square. Photos are provided in Appendix A.

3. Characteristics of the Proposed Development

Full details of the proposed development are provided in the part VIII application documentation. In brief, the proposed development will involve renovation and extension of the existing building to include:

- Alterations and extension to, and refurbishment of the Athy Heritage Centre. The building is a Protected Structure RPS Ref AY075. The building will house a Shackleton Museum and Experience, and the extension is a two storey 82m² structure housing a stairs to the south with removal of the associated part of the central bay of the south façade.
- Refurbishment of existing building, including repointing and cleaning of masonry and brickwork, repairs to windows and replacement where necessary, re-dressing of lead linings, and repairs to roof.
- Reinstatement of 10 No. casement windows on North façade sympathetic to the original 1913 design.
- Provision of plant in attic space and associated vents to inner valleys of the roofs.
- Removal of existing 26m² mezzanine level and construction of a new 37m² mezzanine at second floor level.
- Removal of 2 No. existing stairways and one lift and associated structure, construction of a new lift and fire escape stairs to serve all floors.
- Provision of level access to entire ground floor from front entrance by raising ground floor internally.
- Removal of 1980's access ramp and steps to entrance at the West façade and replacement with new stone steps.
- Complete internal redecoration and new internal openings to allow improved circulation within the building.

- Site works associated with formation of new connections to existing public foul and surface water drainage, and existing utilities as required.
- Removal of 8 No. parking spaces to the rear of the building (Barrow Quay), provision of hard landscaping surrounding new extension and associated site works.

4. Survey Methodology

A survey was undertaken by Aebhín Cawley BSc. CEnv. MCIEEM and Sarah Robertson BSc. on the evening of 28th August 2018. Sunset on that evening was 20:26. The survey commenced at 20:00 and continued until after darkness as the survey was undertaken concurrently with a bat survey. Weather conditions on the night of survey was ideal being mild (15 degrees C), calm and dry.

The scope of the surveys was to try to ascertain whether any swifts are nesting in the building and to note any swift activity around it. Each surveyor watched a pair of facades, with one being located at the north eastern corner of the building and the other at the south western corner of the building. Binoculars were used to identify possible gaps or crevices under the roof tiles and eaves.

The survey was undertaken late in the season and beyond the time when nesting activity would be expected. Most swifts have left Ireland by mid-August. However some individuals can usually still be seen up until the start of September. It can frequently require repeated surveys to positively confirm present of breeding swifts, in particular where only a small number of nests is present. On the basis of a single late season survey it is not possible to definitively rule out the presence of breeding swifts at the Heritage Centre in Athy. The survey limitations have been addressed by the recommendations made in this report.

5. Desktop Data and Consultation

The following organisations and individuals were contacted by phone and all provided invaluable information and advice which was gratefully received:

- Paddy Sheridan (Wild Kildare)
- Tom McCormack (BirdWatch Ireland Kildare Branch)
- Helen Burke (Swift Conservation Ireland)

The local knowledge of swifts in Athy as provided by the above can be summarized as follows.

Athy is a stronghold for swifts and the latest conservative estimate is that there are at least 150 nests in Athy. Areas of particular importance for them include buildings in the following locations; St. Vincent's Hospital (est. >50 nests), the Model School (both the former burnt out building and the new school building est. 40 nests), a school near Stanhope Street (est. 22 nests), Dooley Terrace (est. 25 nests but recently declined due to works on buildings), Castlepark and Emily Square (est. 8 nests). Artificial nest structures have been provided at a number of locations in Athy in recent years and swifts have successfully bred in them, for example at a school near Stanhope Street. A swift tower was placed in Edmund Rice Square and while in 2018 swift activity and investigation of the tower was noted in 2018 they have not yet bred in it. It can take three to four years for Swifts to commence breeding in nest boxes.

While there is no confirmed local knowledge of swifts nesting in the Heritage Centre in Athy, the building is likely to have at least been suitable for them in the past. Repair works to the building over time (e.g. repairs to roofs or repointing works) might have excluded them. A local swift survey volunteer has noted low levels of swift activity (e.g. 1-2 individuals) around the south façade of the building in recent times but nesting has not been confirmed in this building.

6. Survey Results

No swifts were noted during the survey on the evening of 28th August 2018. No obvious nesting opportunities were noted (e.g. gaps under eaves or crevices in stonework). However, even with the use of binoculars, given the three storey height of the building, visibility of these features was limited. The lack of overhanging eaves might make the building less suitable and previous repairs to roofs, gutters and eaves might have excluded them if they did breed in it as some point in the past. The local sightings of swifts around the south façade is of note and although there is no confirmed local knowledge of swifts breeding in this building the possibility cannot be definitively ruled out.

7. Recommendations

Given the proposals to undertake significant renovation and extension works to the building which could impact on swifts if they are nesting within the building, the following is recommended.

It is recommended that prior to any such works which could affect swift nests (i.e. any works to roofs, eaves, gutters or exterior walls/brick/stonework at the upper level of the building) commencing additional surveys are undertaken to confirm presence/absence of nesting swifts in the building. These surveys should include a minimum of three surveys in the breeding season, with at least one of these being within July, undertaken post 18:00 and up to darkness. Given the size of the building a minimum of two surveyors will be required.

Both Wild Kildare and the BirdWatch Ireland Kildare Branch have expressed an interest in the proposed works and their members and volunteers may be interested and available to join or assist with any such future surveys.

If swifts are confirmed as being absent from the building then there will be no seasonal restriction to works required. However if breeding swifts are confirmed then works which could affect swift nests (i.e. any works to roofs, eaves, gutters or exterior walls/brick/stonework at the upper level of the building) must not be undertaken within the breeding season (i.e. May to August) to avoid conflicting with the nesting period for swifts and to comply with legislation protecting breeding birds.

If the additional surveys confirm swifts are present then any existing swift nest sites should be preserved by any proposed works i.e. any nest sites should be left in situ undisturbed preserving the existing entrance. This may require gaps to be left open and positioning of gutters, lead flashing and tiles to be retained as they are. Where existing features (e.g. slates, lead flashing, gutters etc.) have to be removed and replaced, then the new materials should be placed to match the existing access points.

It has also been recommended that swift boxes are included on the building to provide long term secure nesting opportunities for swifts. There is good evidence that placement of swift boxes on buildings in areas where swifts are known to be present will be successful and there is evidence of this success specifically in Athy and not far from the Heritage Centre. As the building is a protected structure the placement of swift boxes on the building has required careful consideration and after consulting the scheme's architect and the appointed Conservation Architect, it has been recommended that two swift boxes will be placed under the eaves of the eastern façade of the building. It is recommended that these are not wooden boxes due to the requirement for longevity for swift boxes given that swifts once established will be loyal to their nest sites for many years. A suitable type of nest box made from magnesium oxide can be obtained from an Irish supplier (<http://genesisnestboxes.ie/>) but there are a range of other European suppliers that can provide swift nest boxes made of other long lasting materials (e.g. woodcrete) and further details on these can be found from Swift Conservation Ireland (<http://www.swiftconservation.ie/nest-box-advice/>) and Swift Conservation in the UK (<https://www.swift-conservation.org/>).

Swifts may take 3-4 years before they take up occupancy in nest boxes and they are unlikely to take up residence at all unless a lure (or swift attraction call system) is used. Therefore a lure will need to be installed as close as possible to the nest boxes. There are different methods of powering (e.g. mains

electricity, battery or solar power) the lure system and for playing calls (e.g. CDs or pen drive systems). While the lure must be placed on the exterior of the building close to the nest boxes, the other elements including mains plug can be located within the building which will make it easier to access and manage. A licence is required from the NPWS to operate a lure system but it may be possible to link in with Swift Conservation Ireland's existing licence.

Finally given the proposed use of the building as an educational/museum facility the provision of a camera within one of the nest boxes would be a beneficial addition for the public and users of the facility and could be given consideration.

All of the organisations listed in Section 4 can provide detailed advice at the time of ordering and installation of nest boxes, lure system and nest box cameras.

8. Conclusions

Swifts are not confirmed to be nesting at the Heritage Centre in Athy. However there is a good population of swifts in the local area and based on local information about swifts and the limitations of the single late season survey, it is not possible to definitively rule out their presence. Therefore recommendations have been made to undertake further survey work to definitively establish presence/absence of nesting swifts.

In the event they are not nesting in this building, then there will be no requirement to seasonally restrict any works. In the event that they are nesting at this building then a seasonal restriction will apply to any works that may impact on them. Further recommendations have been made to retain any nest sites, should any be found present.

Irrespective of whether or not swifts are confirmed as nesting at this building, it has been recommended that two nest boxes are attached, along with a lure system, under the eaves of the eastern façade of the building.

If it is recommended that a copy of this report is forwarded to the organisations listed in Section 4 of this report as well as any further reports prepared for the future surveys. It is also recommended that these organisations are contacted at the time of ordering and installation of nest boxes and lure system for more advice and to inform them of what is proposed.

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**APPENDIX A
PHOTOS**



Front northern elevation of building



Emily Square – taken from front of building



Rear southern elevation of building



Western elevation of building