

Sceilg Mhichíl
World Heritage Property
OPW Works Season 2022
UNESCO Report – Final Issue 13.02.2023



OPW Oifig na
nOibreacha Poiblí
Office of Public Works

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1. Introduction

This report aims to outline the repair works completed on the UNESCO World Heritage Site of Sceilg Mhichíl in the season of 2022. The works were overseen by the Office of Public Works (OPW). The report will outline the extent of the repair works carried out in 2022 and will also briefly summarise works to be undertaken in 2023. The report will also list potential threats to the site and how these threats are being managed by the OPW.

Sceilg Mhichíl opened for tourists on 15th May 2022. The OPW work crew carried out a sweep and the necessary maintenance works to the monastic settlement and steps in advance of the 2022 tourist season. Sceilg Mhichíl officially closed for the 2022 season on 29th September 2022 due to deteriorating weather conditions. All the OPW work crew, OPW guides and sub-contractors left the island on that date.

Climate change continued to be a threat to the island. A major rock fall occurred on the Lower Lighthouse Road on 13th June 2022 and all personnel were immediately evacuated from the island. The island was closed for 3 weeks and re-opened to the public on 4th July 2022. As a result, the OPW installed a canopy (approx. 100 linear meter) on the lower lighthouse road to provide protection for visitors, OPW staff and sub-contractors on the island. All works were carried out under Ministerial Consent issued by the Minister for DHLGH.

Additionally, the OPW appointed Eamonn Costello (Kerry) Ltd in the 2022 season to install 3 no. permanent crash decks on the lower and upper lighthouse roads to replace the temporary crash decks previously installed in the 2021 season. The works to the crash decks commenced in 2022 and are to be completed in the 2023 season. All works were carried out under Ministerial Consent issued by the Minister for DHLGH.

The OPW co-ordinated with the National Monuments Service (NMS) and National Parks and Wildlife Service (NPWS) of the Department of Housing, Local Government and Heritage (DHLGH) to ensure the protection of the island's archaeology and wildlife. All works were carried out under Ministerial Consent issued by the Minister for DHLGH. All future works at the twin lighthouses will be carried out within the context of an agreed Conservation Management Plan for the sites and in accordance with Objectives of the Sceilg Mhichíl Management Plan 2020-30.

The OPW will commence the UNESCO Periodic Reporting in 2022 in collaboration with DHLGH who are the National Focal Point for reporting to UNESCO. The OPW will complete the questionnaire included in Section II of the UNESCO Periodic Reporting to be submitted to the DHLGH. The final questionnaire will be approved and submitted by DHLGH to UNESCO in 2023.

Other tasks and works undertaken in 2022 include the following:

- A digital re-survey was undertaken by PCA surveyors at the Upper Lighthouse following the debris removal.
- The Discovery Programme continued their digital monitoring programme for the inner enclosing monastic retaining wall below St. Michael's chapel.
- NPWS carried out surveys on bird species populations and nesting locations.
- OPW Conservation Architects carried out 7 no. site visits to assess and monitor the ongoing works on site.
- OPW appointed Eamon Costello (Kerry) Ltd as a main contractor for the installation of three permanent crash decks on site.

- OPW continued with the conservation works to the Upper Lighthouse Road.
- OPW appointed Alan Hayden consultant archaeologist to carry out archaeological excavations of the remaining debris at the Upper Lighthouse and archaeological monitoring of the 3 no. Crash Decks excavations works on the Lighthouse Road.
- DHLGH World Heritage Group visited Sceilg Mhichíl on 31st May 2022.
- The Sceilg Mhichíl Expert Advisory Committee (EAC) visited Sceilg Mhichíl on 21st July 2022.
- An Taoiseach Micheál Martin, Ms Martin, Maurice Buckley OPW Chairman and John O'Halloran UCC President visited Sceilg Mhichíl on 8th August 2022.
- Crossing the Line productions continued with their ongoing filming of repair and survey works as a visual record of the works on site for OPW archives.

2. General Description

The island of Sceilg Mhichíl lies 11.6 km off the most westerly point of the Iveragh Peninsula, Co. Kerry (SMR: KE 104A-001; National Grid Reference 024812 060654). The island is approximately 21.6 ha in area. The WHP is owned by the Minister for the Department of Housing, Local Government and Heritage on behalf of the Irish State. The Lower Lighthouse. Lighthouse tower and helipad are owned by the Commissioners of Irish Lights (CIL).

The island's geological composition consists of Devonian Red Sandstone, formed in the Devonian Age approximately 400 million years ago. The topography that we see today is the result of rock formations that occurred circa 100 million years ago. Sceilg Mhichíl was also cut off from the mainland during the sea level rises resulting from the end of the last ice age approximately 10,000 years ago.

There are two main components of the WHS on the island. One is on the North Peak, the monastery enclosure located on the eastern side of the island that comprises a series of terraces, dry stone enclosing walls, three cisterns, seven corbelled cells (six intact) and two oratories. There are also the remains of St Michael's Church. This part of the monastic settlement was accessed via a series of three stairways, only one of which is accessible today.

The second part of the World Heritage site is located on the South Peak with the remains of a hermitage, constructed ledges and altar remains.

The post-medieval industrial heritage of the island are the twin lighthouses and lighthouse road, built in the 1820s, the 19th-century pier, and the Commissioners of Irish Light's helipad.

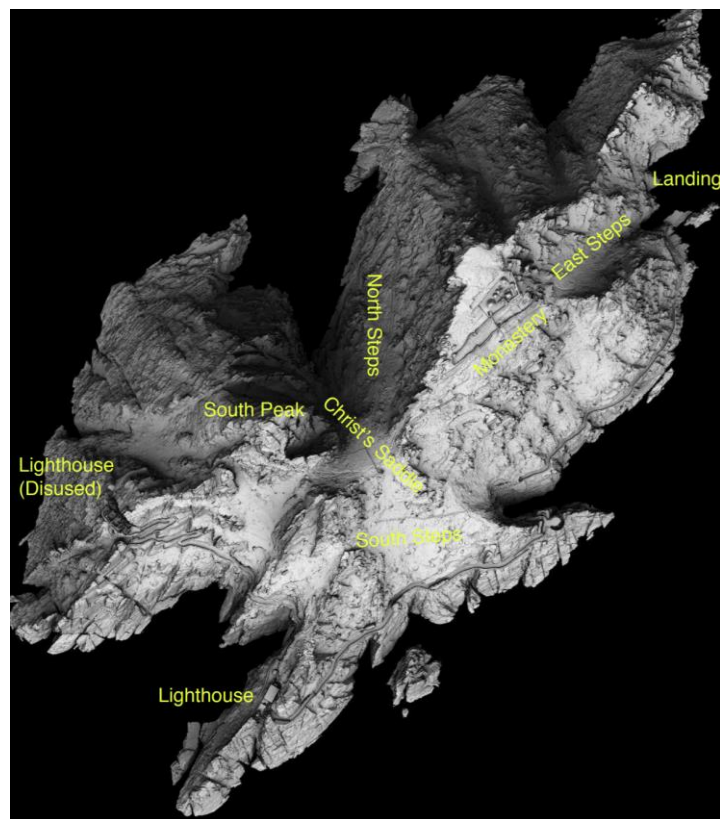


Fig.1. - LIDAR View of Sceilg Mhichíl (Bourke, Hayden, & Lynch, 2011)

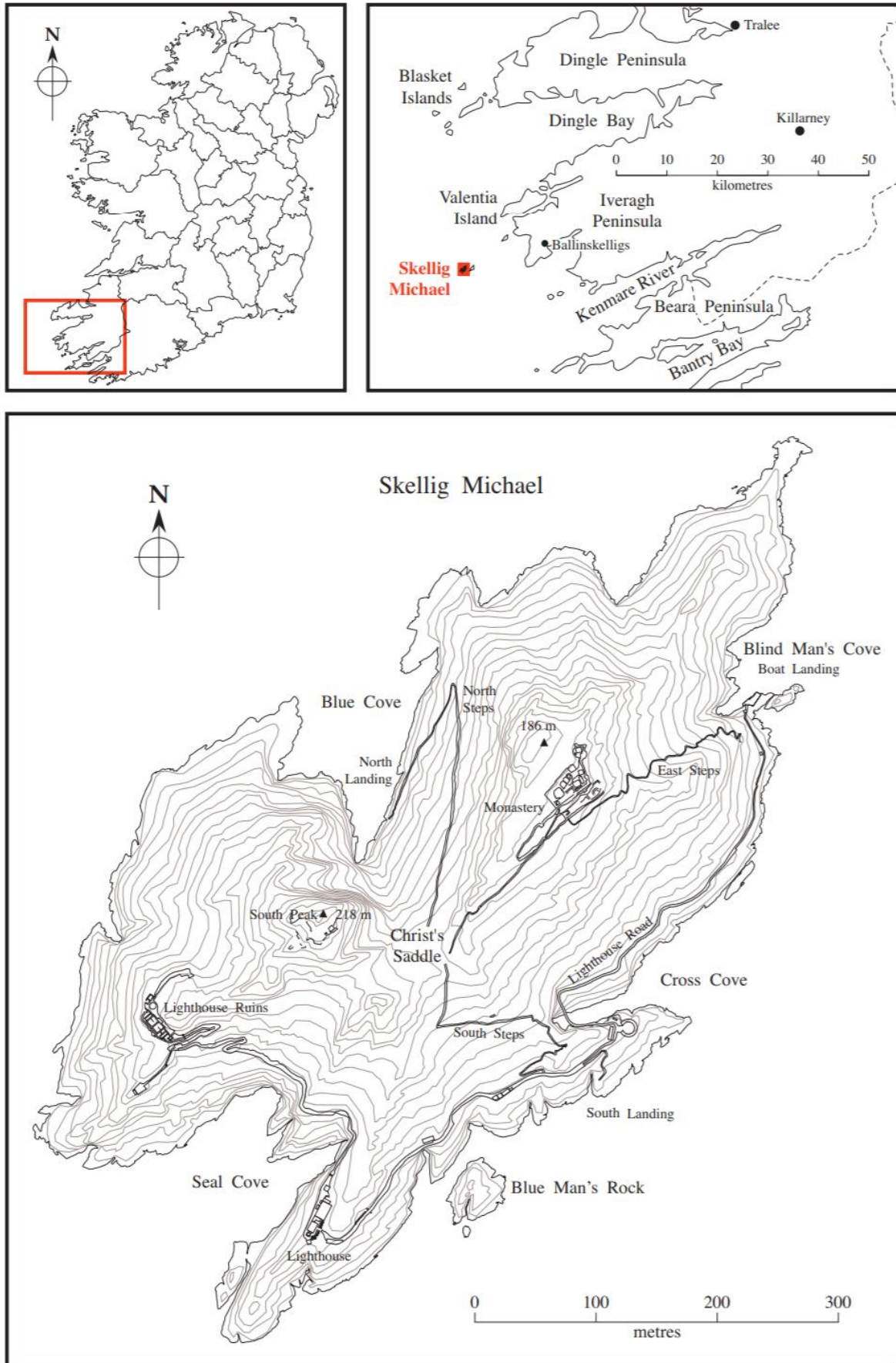


Fig. 2. - Location Map of Sceilg Mhichíl (Bourke, Hayden, & Lynch, 2011)

3. Brief Site History

The following description can be found in *Skellig Michael World Heritage Site Management Plan 2008 -2018* (Department of Environment, Heritage and Local Government; Office of Public Works, 2008, pp. 11-13):

The word *Scelllic* means a rock, particularly a steep rock. The first reference to Scelig occurs in legend, where it is given as the burial place of Ir, son of Milesius, who was drowned during the landing of the Milesians. Françoise Henry, a noted academic, mentions a text from the eighth or ninth century in which reference is made to an episode of strife between the Kings of West Munster and the Kings of Cashel. Duagh, King of West Munster, is said to have ‘fled to Scellecc’. This event is attributed to the fifth century, but we have no means of knowing if a monastic settlement already existed on the island at this time. Charles Smith, writing in 1756, refers to the monastery being founded by St Fionan, who lived in the sixth century.

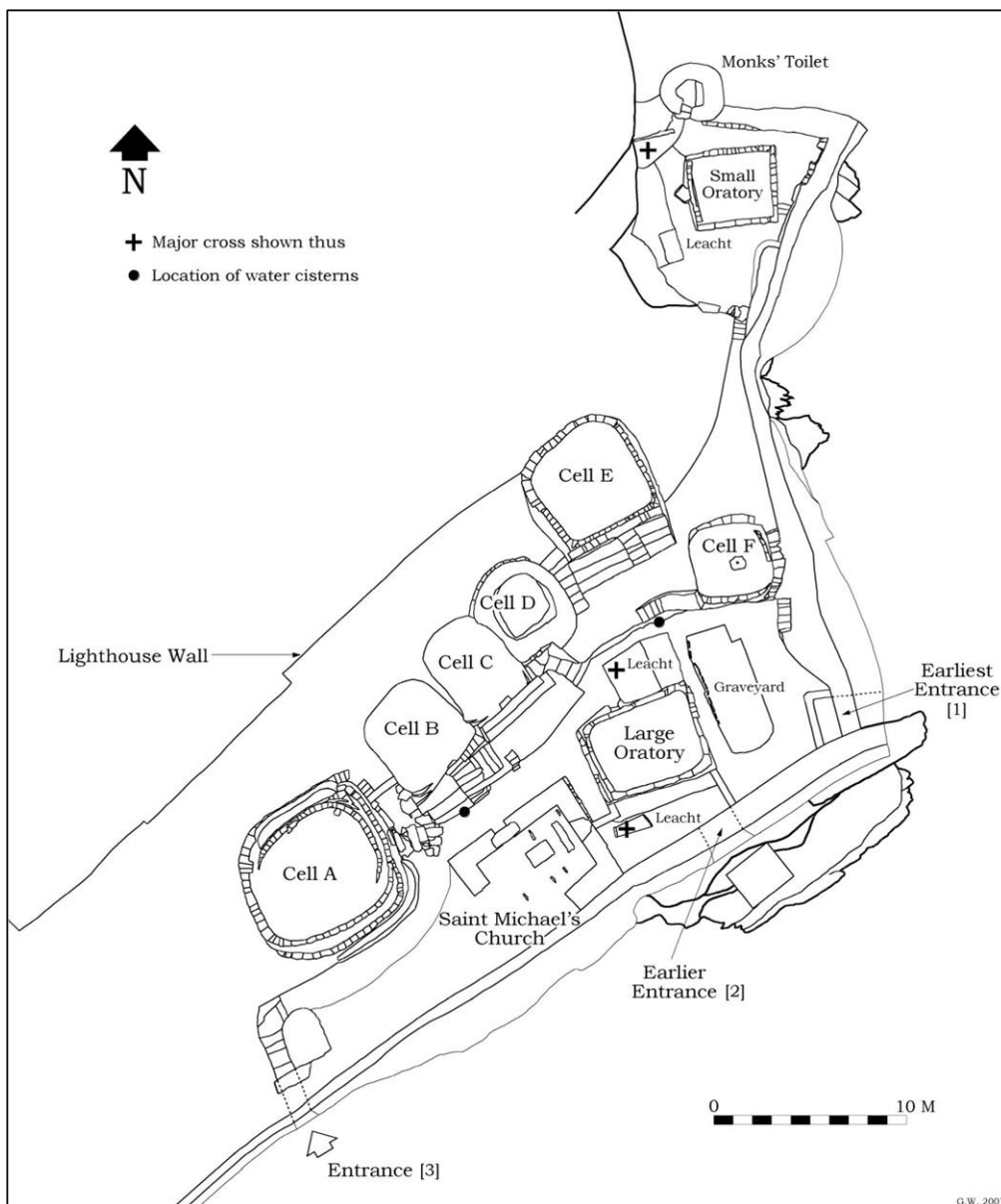


Fig. 3. - Plan of Monastic Settlement

The earliest documentary evidence is *The Martyrology of Tallaght*, written near the end of the eighth century by Mealruain. It commemorates the death of a monk from Sceilg called Suibhni ('Suibhni of Scelig'). This reference to Sceilg in the festology of one of the most celebrated monasteries of Ireland suggests that Sceilg was already well established at this time. A monastery may, perhaps, have been founded here as early as the sixth century, but in the absence of evidence, precise dating is impossible.

Sceilg is referred to in the *Annals of Inisfallen* under the year 824 and also in the *Annals of Ulster*, which give an account of the plunder of the Monastery by the Vikings. In 882 the *Annals of Inisfallen* refer to the death of 'Flann, son of Cellach, abbot of Scelec'. The Monastery was dedicated to St Michael at some time in the tenth century. This is suggested by two references to the Monastery in the *Annals of the Kingdom of Ireland* by the Four Masters. The first reads, 'Age of Christ, 950, Blathmhac of Sgeillic died'; the second reads, 'Age of Christ, 1044, Aedh of Scelic-Mhichil died'. Thus, one can assume that the dedication to St Michael occurred between the years 950 AD and 1044 AD. In monasteries, it was customary to build a new church to celebrate a dedication, and the oldest part of the church, known as St Michael's Church, fits architecturally into this period.

The church of St Michael was mentioned in *The History and Topography of Ireland* by Giraldus Cambrensis, who was in Ireland in the late twelfth century. His account of the miraculous supply of communal wine for daily Mass in St Michael's Church implies the constant occupancy of the Monastery at the time.

In the early thirteenth century, a general climatic deterioration resulted in colder weather and increased storms on the seas around Sceilg. This, along with a shift in the Irish Church from a monastic to a diocesan structure, signalled the end of Irish eremitic island colonies, with the result that the community of Sceilg Mhichíl eventually moved to the mainland at Ballinskelligs. This was probably not a single event, but is likely to have happened over a period of time. The island probably continued to be used as a dependency of the Augustinian Abbey at Ballinskelligs, the island Monastery being occupied by some monks during the summer months. The prior of Ballinskelligs was still addressed in papal letters as 'Augustinian prior of St Michael's, Roche (de Rupe)'. The Augustinians must also have been actively involved in promoting and managing pilgrimages to the island and in maintaining the structures there.

Sceilg Mhichíl remained in the hands of the Augustinian monks until 1578 when, as a result of the Desmond rebellions, Queen Elizabeth I dissolved certain monasteries that were under the protection of the Earl of Desmond. The Sceilg Islands thus passed into secular hands, to the Butler family.

Although the monastery ceased to exist, the island continued to be used as a place of pilgrimage. In 1756, Charles Smith gives his first recorded description of the rock. He refers to the difficult and dangerous pilgrimages and says that 'many persons, about twenty years ago, came from the remotest parts of Ireland to perform these penances, but the zeal of such adventurous devotees has very much cooled of late'.

In the early 1820s, the Corporation for Preserving and Improving the Port of Dublin (the predecessor of the Commissioners of Irish Lights) purchased the island from John Butler of Waterville under a compulsory purchase order for the purpose of erecting two lighthouses on the Atlantic side. These were made accessible by an improved landing on the east side and a road that was blasted out on the precipitous southern and western sides of the island.



Fig. 4. - Painting of Sceilg Mhichíl by Admiral R. B. Beechey, R.H.A., mid 1800s (CIL).

In 1880, the OPW took the monastic remains into guardianship and commenced a project for the repair of collapsed structures. Since that time, the OPW has continued in its efforts to maintain and preserve the monastic remains. The State purchased the island in 1989 from the Commissioners of Irish Lights, with the exception of the lower (working) lighthouse and its curtilage and the helipad area with its adjacent store. The Commissioners also retained a right-of-way over the road.

4. Site Access

The site is accessed by boats departing from Portmagee or Knight's Town on Valentia Island. The Commissioners of Irish Lights (CIL) conduct intermittent maintenance works on the light at the Lower Lighthouse and access the island through the use of helicopter, landing on the helipad. The OPW currently issues 15 boat licenses annually to private operators, subject to review. The number of daily visitors is capped at 180 visitors per day. Approximately 13,300 visitors landed on Sceilg Mhichíl in the 2022 season. Boats land at the pier and passengers disembark by climbing the steps. Visitors then ascend the Lower Lighthouse Road. A section of this route passes under a crash deck. The visitors reach the base of the eastern steps where an OPW guide gives an induction before directing them to the monastery steps. Additional guides are located at the monastery complex, completing the tour. On average, visitors currently spend three hours on the island. Toilet facilities for visitors are located near the existing helipad.



Fig. 5. - Tourists arriving at the landing pier

5. Works Descriptions 2022

5.1. Upper Lighthouse Road Repairs

Repair works to the Lighthouse Road commenced in the 2017 season and continued through the 2021 season. The repair works to the Lighthouse Road are nearing completion. No major repair works to the Lighthouse Road took place in the 2022 season.

Maintenance works to the Lighthouse Road were carried out in the 2022 season by OPW following rainwater runoff. The works also included the compacting of loose stones. The main purpose of the repair and maintenance works to the Upper Lighthouse is to provide safe access for workers and future visitors to the fog signalling platform and Upper Lighthouse complex.

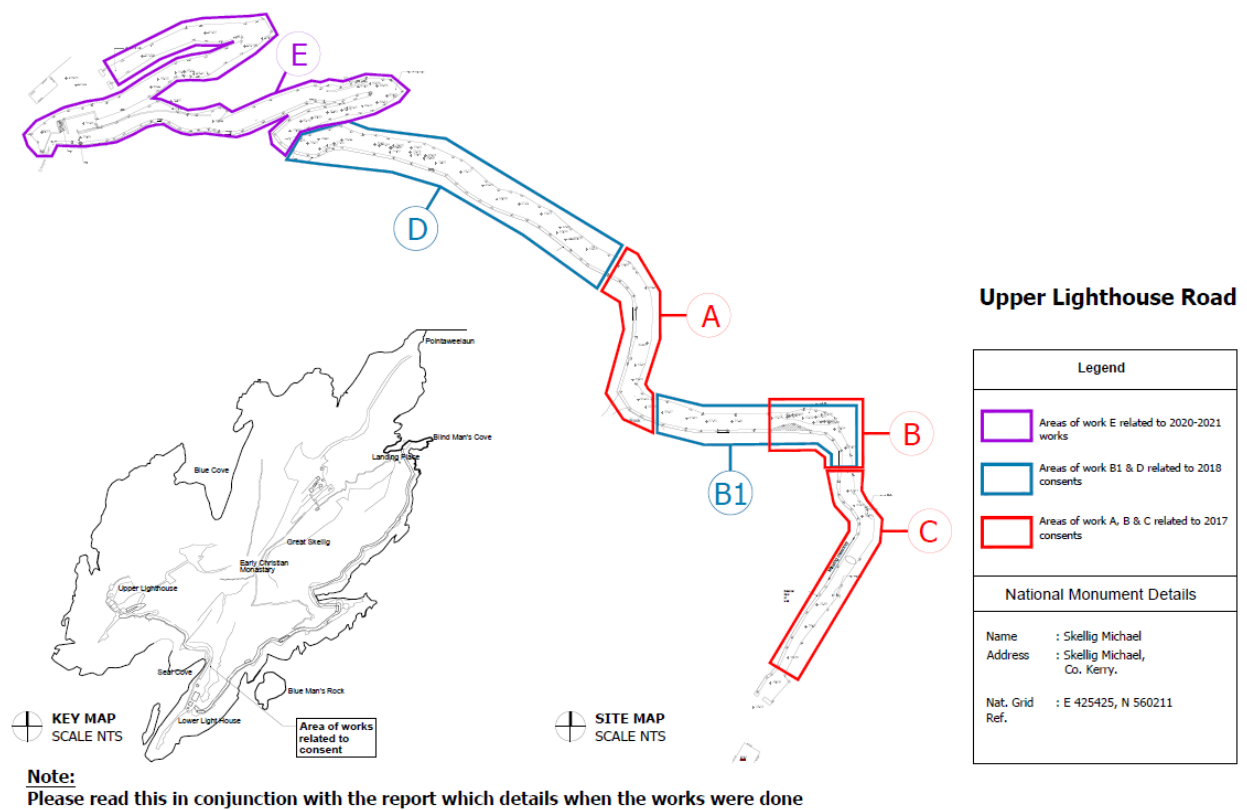


Fig. 6. - Works to Upper Lighthouse Road 2017 - 2021



Fig. 7. - View of the Upper Lighthouse Road



Fig. 8. - View of the Upper Lighthouse Road from the Upper Lighthouse gate

5.2. Digital Surveys

The OPW appointed Paul Corrigan Associates (PCA) to carry out the re-survey of the Upper Lighthouse in the 2022 season following the archaeological excavations of the debris. The survey works were successfully carried out in June 2022. PCA issued the final survey drawings to OPW in June 2022. The digital survey drawings will form the basis for Ministerial consent applications, design decisions and tender packages for proposed future conservation works to the Upper Lighthouse.

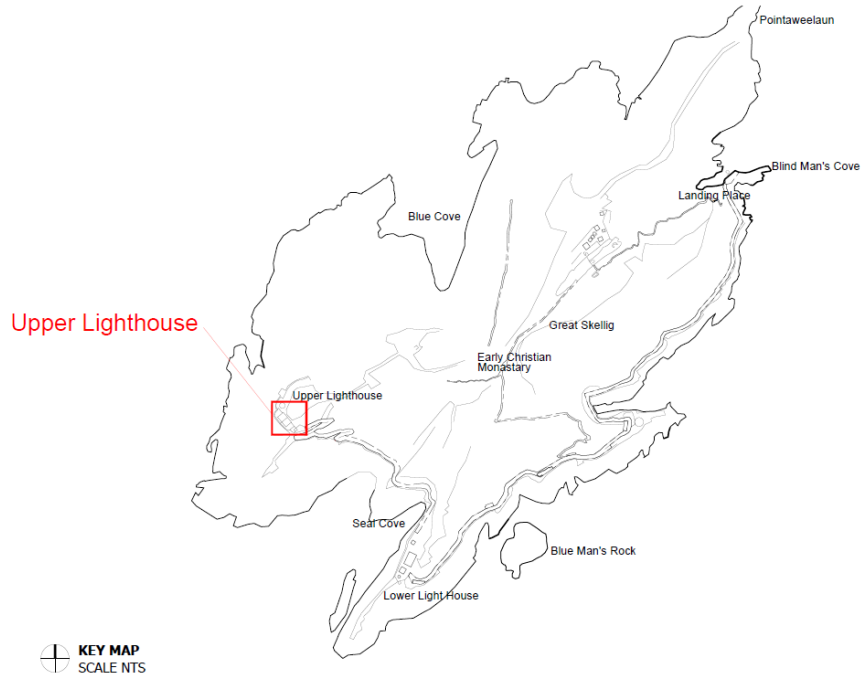


Fig. 9. - Key Plan of 2022 Digital Survey Locations



Fig. 10. - Removal of debris at the Upper Lighthouse



Fig. 11. - Removal of debris at the Upper Lighthouse

5.3. Discovery Programme Survey - Monastery

Since 2015, the Discovery Programme have been monitoring the movement of the main retaining wall of the monastic settlement. Markings were added in 2017 to the South Peak to determine the stability of the structures at that location. The Discovery Programme issue an annual report to the OPW with their findings and recommendations. In September 2022, the Discovery Programme undertook a survey of the monastic settlement and issued their report to the OPW (See Appendix A).

The 2022 report confirmed that a section of the retaining wall directly below St. Michael's chapel is currently undergoing slight movement beyond acceptable tolerances, but with a possible reduction in the annual rate compared to previous years. This section of the monastic wall has been historically susceptible to collapse, with major reconstruction having been undertaken during the 19th century.

Due to increased rainfall and pressure from runoff rainwater, the OPW will be undertaking repairs to this section of the enclosing wall over the coming years. The OPW commissioned a digital survey of the Monastery in 2021 to facilitate the future repair works. All works will be subject to Ministerial Consent and best conservation practices will be implemented. All proposed repair works will be subject to an agreed archaeological mitigation strategy.



Fig. 12. - Discovery Programmed marker point locations at monastery retaining wall

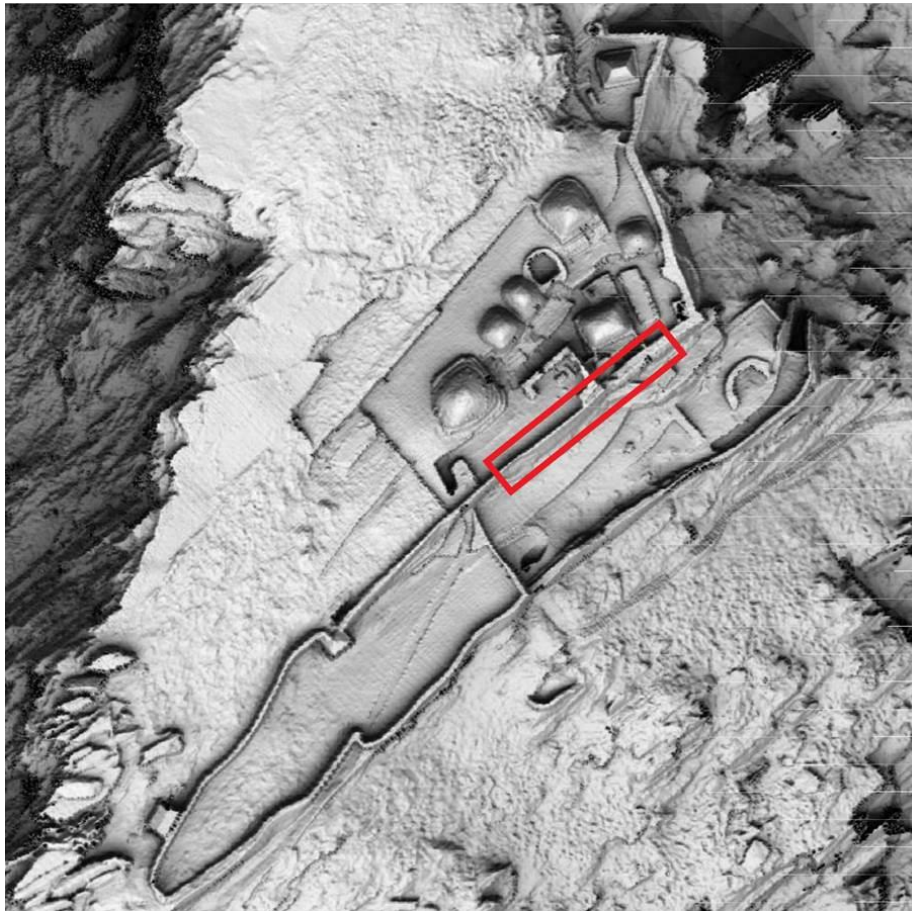


Fig. 13. - Location of movement to retaining wall below St. Michael's Chapel.

5.4. Works to Lower Lighthouse

5.4.1. Project Background

The Lower Lighthouse complex was completed in 1826 but has seen significant alterations in the intervening years. The Keepers' Houses originally had a pitched roof but this was removed in 1910 and a reinforced concrete flat roof was added. In 1968, the original lighthouse tower was demolished and a new tower constructed. The Keepers' Houses were inhabited until 1987, when the lighthouse was fully automated.

OPW is currently in negotiations with the Commissioners of Irish Lights (CIL) to lease the lower lighthouse. CIL will retain full ownership and control of the lighthouse tower and this will be inaccessible to building users. In 2019, with the permission of CIL and approved Ministerial Consent, the OPW commenced internal stripping out works including the removal of the existing dry lining to expose the original building fabric beneath.

The Lower Lighthouse will be refurbished to accommodate OPW staff, as well as NMS, NPWS and external consultants that visit the island. The aim of these works is to provide safe accommodation with sleeping, washing, cooking, administrative and communication facilities for OPW site operatives, consultants and visiting academics. The OPW are currently working on plans for the proposed Lower Lighthouse refurbishment.

DHLGH commissioned Colin Rynne from University College Cork to prepare a Statement of Significance report for the Lower and Upper Lighthouses at Sceilg Mhichíl (Appendix E). The Statement of Significance report was issued to OPW by DHLGH.

5.4.2. Installation of workers composting toilet at the Lower Lighthouse complex

The OPW obtained Ministerial Consent from DHLGH in April 2022 for the installation of a proposed new workers composting toilet and associated works including the removal of a section of the existing bund wall at the Lower Lighthouse complex. The OPW commissioned Envirico consultant ecologists to produce an Appropriate Assessment and Natura Impact Assessment to accompany the Ministerial consent application (Appendix B).

The section of the bund wall was removed in the 2022 season and the foundation for the proposed composting toilet was installed on site. The installation of the new composting toilet at the Lower Lighthouse complex was postponed until the 2023 season due to weather events and limited accommodation on site for OPW workers.

The OPW removed additional sections of the existing bund wall at the Lower Lighthouse complex to facilitate the transportation of construction materials during the Crash Decks installation works.



Fig. 14. - Bund wall removed at the Lower Lighthouse compound



Fig. 15. - Bund wall removed at the Lower Lighthouse compound



Fig. 16. - Foundation for the proposed composting toilet installed at the Lower Lighthouse compound

5.4.3. ARUP Energy and Water Strategy Report

The ongoing refurbishment of the Lower Lighthouse has highlighted many of the challenges, which have faced human settlement on the island over the millennia. The main challenge is that of water supply. There is no natural source of fresh water on the island. Historically, the monks and the lighthouse keepers collected rainwater. This required an innate knowledge of bird nesting locations, nesting season, saline levels due to windborne salt and other factors, as collected fresh water was easily contaminated due to local environmental factors. The island also lacks a supply to the main electrical grid. The Lower Lighthouse will be entirely off grid and energy usage proposals require expert advice.

The OPW commissioned ARUP to undertake a report for an energy and water strategy for the Lower Lighthouse complex in 2020. The report recommended the use of solar photovoltaic panels, the delivery of fresh potable water to the island by boat, the use of recycled water for other purposes, a natural ventilation solution and the use of composting toilets. The OPW are now seeking to appoint a consultant M&E engineer for the proposed M&E works at the Lower Lighthouse. The OPW are also seeking to appoint a consultant structural engineer for the proposed works at the Lower Lighthouse.

5.5. Works to Upper Lighthouse

5.5.1. Project Background

The Upper Lighthouse is located at the end of the Upper Lighthouse Road and is in a ruinous state. The construction of the Upper Lighthouse began in 1821 together with the Lower Lighthouse. The upper light only functioned until 1870 due to the establishment of a new light on Inishtearaght, 22 miles north of Sceilg Mhichíl. The Upper Lighthouse consists of a lighthouse tower and dwellings which were formerly used by lighthouse keepers. These were built using rubble masonry, cut stone, brickwork and slate cladding on the outer walls. The dwellings were one storey buildings with attic rooms on top.

The proposed works to the Upper Lighthouse are subject to further investigation by OPW and DHLGH. The aim will be to give the visitors a greater sense of how the lightkeepers and their families lived and worked on the island in the 19th century. All proposed works will be subject to DHLGH Ministerial Consent.

The OPW appointed Alan Hayden Consultant Archaeologist in the 2021 season to carry out extensive archaeological excavations of the existing debris at the Upper Lighthouse. A section of the debris was left in situ due to the presence of nesting birds at the time. Alan Hayden carried out archaeological excavations of the remaining debris at the Upper Lighthouse in the 2022 season.

The OPW appointed Paul Corrigan Associates (PCA) to carry out the re-survey of the Upper Lighthouse in the 2022 season following the archaeological excavations of the debris (see section 5.2 above).

The OPW submitted a DHLGH Ministerial Consent for the repair of the Upper Lighthouse Outer Gate Pier in January 2021. The OPW also obtained DHLGH Ministerial Consent for the repair works to the Upper Lighthouse sea wall in April 2021. The works were postponed in the 2022 season due to weather events and limited accommodation on site. The OPW will be installing scaffolding and carrying out repair works to the sea wall in the 2023 season.



Fig. 17. - Aerial view of the Upper Lighthouse and sea wall



Fig. 18. - Aerial view of the Upper Lighthouse and sea wall



Fig. 19. - View of the existing sea wall at the Upper Lighthouse

5.6. Puffin Survey

The School of Biological, Earth & Environmental Sciences, University College Cork led by Mark Jessopp and Jamie Darby conduct a puffin survey at Sceilg Mhichíl each year. The aim of the research is to track the movements of the breeding Sceilg Mhichíl puffin population outside the breeding season. However, due to an outbreak in avian flu, the surveys works were cancelled during the 2022 season.

5.7. National Parks and Wildlife Services (NPWS) Surveys

The NPWS conducted surveys to monitor cliff nesting seabirds and artificial nests installed on the island in July 2022 (Appendix C). The surveys were focused on the storm petrel and Manx shearwater species in particular. The aim of the survey works is to assess the potential impacts on the seabird populations of Sceilg Mhichíl.

The NPWS also installed cameras on the island for seabirds monitoring in May and September 2022. The 2022 survey works carried out by NPWS included the monitoring of Kittiwake, Storm Petrel, Fulmar and Manx Shearwater populations on the island. The NPWS issued their end of year seabirds monitoring report to DHLGH and OPW (Appendix D). Additionally, the NPWS continued to monitor the significant impact of the avian influenza on seabird populations on Sceilg Mhichíl.

The NPWS appointed an Ornithological Clerk of Works for the duration of the 2022 season to monitor the potential impact of the ongoing works on the island's wildlife. The OPW will endeavour to continue collaboration with the NPWS into the future for the continuous seabirds monitoring on Sceilg Mhichíl.



Fig. 20. - Example of storm petrel best box (NPWS)

5.8. Sceilg Mhichíl 2020 – 2030 Management Plan

The final version of the Sceilg Mhichíl 2020 – 2030 Management Plan was formally launched by the DHLGH and OPW on 16th December 2021 and superseded the 2008 – 2018 Management Plan. The new Management Plan has been produced by DHLGH, in conjunction with the OPW, after being developed following consultation with local groups, non-governmental organisations and other interested parties. The plan provides information on the various aspects of the management policy for Sceilg Mhichíl, including conservation and preservation, visitor management, the legislative protections it enjoys and the development considerations necessary to protect the site into the future. Management challenges are also addressed, such as threats to the biodiversity and the impacts of climate change. All future works on the island will be closely monitored to assess their potential impact on wildlife.



Fig. 21. - The Management Plan 2020-2030 sets out the protocols and goals for the future repair works on Sceilg Mhichíl

5.9. Archaeological Works

The OPW appointed Alan Hayden Consultant Archaeologist for the 2022 season to monitor works on site and carry out archaeological excavations as required.

Archaeological excavations of the remaining debris at the Upper Lighthouse were carried out by Alan Hayden in the 2022 season. This section of debris was left in situ in 2021 due to the presence of nesting birds at the time. A final report was issued to the OPW describing the remaining archaeological excavations carried out at the Upper Lighthouse (Appendix O).

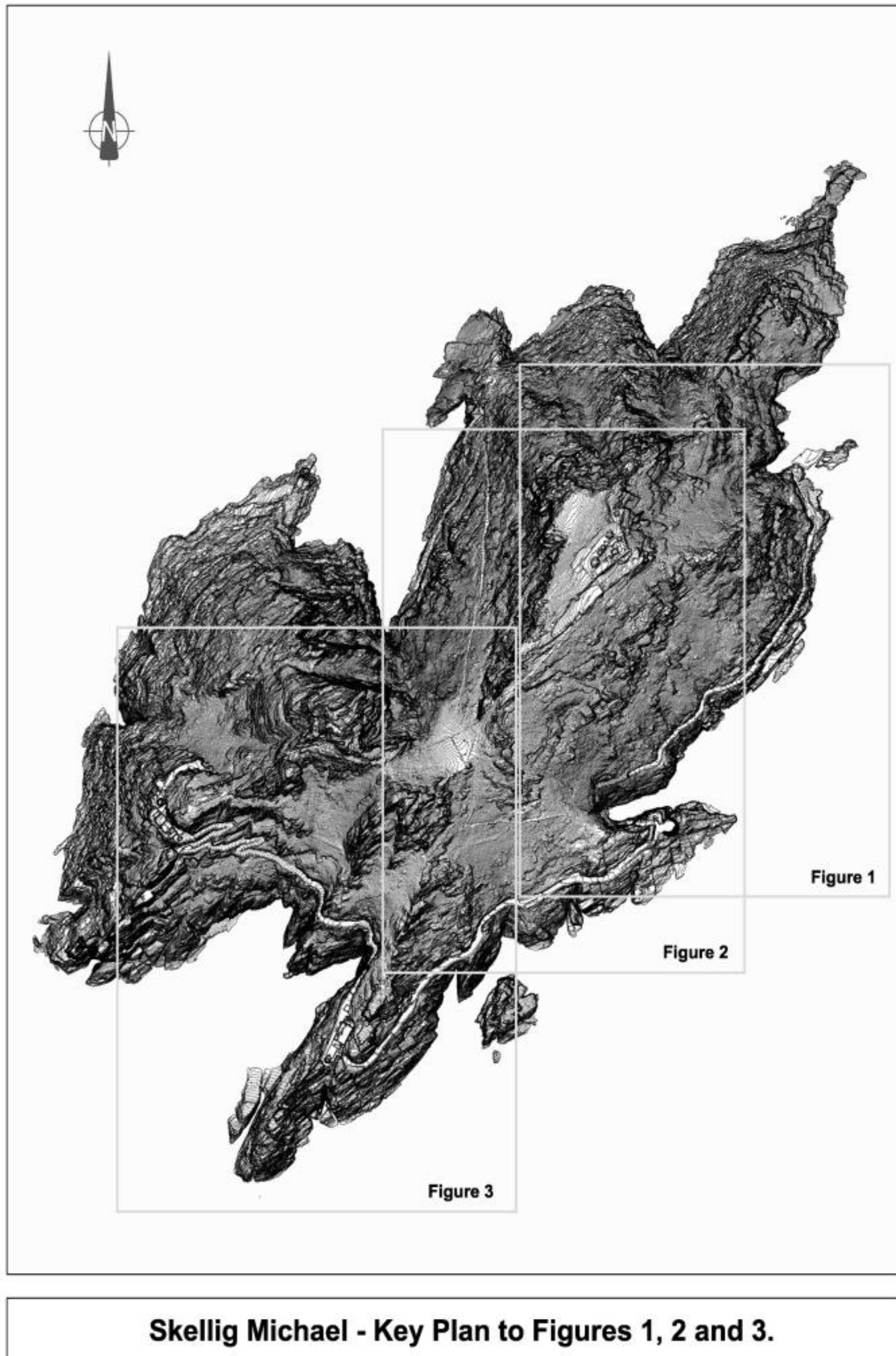
The installation of the 3 no. crash decks on the lighthouse road were archaeologically monitored by Alan Hayden. The works involved the removal of extensive areas of the road edging, cable channel and drain surface. These were stockpiled and will be re-instated in 2023 upon completion of the works on the crash decks. The existing drain and shore under Crash Deck 3 were not interfered with during the construction works. The final archaeological monitoring report was issued by Alan Hayden to OPW (Appendix P).

The installation of the canopy on the lower lighthouse road following the rock fall in June 2022 was carried out under archaeological monitoring by Alan Hayden. The works included excavation works to install the bases of the poles. All the stones removed from the lateral drain were re-instated upon completion of the works. The final archaeological monitoring report was issued by Alan Hayden to OPW (Appendix Q).

Additional minor works were carried out on Sceilg Mhichíl over the 2022 season that required archaeological monitoring. These included the removal of bund walls at the Lower Lighthouse complex, the removal of part of the east side gateway located to the north of the Lower Lighthouse (Appendix N), examination of remains of the Lower Lighthouse iron panels, and the excavation of nest boxes above the Monastery. The final archaeological monitoring report for the minor work was issued by Alan Hayden to OPW (Appendix R).

5.10. Geological report

The OPW appointed Creagh House Environmental (CHE) Ltd to carry out a 'Geological Context of Rock fall Potential' at Sceilg Mhichíl. CHE Ltd carried out a site visit in July 2022 and issued their final report to the OPW in January 2023 (Appendix S). The purpose of the inspection and report is to examine the potential for rock falls Lower and Upper Lighthouse roads and the North, South and East Steps. The report also included the identification of potential rock fall zones on Sceilg Mhichíl.



Skellig Michael - Key Plan to Figures 1, 2 and 3.

Fig. 22. – Key Plan for the geological survey areas

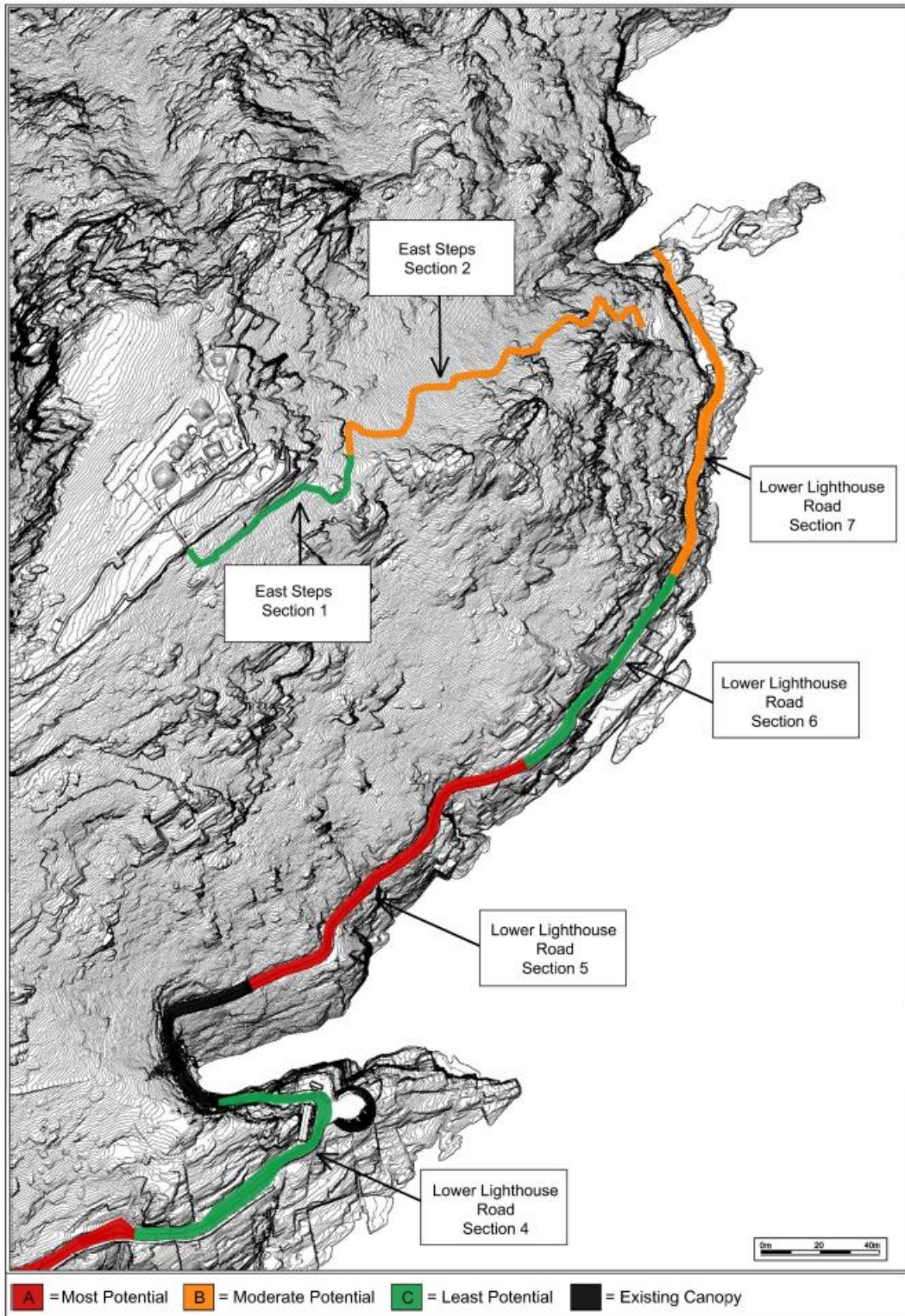


Figure 1. Skellig Michael - East.

Fig. 23. – Potential rock falls on the Lower Lighthouse Road and East Steps

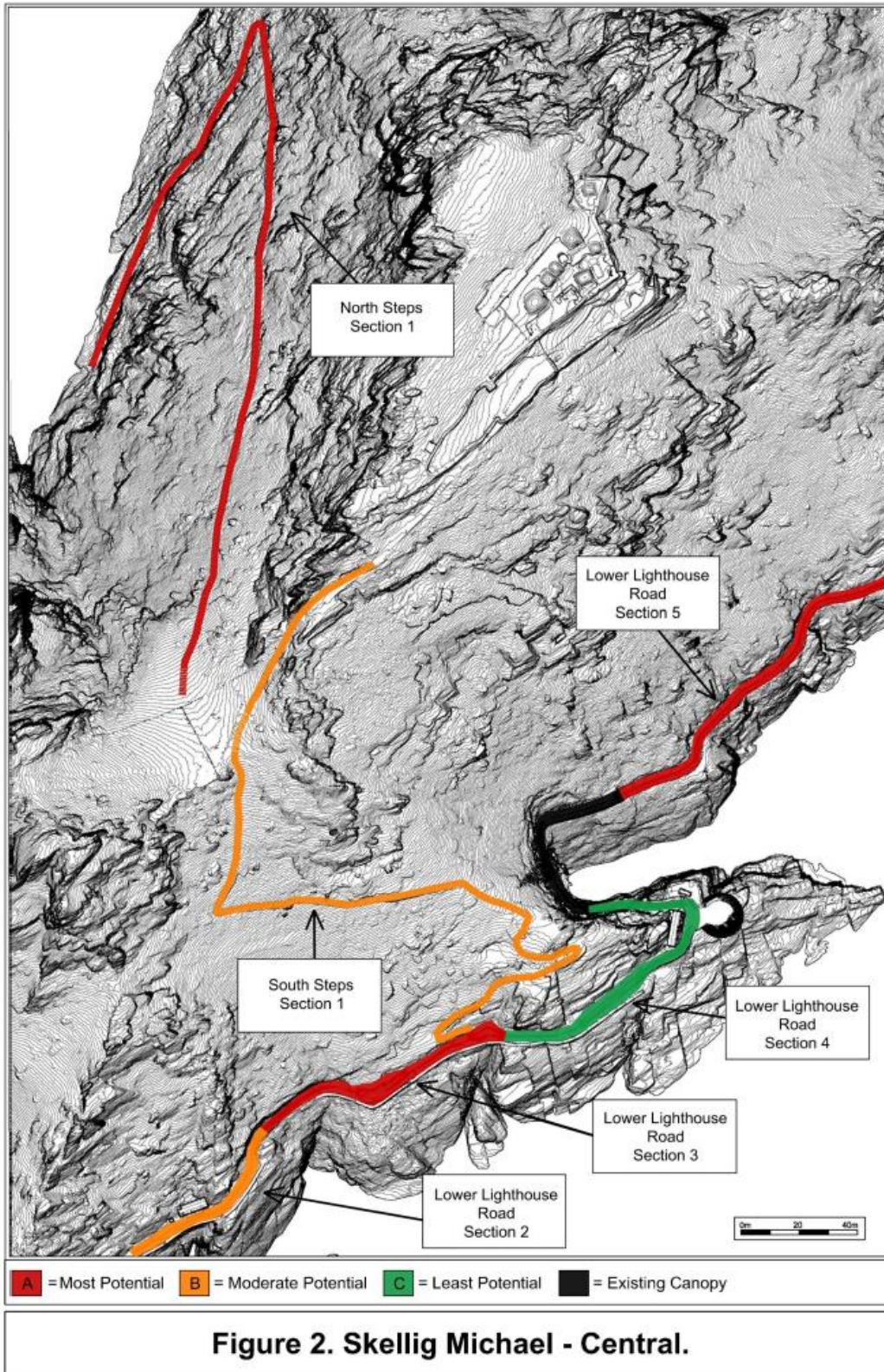


Fig. 24. – Potential rock falls on the Lower Lighthouse Road, South Steps and North Steps

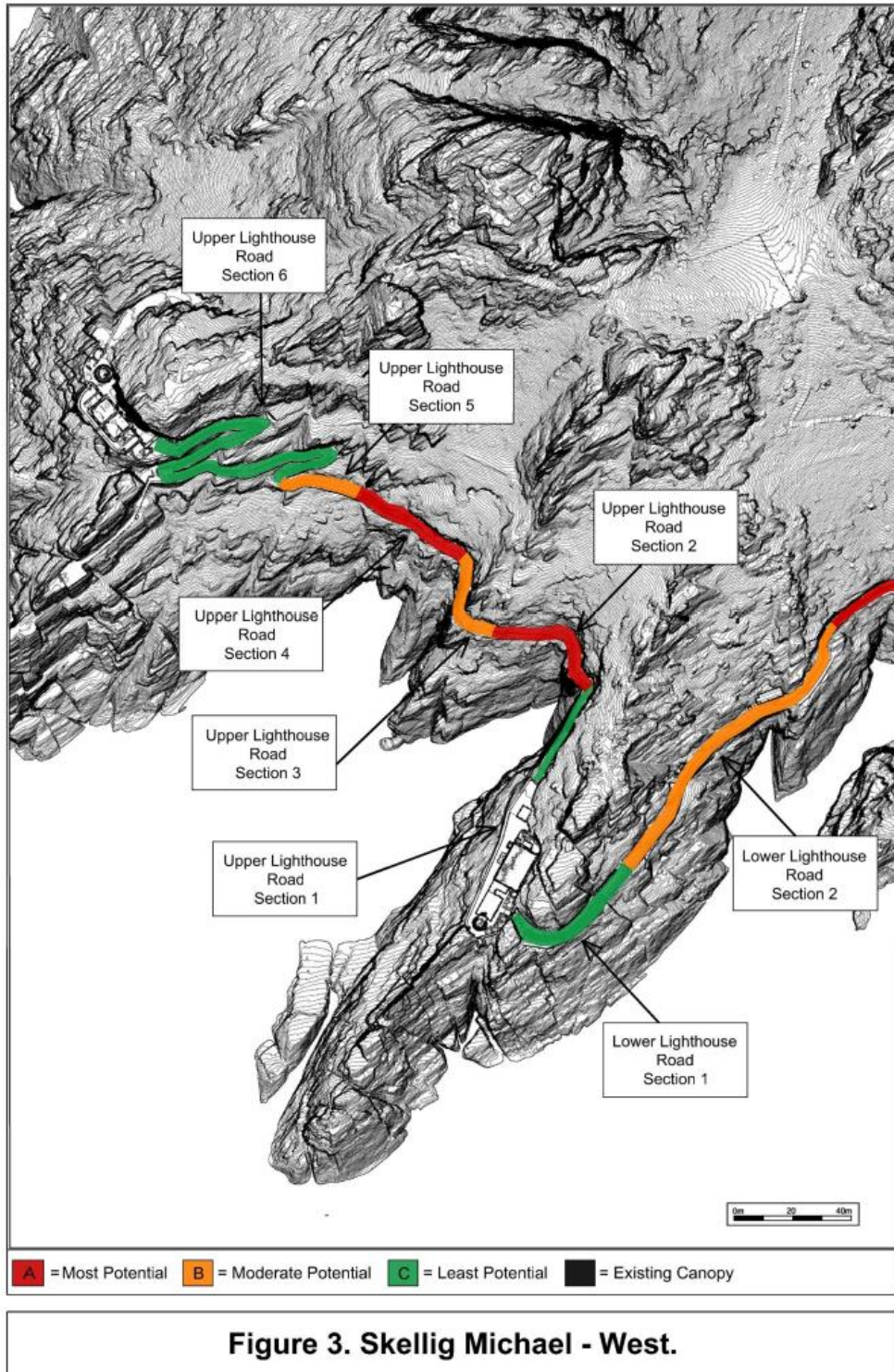


Fig. 25. – Potential rock falls on the Lower Lighthouse Road and Upper Lighthouse Road

5.11. Carrying Capacity

The OPW appointed Creagh House Environmental (CHE) Ltd to carry out an ‘An Analysis of the Visitor Carrying Capacity of the Monastic Enclosure’ at Sceilg Mhichíl. The final report was issued to the OPW in January 2023 (Appendix F). The carrying capacity study included the impacts, evaluation of mitigation measures, residual impacts, and recommended actions for visitors’ access to Sceilg Mhichíl.

5.12. OPW Architects’ & Design Team Site Visits

The OPW Conservation Architects undertook seven site visits to Sceilg Mhichíl over the 2022 season, from May to September led by Fergus McCormick OPW Senior Conservation Architect. A site visit report was drafted by the OPW with a photographic record following each site visit. The site visit reports recorded progress of all repair works and were issued by the OPW following each site visit.

An Taoiseach Micheál Martin, Ms Martin, Maurice Buckley OPW Chairman and John O’Halloran UCC President visited Sceilg Mhichíl on 8th August 2022. The DHLGH World Heritage Group also visited Sceilg Mhichíl on 31st May 2022. The Sceilg Mhichíl Expert Advisory Committee (EAC) also visited the island on 21st July 2022.

Site Visit No.	Date
1	31/05/2022
2	17/06/2022
3	07/07/2022
4	21/07/2022
5	08/08/2022
6	24/08/2022
7	20/09/2022

List and Dates of OPW National Monuments Architects’ visits



*Fig. 26. - DHLGH World Heritage Group visit to Sceilg Mhichíl on 31.05.2022
From left to right - Patrizia La Piscopia DHLGH Archaeologist, Pat O’Shea OPW Foreman, Fergus McCormick OPW Senior Architect, John Knightly DHLGH, Jenny Dimond DHLGH, Ross Waters DHLGH, Emer Connolly DHLGH – photo taken by Connie Kelleher DHLGH*



Fig. 27. - EAC Group visit to Sceilg Mhichíl on 21.07.2022

From left to right - Brian Power (Envirico), Nigel Roche (OPW), Ed Bourke (DHLGH), James O'Donoghue (OPW), Maurice Fitzgerald (OPW), Dermot O'Dwyer (EAC), Pat O'Shea (OPW), Michael Ryan (EAC), Connie Kelleher (DHLGH), Finbar Murphy (OPW QS), Michael MacDonagh (DHLGH), Colin Rynne (EAC), Loughlin Keely (EAC), Fergus McCormick (OPW), Alan Hayden (Consultant Archaeologist), Stephen Newton (EAC).



Fig. 28. - The Taoiseach Micheál Martin visit to Sceilg Mhichíl on 08.08.2022 - From left to right - Photo taken at the Upper Lighthouse Maurice Fitzgerald (OPW Killarney District Works Manager), Pat O'Shea (OPW Sceilg Mhichíl Site Manager), Connie Kelleher (DHLGH Senior Archeologist), The Taoiseach Micheál Martin, Maurice Buckley (OPW Chairman), Fergus McCormick (OPW Senior Architect), Alan Hayden (Consultant Archaeologist), Brian Power (Envirico Ecological Clerk of Works)



Fig. 29. - The Taoiseach Micheál Martin visit to Sceilg Mhichíl on 08.08.2022 Bob Harris OPW Supervisor Guide briefing The Taoiseach Micheál Martin and his wife on the history of the Monastery

5.13. Audio-visual Recording of 2022 Works by Crossing the Line Productions

OPW commissioned Crossing the Line Productions to film works on the island for the 2022 season. The aim of the film footage is to provide a visual record of the works during the 2022 season. An audio-visual synopsis of the 2022 works will be produced and issued to the OPW in 2023. The audio-visual files produced by Crossing the Line acts as a record of works in conjunction with site reports and photographic records.



Fig. 30. - Crossing the Line Productions filming on site at Sceilg Mhichíl

6. 2022 Challenges

6.1. Rock Collapse & Climate Impact

Rock-falls have increased in frequency in the past five years, due to the effects of climate change. The high levels of precipitation are leading to soil erosion and rock falls. The substantial rock fall which occurred in 2020 on the lighthouse road near the site huts resulted in the installation of a temporary crash deck at this location and at another two high risk locations on the Upper Lighthouse Road to protect OPW operatives from falling debris.



Fig.31. - Rock Fall on 27th July 2020

A serious rock fall occurred on the lower lighthouse road on 13th June 2022. The island was closed to the public with immediate effect for 3 weeks from 13th June 2022 and re-opened on 4th July 2022. A site visit was carried out on 17th June 2022 by OPW Senior Architect, OPW Safety Officer, MWP Consultant Engineers and CHE Ltd Consultant Geologist.

CHE Ltd Consultant Geologists were commissioned by OPW to issue a reconnaissance report on the geological context of the rock fall that occurred on the lower lighthouse road (Appendix G). The report included an assessment of potential rock falls on the lower lighthouse road. The area where the rock fall occurred was deemed as most potential for rock falls by CHE Ltd.

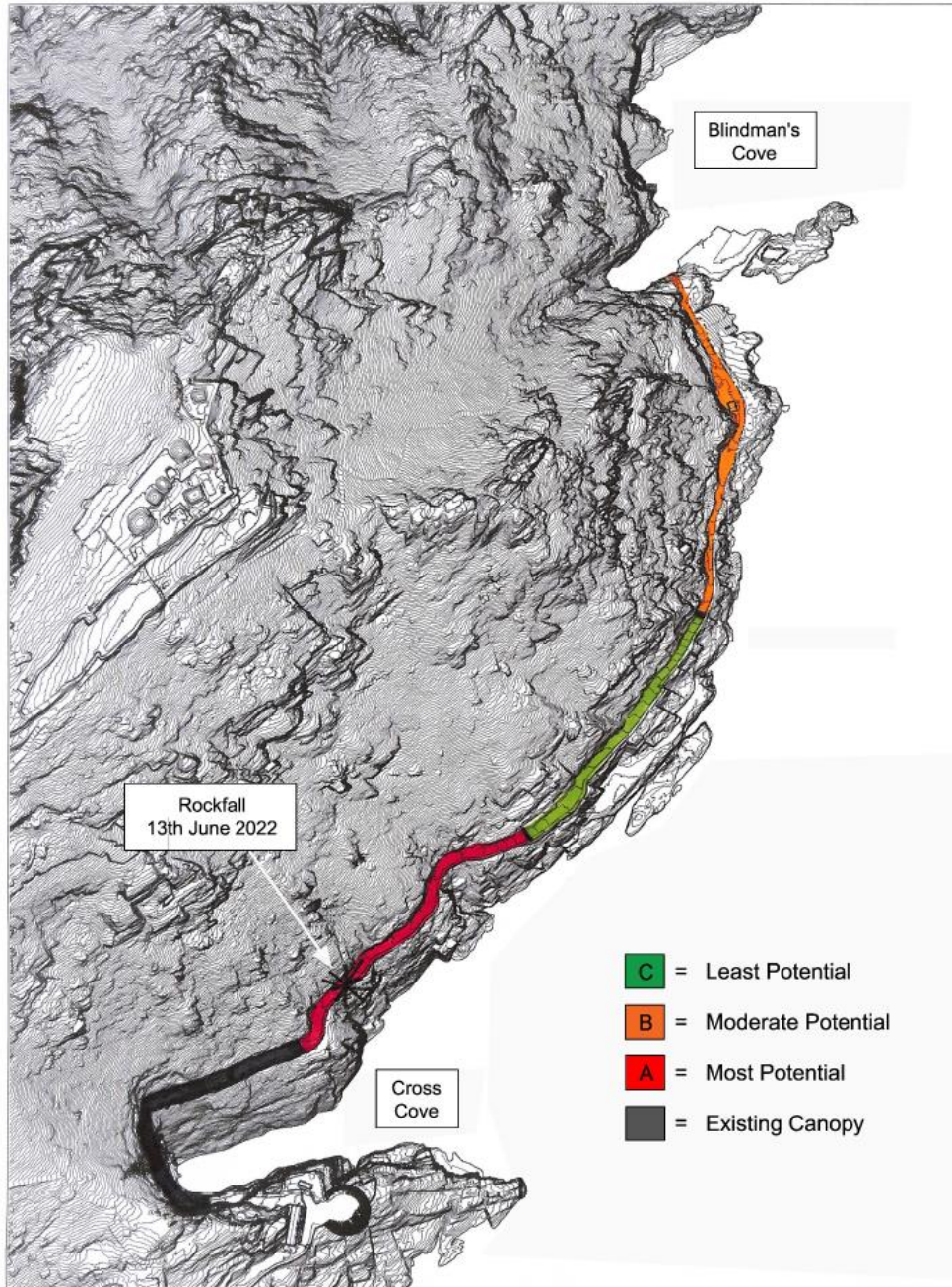


Figure 1. Potential for Rockfall: Lower Lighthouse Road - "Relative" Assessment.

Fig. 32. - Areas of potential rock falls on the Lower Lighthouse Road

Additionally, a safety sweep of loose stones and debris was carried out by the OPW crew on 20th June 2022 in the location of the rock fall under the monitoring of the Ecological Clerk of Works. A report was issued to the OPW by the Ecological Clerk of Works (Appendix H). The main purpose of the ecological monitoring is to minimise and eliminate any possible interference with the breeding bird population in the area of the safety sweep.

To mitigate the effects of rock falls, the OPW installed a new canopy on the lower lighthouse road of approximately 100 linear meters in length following a grant of Ministerial Consent by DHLGH. The Ministerial consent application was accompanied by an Appropriate Assessment / Natura Impact Assessment produced by Envirico Ltd (Appendix I), and an Archaeological Impact Assessment produced by Alan Hayden Consultant Archaeologist (Appendix J).



Fig. 33. - View of the existing rock from the rock fall that occurred on 13th June 2022 on the Lower Lighthouse road



Fig. 34. - View of the canopy being installed at the Lower Lighthouse road following the rock fall that occurred on 13th June 2022



Fig. 35. - View of the canopy being installed at the Lower Lighthouse road following the rock fall that occurred on 13th June 2022



Fig. 36. - View of the canopy being installed at the Lower Lighthouse road following the rock fall that occurred on 13th June 2022



Fig. 37. - View of the canopy installed at the Lower Lighthouse road following the rock fall that occurred on 13th June 2022



Fig. 38. - View of the canopy installed at the Lower Lighthouse road following the rock fall that occurred on 13th June 2022

Another rock fall was recorded on the Upper Lighthouse road which occurred before OPW accessed the island in the 2022 season in the location of crash deck no. 2. The rock fall caused significant damage to the sea wall. The OPW installed a temporary railing as a temporary safety measure in the location of the rock fall. The OPW will be carrying out repair works to the damaged section of the sea wall in the 2023 season.



Fig. 39. - View of the rock fall in the location of crash deck no.2 on the Upper Lighthouse road



Fig. 40. - View of the rock fall in the location of crash deck no.2 on the Upper Lighthouse road



Fig. 41. - Temporary safety railing installed on site by OPW where the rock fall occurred in the location of crash deck no. 2 on the Upper Lighthouse road

6.2. Crash Decks Installation Works

The proposed Crash Decks installation works commenced in the 2022 season on Sceilg Mhichíl. The OPW obtained DHLGH extension to Ministerial Consent in July 2022 for the installation of the permanent crash decks. The extension to Ministerial consent was based on the revised crash decks design provided by Downes Associates consultant structural engineers. The Ministerial consent application also included an 'Archaeological and Mitigation Strategy for the installation of three Crash Decks' document prepared by Alan Hayden consultant archaeologist (Appendix L).

The OPW appointed Eamonn Costello (Kerry) Ltd as main contractor the Crash Decks installation works following a tender process. The installation of the permanent crash decks commenced in the 2022 season. To facilitate the transportation of construction materials, the main contractor installed a temporary crane at the landing pier. The structures of 3 no. crash decks were installed on site by the main contractor. The works were halted on 29th September 2022 due to deteriorating weather conditions. The stainless steel mesh and canopy for the 3 no. crash decks will be installed by the main contractor in the 2023 season.

The installation of permanent and robust crash decks is critical for the safety and wellbeing of OPW workers on site and for the future access and use of the upper lighthouse road by visitors. The viability of the island as an accessible tourist location is dependent on safe access conditions on the Lighthouse roads.



Fig .42. - Crane installed at the landing pier by Eamon Costello (Kerry) Ltd to facilitate lifting of steelwork and other heavy construction materials

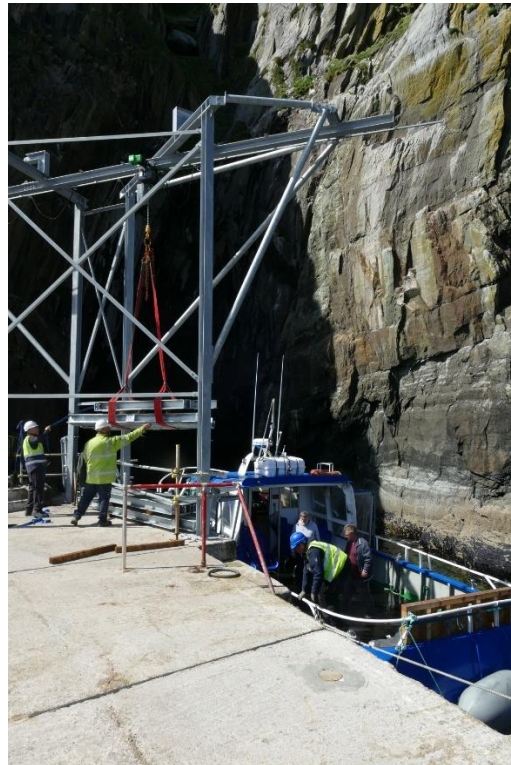
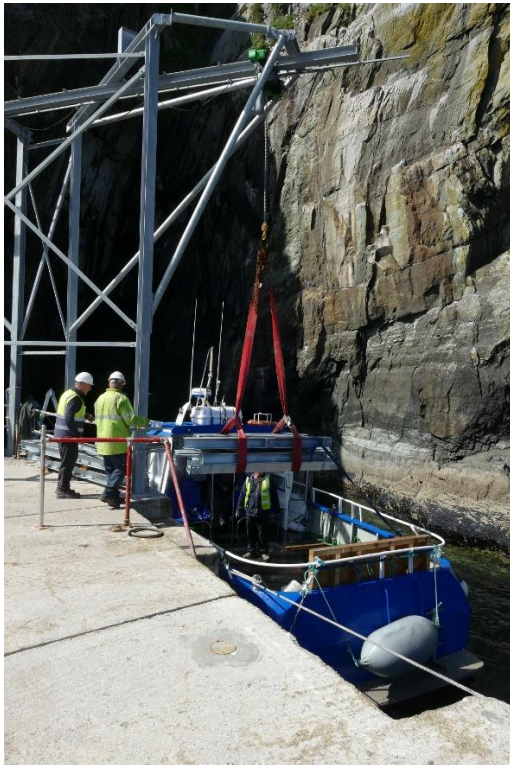


Fig. 43. - Crane installed at the landing pier by Eamon Costello (Kerry) Ltd to facilitate lifting of steelwork and other heavy construction materials



Fig. 44. - Crash Deck No. 1 – Steel structure installed on site



Fig. 45. - Crash Deck No. 2 – Steel structure installed on site



*Fig. 46. - Crash Deck No. 3 – Installation of concrete foundation and associated ground works on site
(Photo taken by Alan Hayden)*



*Fig. 47. - Crash Deck No. 3 – Installation of concrete foundation and associated ground works on site
(Photo taken by Alan Hayden)*



Fig. 48. - Crash Deck No. 3 – Installation of steel foundation on site (Photo taken by Alan Hayden)



Fig. 49. - Crash Deck No. 3 – Steel structure installed on site

6.3. Landing Pier

The OPW are also considering repair and enhancement works to future proof the landing pier against the effects of climate change. Measures will need to be discussed and agreed with DHLGH, including the possibility of constructing a wall on the pier to protect the landing area from increased swells and higher tides. There is a more long-term strategy of increasing the height of the pier to accommodate predicted sea level rises due to climate change.

OPW are in discussion with Met Éireann, the Irish national meteorological organisation, regarding the possible installation of a weather station on the site to provide an accurate record of weather events and to monitor changing climatic patterns.

6.4. Security

OPW guides typically have a full-time presence on the island throughout the tourist season. They are housed on the island and provide an informal security presence. Unauthorised landings outside the tourist season are undocumented and unquantified. OPW operatives work on the island from Monday to Friday. Due to the lack of a guide presence in the 2020 season, the site was exposed to unauthorised landings and excursions during the weekends. No damage was reported. A number of attempted landings were discouraged by operatives during the working week. The OPW has a number of signs in place warning unauthorised trespassers of the dangers posed to them; however, this alone is not enough of a deterrent. An unauthorised drone was also noted on one of the site visits. This occurred during the peak of the nesting season and could have caused potential stress and danger to nesting seabirds.

The OPW will endeavour to provide greater security to the site. The OPW are proposing to install CCTV and solar panels on the storage building adjacent to the landing pier. The OPW were granted DHLGH Ministerial Consent in April 2022 for the proposed installation of CCTV on the storage building adjacent to the landing pier. Technical information was provided by OPW M&E Engineering section to accompany the Ministerial consent application. A Natura Impact Statement Document was commissioned from Envirico specialist environmental consultant to accompany the consent application (Appendix M). The CCTV installation works were not carried out in the 2022 season due to unfavourable weather conditions. It is hoped to carry out the CCTV installation works in the 2023 season.



Fig. 50. - Proposed location of CCTV on the storage building adjacent to the landing pier

7. 2023 Objectives

The objectives for the 2023 season can be summarised as follows:

- Collaboration with DHLGH on the drafting of the Lower and Upper Lighthouses Conservation Plan to inform future works, mitigation strategies and research frameworks for the lighthouse structures.
- The completion of the UNESCO Periodic Reporting in collaboration with DHLGH.
- Continuation of the repair works to the Lower Lighthouse.
- The installation of new OPW workers composting toilets in the compound of the Lower Lighthouse.
- Continuation of the repair of the Upper Lighthouse road and seawall under archaeological supervision.
- Repair works to the Upper Lighthouse buildings and entrance gate pier.
- Repair works to the Upper Lighthouse sea wall.
- Completion of the installation of three permanent crash decks on the lighthouse road.
- The installation of CCTV on the building at the lading pier.
- Conducting the Climate Vulnerability Assessment (CVA) for Sceilg Mhichíl.
- The continued monitoring of the movement at the monastery enclosure retaining wall by the Discovery Programme.
- Ongoing wildlife surveys.
- Ongoing filming of the works on site.

8. Bibliography

- Department of Housing, Local Government and Heritage; Officer of Public Works; (2021). *Sceilg Mhichíl World Heritage Property Management Plan 2020-30*. Dublin: Department of Housing, Local Government and Heritage.
- Bourke, E., Hayden, A. R., & Lynch, A. (2011). *Skellig Michael, Co. Kerry: the monastery and South Peak, Archaeological stratigraphic report: excavations 1986 - 2010*. Dublin: Department of Arts, Heritage and the Gaeltacht.
- Department of Environment, Heritage and Local Government; Office of Public Works; (2008). *Skellig Michael Heritage Site Management Plan 2008 - 2018*. Dublin: Department of Environment, Heritage and Local Government.
- Rourke, G. D. (2002). Preserving the Monuments on Skellig Michael for the Future. *Antiquity* 76.292, pp. 542-552.