

Black Pigs Dyke at Aghareagh West in the ownership of Monaghan County Council Conservation Management Plan





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Ba mhaith linn buíochas a ghabháil leis na heagraíochtaí seo a leanas, as ucht cuid den airgead a chur ar fáil le haghaidh na scéime seo; Coiste Forbartha Pobail Áitiúil Chontae an Chabháin, Comhairle Chontae an Chabháin, Breifne Aontaithe CLG, Coiste um Fhorbairt Pobail Áitiúil Mhuineacháin, Comhairle Contae Mhuineacháin, Forbairt Chomhtháite Mhuineacháin Teoranta, an t-Aire agus an Roinn Tuaithe, agus forbairt Pobail, EU agus an EAFRD. Maoinithe ag Rialtas na hÉireann faoin gClár LEADER 2014-2022.

Preparation of conservation management plans for key heritage tourism sites in counties Cavan and Monaghan.

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Monaghan Local Action Group



Cavan Local Action Group

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1.1 Introduction

The objective of this document is to provide heritage advice on the appropriate conservation, management and interpretation of the 130m long section of the Black Pig's Dyke at Aghareagh West in the ownership of Monaghan County Council (i.e. the site) and its immediate curtilage. The section in council ownership is likely the best-preserved part of a prehistoric linear earthwork that stretches discontinuously for 9.85km east-west across southwest Monaghan. This report was jointly commissioned by Cavan County Council and Monaghan County Council.

1.2 Site Identification

The site is located 2.5km southeast of Scotshouse, Co. Monaghan. It lies within the townland of Aghareagh West, the civil parish of Currin and the barony of Dartree. The location of the site is shown in figures 1.1 and 1.2. The area in ownership of Monaghan County Council is 130m long and is limited to the dyke's two banks and two ditches. It is demarcated by fencing. There is also a small area for public car parking immediately beside the dyke. Visitor access to the dyke is provided from the roadside through an overgrown gap with a fallen gate. The adjacent fields are in private ownership and are in use as pasture. The site was purchased in 1976 with the aid of the regional tourism agency.

Figure 1 **Location of the Black Pig's Dyke in the ownership of Monaghan County Council**



(Source: Google maps, accessed: 10/12/2021)

Figure 1.2 **Approximate area of Black Pig's Dyke in the ownership of Monaghan County Council (outlined in red). Location of car park.**



(Source: Google maps, accessed: 10/12/2021)

1.3 Statutory Context and Listings

The section of the Black Pig's Dyke of which this report focuses on (i.e. in the ownership of Monaghan County Council), is listed in the Record of Monuments and Places (RMP) (MO021-011). The monument number incorporates the section of the Black Pig's Dyke in the townlands of Cornapaste, Aghnaskew, Annaghheane, Corrackan, Corrinny, Killark, Lattacrossan, Skerrick, West Callowhill and Aghareagh West. As the site is listed in the RMP, it is protected under the *National Monuments Acts 1930-2004*.

1.4 Methodology, Limitations & Terminology

The report is based upon archival research, site visits, meetings with leaders in the management of a monument similar to the Black Pig's Dyke and consultation with local landowners and other stakeholders. No opening up works were undertaken during the survey of the dyke.

A site visit was held with archaeologist Aidan Walsh. Aidan was the director of the archaeological excavation at the site in 1982. Fáilte Ireland and the County Museum Curator were also contacted for their opinions and input. Aside from contacting local landowners, a site meeting was also held with Scotshouse Tidy Towns. In order to learn from the experience of those already managing an

internationally important site similar to the Black Pig's Dyke, a meeting was held with representatives from Historic England and Cadw involved in the management of Offa's Dyke.

Complimenting the local meetings, was an online public consultation survey. Hosted on Monaghan County Council's website during January 2022, it ascertained levels of knowledge and what should be done to the site at Aghareagh West. There were 48 responses to the online survey.

Although lessons may be used to inform the management of the Black Pig's Dyke elsewhere in County Monaghan, this report is focused explicitly on the area of the dyke in council ownership and its immediate surroundings.

This report incorporates relevant principles and processes of the *Granada Charter* 1985 and the *Burra Charter: The Australia ICOMOS Charter for Places of Cultural Significance* 1999. The terminology used in this report is consistent with the Department of Housing, Local Government and Heritage's *Architectural Heritage Protection Guidelines* 2004 and the *Burra Charter*.

1.5 Author Identification

This Conservation Management Plan has been conducted and prepared by Liam Mannix (BA(Hons) MBA MPhil PGDip MIAI) Conservation Consultant. Additional input was provided by landscape architects James Hennessy (BA MA) and Anna Baxter (BA) of the Paul Hogarth Company.

All images are by Research + Dig unless otherwise indicated.

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- Eileen Rehill
- Stephen Beattie
- Scotstown Tidy Towns Group
- Aidan Walsh
- Fáilte Ireland
- Monaghan County Council
- Cadw

- Historic England

We also appreciate the efforts of all those who participated in the online survey.

2.0 Site History

2.1 History and Archaeology

Ireland and Britain contain the most extensive set of prehistoric land boundaries in Europe (Ó Drisceoil et al, 2014). The Black Pig's Dyke is part of this set. There are 179 linear earthworks recorded as archaeological monuments on the island of Ireland. This number includes Neolithic, later prehistoric, medieval and later examples of linear earthworks. The form and size of Ireland's prehistoric linear earthworks varies widely. Despite their variety and concentration on the Irish landscape, they have not been studied as a group. Perhaps unsurprisingly, the chronology of prehistoric Irish linear earthworks is not deeply understood. It is only when Iron Age dates emerged from samples collected during excavations at Dorsey and Aghareagh West, that the popular belief linear earthworks were influenced by Roman barriers was disproved.

The Black Pig's Dyke runs intermittently for 9.85km through southwest Monaghan. It is the longest linear earthwork in the county (ibid). It is also one of 12 linear earthworks located close to the Ireland/Northern Ireland border that were conflated in the early 20th century by antiquarian William Francis de Vismes Kane as being the remains of an ancient boundary fortification for Uladh (Ulster). In 1982, one complete section across the dyke was excavated by Aidan Walsh at Aghareagh West. This occurred in the portion of the dyke owned by Monaghan County Council. Prior to Walsh's excavation, the monument was undated. The initial Iron Age dates have been built upon by recent radiocarbon analysis of charcoal taken during the 1982 excavation. These indicate an early to middle Bronze Age genesis for the monument – at least in the excavated section (Ó Drisceoil & Walsh, 2021).

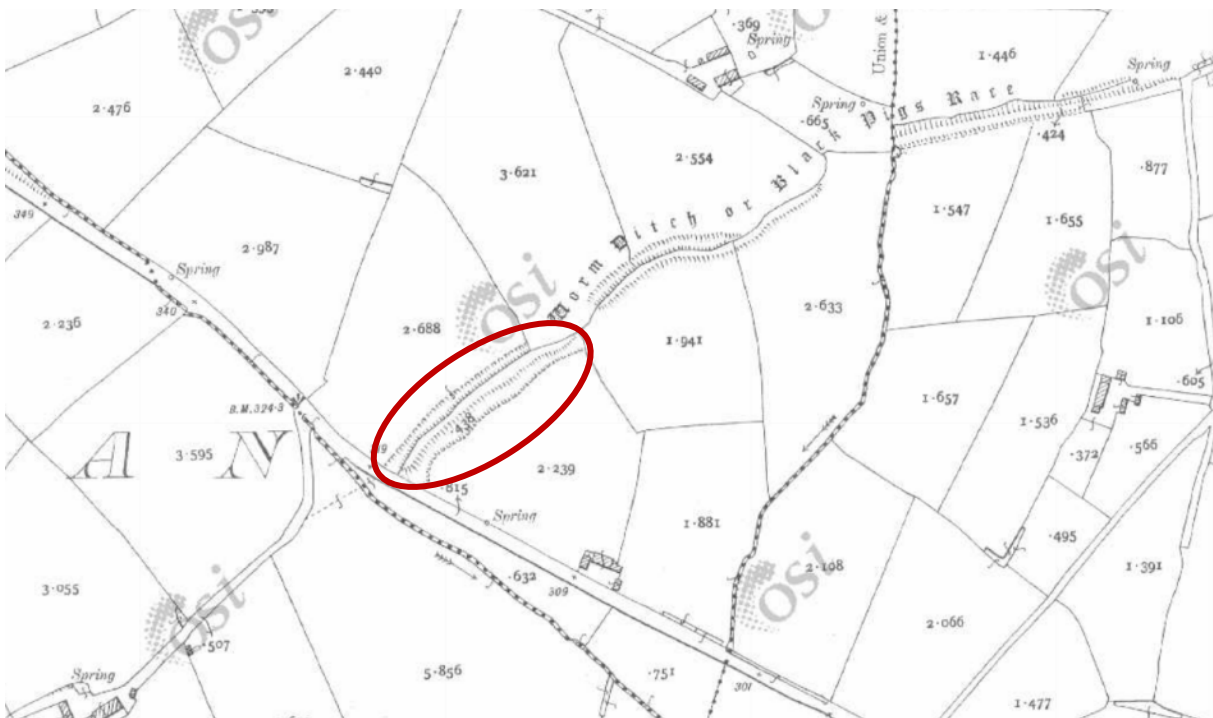
Much of what we know of as being the Black Pig's Dyke comes from the survey work undertaken for the first edition Ordnance Survey (OS) in the mid-19th century (figure 2.1). In the first edition, the dyke is called the 'Worm Ditch' and shown as a continuous line. Despite this, Ó Drisceoil and Walsh (2021) assert that much of the line is probably largely conjectural and is very unlikely to have been intact. The fragmented nature of the ditch along its 9.85km path is illustrated in the later 25-inch 1910 OS map (figure 2.2). Today, 14 individual standing linear earthworks cumulatively measure 2.25km.

Figure 2.1 Route of Black Pig's Dyke as shown in 1st ed OS map (approximate area of site at Aghareagh West circled)



(Source: <http://map.geohive.ie/mapviewer.html>, accessed: 17/12/2021)

Figure 2.2 Route of Black Pig's Dyke as shown in 25 inch 1910 OS map (approximate area of site at Aghareagh West circled)



(Source: <http://map.geohive.ie/mapviewer.html>, accessed: 17/12/2021)

The current form of the Black Pig's Dyke in County Monaghan varies from easily identifiable (large double banks and ditches), to severely denuded, to integrated within field boundaries and laneways. The section of the dyke owned by the local authority in Aghareagh West is likely to be the most intact section. At Aghareagh West, the two large banks survive, as do the two ditches. Here as with throughout the upstanding remains along the length of the dyke in Monaghan, the northern bank is the bigger. Throughout its 9.85km length, the dyke follows the sides of drumlins and valleys. Its route is also heavily influenced by wetlands.

The 1982 excavation at Aghareagh West by Walsh was the first to have taken place on the monument in the modern era (figure 2.3). The only other excavation to have occurred on the Monaghan Black Pig's Dyke in the past few decades were test excavations undertaken by Rosanne Meenan in 2005. During that dig, the probable remains of a section of burnt palisade were uncovered (ibid).

Figure 2.3 **1982 section of dyke to be excavated with vegetation removed**



(Source: image courtesy of Aidan Walsh)

In 2019, geophysical investigations in the two fields immediately adjoining the section of dyke in council ownership at Aghareagh West, uncovered evidence of a densely occupied settlement. Ó

Drisceoil and Walsh (2021) have postulated that the settlement appears to date from the middle-late Bronze Age.

Aidan Walsh's 1982 excavation at Aghareagh West comprised a 32m x 1-2m trench cut right through the double bank and ditches (figure 2.4). It was discovered that the two banks were simple earthen mounds. The two ditches were U-profiled. The north ditch was 4m wide x 2m deep. The south ditch was 2.7m wide x 1m deep. Although no artifacts were found, a hearth was discovered in the southern bank. This is thought to represent a pause in construction of the bank. A recent date obtained from charcoal in the hearth which was taken in 1982 has given an early to middle Bronze Age date range. This could indicate that the southern bank may have been part of the Bronze Age settlement discovered during geophysical surveying. The bank then become incorporated into the subsequent Iron Age earthwork.

Figure 2.4 **1982 excavation underway**



(Source: image courtesy of Aidan Walsh)

A 0.9m deep palisade slot with charcoal was discovered 1m north of the north ditch. It was traced running parallel with the north ditch for c.10m. The position of the palisade is interesting. If the dyke was for purely defensive purposes, the logical place for the palisade would have been on top of the large northern bank. Its position to the north of the north bank would have placed it in the rear of any supposed defenders of Ulster standing on the banks. In another scenario, if the defenders took positions behind the palisade, then cover would have been provided to attackers using the banks as

shelter. The story of the palisade becomes even more interesting as the large amounts of charcoal present indicated that it had been burnt. Almost all the discovered charcoal in the palisade trench was oak. As part of the 1982 investigations, the excavation team conducted fieldwalking along the route of the dyke. Fortuitously, a likely section of the palisade was discovered 1.6km west of the excavation site when groundworks for a new house exposed remains. During Meenan's excavation of the dyke - 180m to the west of the Walsh dig - the discovery of a line of burnt clay parallel and to the north of the north bank was interpreted by her as being the same palisade feature uncovered by Walsh. The evidence for a large, continuous palisade is further supported by accounts of timbers associated with the dyke being exposed during the 19th and early 20th centuries in other sections of Monaghan's Black Pig's Dyke. Finally, during the geophysical surveying of a field along the route of the dyke in Corrinny (1km northeast of the Aghareagh site), a probable intense band of burning was recorded parallel and roughly 1m north of the northern ditch. According to Ó Drisceoil and Walsh (2021), it is likely that the whole oak palisade was burnt at the same time. Once the palisade was burnt (40BC-AD140), there is no evidence from the excavations led Walsh or Meenan that the dyke in Monaghan was remodelled (ibid).

The dominant theory behind the purpose for the Black Pig's Dyke in Monaghan and elsewhere was that it was for the defence of Ulster. However, the presence of a northern ditch to the north of the largest bank, coupled with a palisade to the north of the northern ditch raises questions about its defensive qualities for defenders protecting Ulster to the north. There is also the issue of manning the dyke, even the 9.85km in Monaghan. It has also been pointed out that only 10% of antiquarian's William Francis de Vismes Kane supposed 'great wall of Ulidia (Ulster)' had physical remains (ibid). Any enemy would simply go around. Another interpretation behind the purpose of the linear earthworks in Ireland is as they being control points for people and cattle travelling along prehistoric routes. There is also the interpretation that large linear earthworks acted as routes for military patrols. However, this is undermined by the fact that the dykes - including the Black Pig's Dyke in Monaghan - tend to link bogs and lakes. Dykes as being boundary markers is possible. However, as Ó Drisceoil and Walsh (2021) have pointed out, such a dominant use is excessive given the labour involved in their construction.

One proposed use is not militaristic. It has been suggested that dykes may have served as ritual processional routes. Again, this is problematic as archaeologists have tended to separate ritual from non-ritualistic sites in a simple binary fashion that may not be true. Furthermore, there is no large-

scale ritualistic deposits in bodies of water associated with linear earthworks. Finally, some dykes are simply too narrow to serve as processional routes.

In *Materialising Power: the archaeology of the Black Pig's Dyke, Co. Monaghan*, Ó Drisceoil and Walsh (2021) proposed an interpretation that some linear earthworks such as the Black Pig's Dyke could have served as linear *oppida* (i.e. large, heavily fortified, prehistoric settlements). In this scenario, the linear earthwork would have been a key part of what Tom Moore calls 'powerscapes', 'places where topography, architecture, and activities (industry, exchange) were manipulated to communicate the status of the community and the power of the place itself' (Moore in Ó Drisceoil & Walsh, 2021, p.156) (figure 2.5).

Figure 2.5 **Interpretation of the dyke under construction during the Iron Age c.100BC. Reconstruction by Philip Armstrong and Cólín Ó Drisceoil.**



(Source: [www.blackpigsdyke.ie/locations/monaghan/#iLightbox\[ee6a23e2f977e02ee17\]/1](http://www.blackpigsdyke.ie/locations/monaghan/#iLightbox[ee6a23e2f977e02ee17]/1), accessed: 21/12/2021)

2.2 Folklore

Although the various components of the Black Pig's Dyke as envisioned by Kane would reasonably be expected to feature heavily in Old Irish and Early Modern Irish literature, this is not the case (ibid). Nonetheless, there is some folklore connected with the monument. The Black Pig's Dyke name is associated with the story of a school master who turned into an angry pig that then scoured the

landscape creating linear earthworks (Clarke & Jackman, 2020). In the area around Aghareagh West, the most commonly used name for the dyke is the 'Worm Ditch'. In the associated origin story, the Worm Ditch was created by a giant serpent or 'worm' creating ditches and banks as it moved through the landscape.

After a review of the 1930s National School Folklore collection, only one entry from a school within the parish of Currin referred to the Black Pig's Dyke/Worm Ditch (see below).

There is a field called the Graveyard field in Mr. David Agnew's farm, at Crussin, Scotshouse. It is said people were buried there in Penal times. In the same farm, quite near to his dwelling house is the best preserved part of the Worm-ditch. It has been left undisturbed as it was in olden times when it was supposed to be a boundary.

It is known in other parts of the district as the Black Pig's Race or Dane's Cast. It is said that Laurel Hill Schoolhouse stands on what was once portion of the Worm Ditch.

(Achadh na Habhla National School, Scotshouse, available at:

<https://www.duchas.ie/en/cbes/5162172/5160827/5170400?ChapterID=5162172>)

3.0 Site description and evaluation of physical condition

The following description and evaluation of condition is solely focused on the 130m length of the Black Pig's Dyke in Aghareargh West purchased in 1976 by Monaghan County Council. The following measurements were taken from *Materialising power: the archaeology of the Black Pig's Dyke, Co. Monaghan* (Ó Drisceoil & Walsh, 2021).

The section in ownership of the council is probably the most intact section of the Black Pig's Dyke in County Monaghan. Located at 102m above sea level, the dyke is sandwiched between two pasture fields (figures 3.1 & 3.2). In 2019, geophys surveys of these two fields discovered evidence of what is likely to be a dense Bronze Age settlement. The southern end of the site is abutted by a narrow public road (L6280) (figure 3.3). A small car park is located to the immediate south-east. The northern end of the dyke owned by the council is terminated by a field boundary. Just beyond that, the dyke can be seen continuing in a northeasterly direction as a single bank.

Figure 3.1 **Area of Black Pig's Dyke in council ownership with surrounding pasture fields**



(Source: Google maps, accessed: 10/12/2021)

Figure 3.2

Black Pig's Dyke running in south-west/north-east direction



Figure 3.3

Heavily overgrown section of Black Pig's Dyke with carpark in foreground



The dyke in council ownership runs in a south-west/north-east direction along a south-east facing drumlin slope. It is now heavily undergrown. There are two banks with a 3m wide silted up ditch in between. There is another 6.5m wide ditch to the immediate north of the northern bank (figure 3.4). The southern bank is 4.8m wide, while the northern bank is 7m wide. The top of the southern bank is .85m above the base of the 3m wide ditch which lies between the two banks. The 7m wide northern bank is 2.5m above the base of the 3m wide bank (to its immediate south). The top of the 7m wide northern bank is 2.1m above the base of the 6.5m wide infilled ditch to its north. The 1982 excavation at the site revealed that the two banks are of simple earthen construction.

Figure 3.4 **A colleague looking up from the northern ditch gives a good sense of its impressive scale**



The site is now totally covered in undergrowth (predominately hazel) (figure 3.5). Nonetheless, it is possible to walk under the canopy and explore the dyke. Although it may seem that the trees are providing protection to the dyke, they are causing significant damage (figure 3.6). The roots disturb subterranean archaeological remains and push out from the banks. The fallen leaves from the trees act to fill up the ditches. The leaves also clog up the small stream that runs through the site (figure 3.7). Finally, should trees fall, they would drag up considerable soil in their roots.

Figure 3.5 **On top of the northern bank**



Figure 3.6 **Woody vegetation exposing the bank and pushing out remains**



Figure 3.7 **Vegetation clogging up flow of stream between the two banks**



It was noticeable from the site visit in October, 2021 that our boots easily sunk into the banks. Although much of this was in the accumulated humus, the ground did appear very soft. The vulnerability of the banks to erosion was illustrated by a large gash created in the banks, likely from cattle (figure 3.8). From discussions with two locals it appears that people rarely visit the site. This is fortunate. If the site was popular, deep ruts at the top of the two banks would have been created.

Figure 3.8 **Cut made through the northern bank, likely caused by cattle**



The existing fencing enclosing the area in council ownership is simple post and wire. Nonetheless, it has been successful in keeping livestock out of the site (figure 3.9). The entrance gateway has collapsed and may now lead to ingress by livestock (figure 3.10).

Figure 3.9 **Fencing marking edge of council owned land**



Figure 3.10 **Entranceway at road with collapsed gate**



4.0 Assessment of Significance

4.1 Introduction

According to Historic England's *Conservation principles, policies and guidance for sustainable management of the historic environment* 'conservation is the process of managing change to a significant place in its setting in ways that will best sustain its heritage values' (2008, p.22). Conservation strategy and management is a process by which a site's significance is maintained whilst permitting continued sustainable use.

This report is explicitly focused on one small 130m section of the Black Pig's Dyke at Aghareagh West and its immediate environs. However, simply compartmentalising out the section and not evaluating it within a larger story is likely to present an inadequate evaluation of the section's true importance. Hence, the following evaluation of significance looks at the importance of the whole 9.85km length of the Black Pig's Dyke in Monaghan. The portion in ownership of the council at Aghareagh West is likely the most complete section of the dyke in Monaghan. Where additional significance is identified at the specific area owned by the council, this will be noted.

The study of the physical remains alone rarely provides sufficient understanding of a site. Its significance needs to be set in the context of the social and cultural circumstances that produced the place. This is particularly true in the case of the Black Pig's Dyke in Monaghan. For all Irish sites, significance should be assessed according to the following criteria set down in *Architectural heritage protection: guidelines for planning authorities* (n/a, 2011):

- architectural interest
- historical interest
- archaeological interest
- artistic interest
- cultural interest
- scientific interest
- technical interest
- social interest

Natural heritage is an integral component of our heritage (see definition of 'heritage' in the *Heritage Act*, 1995). As a result, the criterion of natural interest is also considered, albeit, in a limited fashion.

Ideally, all the identified heritage values of a place should be conserved. However, on occasion what is necessary to sustain one criterion will be in conflict with another. If this is the case, then understanding the relative contribution of each criterion to the overall significance of the Black Pig's Dyke will be essential to objective decision making.

There is no pre-existing plan of comparative scale that has analysed the heritage of the Black Pig's Dyke.

4.2 Assessing its significance

The following is an analysis of the relevance of the architectural, historical, archaeological, artistic, cultural, scientific, technical, social and natural criteria to the significance of the Black Pig's Dyke in Monaghan.

Architectural Interest

This field monument is not an exemplar of good architectural design, nor the work of a distinguished architect, engineer, designer or craftsman. The monument makes an unstated but positive contribution to the landscape. Thus, it is not of architectural interest.

Historical Interest

The dyke in Monaghan is one of 12 linear earthworks located close to the Ireland/Northern Ireland border that were conflated in the early 20th century by antiquarian William Francis de Vismes Kane as being the remains of an ancient boundary fortification for Uladh (Ulster). Since then, the Black Pig's Dyke has been part of the Unionist/Loyalist origin myth that Ulster has long been separate from the rest of Ireland. In 1986, Michael Hall wrote a book called *Ulster, the hidden history*. The book was published by the loyalist Pretani Press. In his publication he took the preliminary results from the 1982 excavation at Aghareagh West that the dyke was constructed as a defensive structure and speculated that the Black Pig's Dyke was entirely defensive and functioned to protect Ulster. Due to its connections with Ulster Unionism/Loyalism, the dyke is of historic interest.

Archaeological Interest

Although late prehistoric linear earthworks are record throughout Europe, the most substantial examples exist in the UK and Ireland (Ó Drisceoil and Walsh, 2021). The Black Pig's Dyke in Monaghan is the fifth longest in Ireland. The width of its defensive zone (23m) is the thickest of the albeit limited number of six linear earthworks in Ireland where complete sections have been archaeologically excavated.

The 130m section of the dyke in the ownership of the council is probably the most intact portion of the 9.85km dyke.

The site at Aghareagh West - in conjunction with the pre-historic settlement in surrounding fields - presents the opportunity to investigate the association of linear monuments with both Bronze Age and Iron Age Ireland. Nowhere else in Ireland has this apparent Bronze Age/Iron Age dynamic with linear earthworks been discovered. The dyke is of archaeological interest.

Artistic Interest

This field monument is without decoration and is not of artistic interest beyond its positive contribution within the landscape. The dyke is not of artistic interest.

Cultural Interest

Nobel Laureate W.B. Yeats (*The Valley of the Black Pig*), James Joyce (*Finnegan's Wake*) and Vincent Woods (*At the Black Pig's Dyke*) have all referred to or been inspired by the Black Pig's Dyke. The Black Pig's Dyke has cultural significance.

Scientific Interest

The monument is not associated with scientific research. No materials used in its construction have the potential to contribute to scientific research. Finally, no results of scientific research can be seen in the execution of the monument. The dyke is not of scientific interest.

Technical Interest

Although vast in scale, the monument is of simple construction, displays no innovation and is not the work of a known or distinguished engineer. The logistics and economics associated with constructing such a large monument are certainly interesting. Nonetheless, it is of no technical interest.

Social Interest

Although the site is well known to locals, the level of stories and recent events associated with the Black Pig's Dyke in and around Aghareagh West and elsewhere in Monaghan is low. It is not an essential reference point to the local community's identity. The dyke is not of social interest.

Natural Interest

Although the site is not an SAC, NHA or pNHA, the natural hazel woodland that has colonized the area of the dyke in public ownership since 1982 may have natural heritage value. A full appraisal of the site by an ecologist is required to ascertain its heritage value. This is especially important as the trees have been appraised as being responsible for damaging the dyke. The site lies within an identified County Geological Site as listed in the current county development plan (CGS Scotshouse-Redhills crosscutting ribbed moraines). These ribbed moraines form part of the largest field of ribbed moraines found anywhere in the world.

Statement of significance

The Black Pig's Dyke in Monaghan is of international significance. The section of the dyke in public ownership at Aghareagh West is the most intact section of the dyke in the county. It and the surrounding fields are of immense archaeological research value in understanding the story behind prehistoric linear earthworks and their role in the landscape. According to Ó Drisceoil and Walsh (2021), the Black Pig's Dyke in Monaghan is the county's premier and best-known archaeological monument. Aside from bridging a gap in our understanding of Bronze Age and Iron Age Ireland, the answering of research questions at the site may impact on the origin myths of Ulster Unionism/Loyalism. Finally, the Dyke has also served as a source of inspiration for nationally and internationally important literary figures.

4.3 Threats to significance

Accidental or malicious removal of material by people

The greatest reason for the removal of field monuments such as linear earthworks like the Black Pig's Dyke has been human activity. In the second half of the 19th century a 440m section of the dyke from Scotshouse to the Cootehill road was removed. Since the 1910 OS map was published, roughly one third of what was shown has been lost or is much degraded. The removal of such sections has been put down to agricultural intensification, housing developments and commercial forestry (ibid). Although the dyke is now legally protected and the section which is the subject of this report is in public ownership, there is still the risk that parts of it could be removed. This could be carried out by people both aware and unaware of its importance and legal protections. There is also the prospect of damage being caused by those engaged in unlicensed metal detecting.

A possible factor in the removal of archaeological monuments such as the Black Pig's Dyke is the perception that is of no or very low economic value to those living locally. Hence, there may be a perceived economic benefit from using the land for another activity other than just the preservation

of the monument (e.g. agriculture, forestry, housing development). A way of countering this is to sensitively use the monument for tourism purposes. The economic gains realised through environmentally sustainable tourism has been shown to improve wider conservation behaviours (Park et al, 2019).

Woody vegetation

The site is now nearly totally covered by trees (predominately hazel). Although it may seem that the trees are providing protection to the dyke, they are causing significant damage. The roots disturb subterranean archaeological remains and push out from the banks. The fallen leaves from the trees act to fill up the ditches. The leaves also clog up the small stream that runs through the site. Finally, should trees fall, they would drag up considerable soil in their roots. The risk of falling trees will only grow as climate change worsens and the number of very intense Irish storms increases.

The section at Aghareagh West is the probably the most intact section of the dyke in Monaghan. It is likely that its Iron Age builders did not intend the dyke to become overwhelmed by trees. The possible uses of defence, ritual procession route and oppida routeway are all undermined by heavy vegetation growth. During discussions with representatives from Cadw and Historic England, it became apparent that due to the significance of the section at Aghareagh West the appearance closest to its Iron Age form should be protected. Such an approach would necessitate the careful removal of woody vegetation from the section and replacement with appropriate native grasses (the grass would provide a protective carpet). The removal of trees and shrubbery would aid legibility of the monument and greatly assist in its interpretation.

Any proposed vegetation management regime must take into account any identified natural heritage values (survey by ecologist needed). The ability of the existing vegetation to sequester carbon must also be considered.

Damage caused by animals

Although the area owned by the council is fenced off, the gate beside the road has collapsed. This could possibly permit entry to livestock walking on the roads. Portions of the fence may also collapse in the future and need repair.

Little evidence was discovered of damage caused by burrowing animals (e.g. badgers, rabbits). However, this threat could increase and should be monitored.

Inappropriate tourism

Given the site's delicate condition under the tree canopy, only very low levels of foot traffic are presently sustainable on the two banks. The ground is simply too exposed under the canopy to withstand being explored by numbers beyond those engaged in academic research or maintenance. Tourists being permitted to access the banks or ditches would cause serious erosion. Given the character of the site, visitors would likely be drawn to the tops of the banks, concentrating their footfall. A grass carpet instead of a tree canopy would bring far greater solidity to the monument. However, this may conflict with as yet unassessed natural heritage values. Regardless of the surface being bare or grass, due to its simple earthen construction and the likely desire lines caused by visitors, access directly onto the banks and ditch is not appropriate. Proper visitor management and interpretation is essential in the creation of a pleasant and enlightening experience that does not damage the site.

Damage to its setting

Inappropriate development close to the site would detract from its setting and character. Likewise, inappropriate development of the site itself to facilitate tourism would also damage its setting and character. The landscape is constantly changing. However, any change close to the site should factor in possible impacts to the dyke's heritage significance.

Climate change

Climate change is both an immediate and growing threat to Ireland's built and natural environments (Fealy et al, 2009). Due to climate change, Ireland is projected to experience more frequent storms. Rain patterns will also become longer in duration and higher in intensity. This will lead to more flooding during winter and water scarcity during late summer and autumn (ibid). Finally, after already rising by 0.8degC since 1900, the country's average annual temperature is expected to rise 1-1.6degC above the 1981-2000 reference period sometime between 2041-2060 (Daly, 2019). Another consequence of climate change is an expected longer growing season of 35-40 days by 2041-2060 (ibid).

The consequences for the Black Pig's Dyke at Aghareagh West are that some plants and animals will become stressed and deteriorate locally. The growing season will change. The increase in temperatures, coupled with more visitors to the site will raise the chance of forest/ground fires

occurring (e.g. caused by BBQs). The dyke will be affected by more frequent storms and damage from localised flooding (ibid). Both the localised flooding and droughts will negatively impact on the archaeology of the dyke at Aghareagh West and adjoining fields. Even slight changes to the burial environment can damage subsurface remains (ibid).

5.0 Opportunities and constraints

5.1 Background

The role of the conservation policies is to provide specific guidelines for the conservation and development of the section of Black Pig's Dyke in the ownership of Monaghan County Council and adjoining land, so that its heritage significance is appropriately maintained.

Development of a set of conservation policies involves the consideration of the following issues:

- requirements of adjoining landowners, the local community and Monaghan County Council;
- constraints and opportunities presented for the use and development of the site arising from the statement of significance;
- the principles of the relevant charters and declarations (i.e. *Granada* and *Burra*);
- relevant legislation, guidelines, development plans and other national and local government plans and policies.

5.2 Stakeholder requirements

Requirements of adjoining landowners

The owners of the two fields that immediately adjoin the Black Pig's Dyke in Council ownership have stated that they would be amenable in principle to sell a strip of land to permit adequate access and interpretation. Without the sale of at least one strip of land, the development of the site for visitors would not be feasible. This is due to the sensitivity to erosion of the earthen banks.

In exchange for the sale of land, the owners indicated that they would require:

1. That access to visitors to any new amenity comes from the public road only.
2. The boundary of the newly enlarged visitor area is securely fenced off. The fencing should be robust enough to stop the escape of cattle.
3. The site is adequately maintained and does not become unsightly.
4. The design materials used to develop the site fit in aesthetically with the rural character of the site (i.e. use natural materials where feasible).
5. In the event of trees being removed from the site that they are provided to them for use as fuel.

It has also been requested that the public roadway be repaired.

The proposals for the site in sections 6 and 7 of this report are designed for a maximum of 20,000 annual visitors. They take into account the wishes of the adjacent landowners. It is expected that should the plans as outlined in sections 6 and 7 be completed annual visits to the site would not exceed 10,000. However, should the site prove popular beyond its 20,000 design concept, then consultations should occur with the adjacent landowners on future management proposals.

Requirements of the local community

The following assessment of requirements has been taken from the findings of an online public survey hosted on Monaghan County Council's website (appendix 1), a site meeting with representatives from Scotshouse Tidy Towns and a discussion with a person living in a house overlooking the site.

Only one of the 48 respondents to the online survey wished that nothing was done to the site. By contrast, 75% wanted greater access to the site. The same number again wanted information signage/artworks. There was also strong indication for interpretation about the site in or near Scotshouse itself. These findings were mirrored in the meeting with Scotshouse Tidy Towns. Discussions with Scotshouse Tidy Towns concerning the sensitive development of the Black Pig's Dyke revolved around:

1. Enhancing the liveability of Scotshouse and the parish of Currin by creating a community amenity.
2. That the tourism attractiveness of Currin is significantly improved and that there is a direct economic benefit to the area.

Comments and suggestions were invited during the online survey. The comments mostly revolved around the sensitive redevelopment of the site, enhancing the connections between Scotshouse and the site, improving the road and enhancing site interpretation.

The proposals for the site in sections 6 and 7 of this report are designed for a maximum of 20,000 annual visitors. They take into account the wishes of the community. It is expected that should the plans as outlined in sections 6 and 7 be completed annual visits to the site would not exceed 10,000. However, should the site prove popular beyond its 20,000 design concept, then consultation should occur with the local community on future management proposals.

Requirements of Monaghan County Council

The following assessment of requirements has been taken from published council material (e.g. County Development Plan) and meetings with the Tourism Officer, Heritage Officer and Curator of the County

Museum. Effectively, the sensitive development of the Black Pig's Dyke at Aghareagh West should accomplish the following:

1. Encourage greater awareness of the Black Pig's Dyke at Aghareagh West and elsewhere along its c.10km route in County Monaghan.
2. Be an attraction that will encourage tourists to the County and retain them within Monaghan.
3. Enhance the liveability of the locality.
4. Create actions that will lead to a deepening of knowledge about the monument.
5. Encourage the appropriate management of the Black Pig's Dyke along its full length in County Monaghan.
6. The final proposed works at Aghareagh West and elsewhere should be of best conservation practice.

5.3 Constraints arising from significance

Assessed Heritage Values

The Black Pig's Dyke in Monaghan and specifically the section in council ownership has been deemed to be of international significance. Its future management should take account of the constraints arising from its identified heritage values.

Aspects of identified significance include:

- An impressive remnant of Iron Age Ireland (importance rating: international)
- Its archaeological research value in learning more about Bronze Age and Iron Age Ireland (importance rating: international)
- Role in the construction of an Ulster Unionist/Loyalist origin myth (importance rating: national)
- Role as an inspiration for literature (importance rating: regional)

Opportunities to retain, and where appropriate reinstate these heritage values should be investigated and implemented.

5.4 Guiding Heritage Principles

The conservation and development of the Black Pig's Dyke in the ownership of Monaghan County Council is to be carried out in accordance with the relevant principles of the Granada and Burra Charters. The principles contained with the charters provide specific guidance for works to the site. Relevant principles include the following:

Granada Charter Article 12

While recognizing the value of permitting public access to protected properties, each Party undertakes to take such action as may be necessary to ensure that the consequences of permitting this access, especially any structural development, do not adversely affect the architectural and historical character of such properties and their surroundings.

Burra Charter Article 1.2

Cultural significance means aesthetic, historic, scientific, social or spiritual value for past, present or future generations. Cultural significance is embodied in the place itself, its fabric, setting, use, associations, meanings, records, related places and related objects. Places may have a range of values for different individuals or groups.

Burra Charter Article 2.4

Places of cultural significance should be safeguarded and not put at risk or left in a vulnerable state.

Burra Charter Article 3.1

Conservation is based on a respect for the existing *fabric, use, associations* and *meanings*. It requires a cautious approach of changing as much as necessary but as little as possible.

Burra Charter Article 5.1

Conservation of a place should identify and take into consideration all aspects of cultural and natural significance without unwarranted emphasis on any one value at the expense of others

Burra Charter Article 7.2

A *place* should have a *compatible use*. The policy should identify a use or combination of uses or constraints on uses that retain the cultural significance of the place. New use of a place should involve minimal change, to significant fabric and use; should respect associations and meanings; and where appropriate should provide for continuation of practices which contribute to the cultural significance of the place.

Burra Charter Article 15.2

Changes which reduce *cultural significance* should be reversible, and be reversed when circumstances permit.

Burra Charter Article 16

Maintenance is fundamental to conservation. Maintenance should be undertaken where fabric is of cultural significance and its maintenance is necessary to retain that cultural significance.

Burra Charter Article 25

Interpretation The cultural significance of many places is not readily apparent, and should be explained by interpretation. Interpretation should enhance understanding and engagement, and be culturally appropriate.

Following on from the relevant principles outlined above, adverse impacts on aspects of the Black Pig's Dyke significance should only be permitted where:

- there is sufficient information to understand the impact of the proposal onto the significance of the Black Pig's Dyke;
- a full assessment of alternative options has been undertaken to minimise adverse impacts;
- it makes possible the recovery of aspects of greater significance (only applicable for items of little significance or that are intrusive);
- there is no feasible alternative to meet safety and/or legal requirements, and
- the area or element has been adequately recorded.

5.5 Heritage Planning Context

The Black Pig's Dyke in the ownership of the County Council at Aghareagh West is protected under international treaties and conventions, national legislation, and both statutory and non-statutory guidance. These include the *National Monuments Acts 1930-2004*, the *European Birds (1979) and Habitats (1992) directives*, *Birds and Natural Habitats Regulations 2011*, the *Wildlife Acts 1976*, and the *Wildlife (Amendment) Act 2000-2010*, and *Monaghan County Development Plan 2019-2025*. Other local government initiatives such the *Monaghan Biodiversity & Heritage Plan 2020-2025*, *Monaghan County Council Tourism Statement of Strategy and Work Programme 2017-2022* *Monaghan Local Economic and Community Plan 2015 – 2021* and *Monaghan Tourism Clusters Destination and Experience Development Plan* (done in collaboration with Fáilte Ireland) also have a bearing on any proposed policies and actions. Finally, certain State initiatives such as the *Climate Action Plan 2021* and *Heritage Ireland 2030 (2022)* have an influence on any proposed policies and actions. The relevance of those documents to the future management of the Black Pig's Dyke are discussed below.

The current *National Landscape Strategy 2015-2025* does not have a bearing on this plan. The strategy essentially focuses on research, awareness building and training. Its objective is to provide the data that will allow for better decision making concerning how we manage our landscape.

Statutory listings and natural heritage

The section of the Black Pig's Dyke of which this report focuses on is listed in the Record of Monuments and Places (RMP) (MO021-011). The monument number incorporates the section of the Black Pig's Dyke in the townlands of Cornapaste, Aghnaskew, Annaghheane, Corrackan, Corrinary, Killark, Lattacrossan, Skerrick, West Callowhill and Aghareagh West. As the sites is listed in the RMP, it is protected under the *National Monuments Acts 1930-2004*. When the owner or occupier of a property, or any other person, proposes to carry out any work at, or in relation to, a recorded monument, they are required to give notice in writing to the Minister for Housing, Electoral Reform and Heritage two months before commencing any work. Any proposed works to or in the immediate vicinity of the well would require the consent of the Minister.

The Black Pig's Dyke is not listed in County Monaghan's Record of Protected Structures. As a result, it is not protected under the *Planning and Development Act 2000*.

The Black Pig's Dyke is not listed in the National Architectural Inventory of Ireland. Ascription in this inventory does not provide legal protection. However, the inventory is used to inform future judgment on whether a building should be listed as a protected structure.

Protection to a number of species and designated landscapes are provided under the European Birds (1979) and Habitats (1992) directives, Birds and Natural Habitats Regulations 2011, the *Wildlife Acts 1976* and the *Wildlife (Amendment) Act 2000-2010*. Where development is proposed that impacts upon a protect species or protected place, a derogation license must be sought from the National Parks and Wildlife Service. The site is not located within an area designated as a Special Area of Conservation, Natural Heritage Area or proposed Natural Heritage Area.

Monaghan County Development Plan 2019-2025

The County Development Plan has been prepared in accordance with the requirements and provisions of the Planning and Development Act 2000 (as amended). It sets out an overall strategy

for the proper planning and sustainable development of the functional area of County Monaghan, over the period 2019-2025 and beyond.

Although there are no explicit objectives or policies for the Black Pig's Dyke, there are a number of objectives and policies protecting the archaeological and natural heritage of the county in general, that are of relevance to the site. Aside from the policies and objectives that focus on heritage, there are other policies and objectives covering tourism and climate change that impact directly on the future management of the site. Relevant objectives and policies from the development plan include:

Heritage, Conservation and Landscape Objective

HCLSO 1 To promote and encourage the conservation and preservation of the County's natural environment, cultural heritage and amenities in accordance with legislation, plans and policies developed to specifically address these areas and to ensure a rich cultural landscape, healthy environment and the full provision of ecosystems services in the county.

Heritage Conservation and Landscape Policies

HLP 1 To implement in partnership with all relevant stakeholders the objectives and actions detailed within the County Monaghan Heritage Plan 2017- 2022 and any subsequent versions

HLP 5 To recognise that nature conservation is not just confined to designated sites and acknowledge the need to protect non-designated habitats and landscapes and to conserve their biological diversity and provide ecosystem services.

HLP 8 To ensure the preservation of the County's landscapes, by having regard to the character, value and sensitivity of the landscape as identified in the County Monaghan Landscape Character Assessment (2008) or any subsequent versions when considering planning applications.

HLP 9 To protect the landscapes and natural environments of the County by ensuring that any new developments in designated sensitive rural landscapes do not detrimentally impact on the character, integrity, distinctiveness or scenic value of the area. Any development which could unduly impact upon such landscapes shall be resisted.

HLP 21 To cumulatively contribute towards, in combination with other users and bodies, the achievement of the objectives of the regulatory framework for environmental protection and management, including compliance with EU Directives - including the Habitats Directive (92/43/EEC, as amended), the Birds Directive (2009/147/EC), the Environmental Impact Assessment Directive (2011/92/EU, as amended by Monaghan County Development Plan 2019-2025 115 Heritage, Conservation and Landscape Policies 2014/52/EC) and the Strategic Environmental Assessment Directive (2001/42/EC) – and relevant transposing Regulations

The county development plan has identified sites through Monaghan County Council surveys as being of biodiversity importance. These are listed in Table 6.4 of the development plan. The section of Black Pig's Dyke that is the subject of this report is not contained within any identified site of biodiversity significance. Similarly, the site is not located along a Scenic Route as designated in the county development plan. Nor is the site part of a designated Primary Amenity or Secondary Amenity.

The site lies within an identified County Geological Site (CGS Scotshouse-Redhills crosscutting ribbed moraines). These ribbed moraines form part of the largest field of ribbed moraines found anywhere in the world. The current development plan has a set of policies protecting aimed at protecting these places. Relevant policies include:

County Geological Sites Policy

GEP 3 To protect from inappropriate development and maintain the integrity and conservation value of those features in areas of geological interest that are listed in the plan or any sites proposed by the Department of the Environment, Heritage and the Gaeltacht or Geological Survey of Ireland during the lifetime of the plan.

GEP 4 To contribute towards the appropriate protection and maintenance of the character, integrity and conservation value of features or areas of geological interest.

GEP 5 To promote CGS15 Rockorry- Cootehill ribbed Moraine and CGS16 Scotshouse - Redhills cross cutting ribbed moraines as unique landscapes as per the recommendations of the Geological Survey of Ireland.

Although there no Trees of Special Amenity Value on the site, the county development plan does contain a policy associated with trees and hedgerows that is of relevance to this report:

Trees and Woodlands Policy

TWP 1 To minimise loss of tree(s) and hedgerow associated with any development proposal and encourage the retention of existing mature trees, hedgerows and woodlands in new developments. Where removal is unavoidable consideration should be given to transplanting trees and/or providing compensatory planting on the site.

The current county development plan contains a strong set of policies concerning the protection of the county's archaeological heritage. Especially relevant policies include:

Protected Monuments & Places Policy

PMP 1 To protect the Record of Monuments and Places listed in Appendix 5 (and any subsequent additions by the National Monuments Service) to ensure that the setting of the recorded monument or site is not materially injured and to co-operate with all recommendations of Statutory bodies in the achievement of this objective.

PMP 2 To ensure that any development adjacent to an archaeological monument or site shall not be detrimental to the character of the archaeological sites or its setting and shall be sited in a manner which minimises the impact on the monument and its setting. Development which is likely to detract from the setting of such a monument or site shall be resisted.

PMP 5 To identify where appropriate Archaeological sites in the Plan area to which public access could be provided or improved in consultation with landowners.

Tourism is a key aspect of the county's economy which the local authority wishes to develop. Given the significant role archaeology plays in attracting overseas tourists to Ireland and the significance of the site, there is the possibility of the dyke at Aghareagh West being a modest but beneficial aspect of Monaghan's tourism offering. The current county development plan contains several relevant tourism policies:

Tourism Policies

TMP 1 To promote the development and strengthening of Monaghan as a destination, by mirroring the quality of the natural environment with improving the appeal of the built environment of settlements.

TMP 3 To promote and facilitate the sustainable use of the County's existing historical, cultural and landscape assets for tourism purposes.

TMP 7 To facilitate, where appropriate, the provision of high quality tourism products and services within the County in order to increase the level of activity and the sustainability of the tourism market. In particular the provision of quality hotels and visitor accommodation facilities, and the development of tourism projects, facilities, activities, and attractions shall be a priority.

TMP 8 To promote events, festivals and the development of linked tourist trails that showcase the wealth of natural, historical and cultural heritage of the County and contribute towards its unique identity and quality of life.

TMP 15 To seek to manage any increase in visitor numbers in order to avoid significant effects including loss of habitat and disturbance, including ensuring that any new projects, such as greenways, are a suitable distance from ecological sensitivities, such as riparian zones.

The county development plan contains one policy concerning climate change that is of particular relevance to the future management of the site:

Climate Change Policies

CCP 6 To support and assist a shift to a low carbon society and a reduction in the dependence on fossil fuels in County Monaghan by implementing measures to deliver energy efficiency, compact urban forms and sustainable transport patterns.

Monaghan Biodiversity & Heritage Strategic Plan 2020-2025

A county heritage plan is a non-statutory document created by local authorities. Such plans identify priorities and establishes a framework for the management of heritage within a county. The current heritage plan for Monaghan is combined with biodiversity considerations to create an overall

heritage and biodiversity strategic plan for the county. The Black Pig's Dyke is one of 13 priority strategic themes of the plan. Associated with the Black Pig's Dyke theme are a series of activities:

The Worm Ditch, The Black Pig's Dyke

Cognisant of the significance of the cultural landscape of this archaeological monument, we will undertake and facilitate further research, dissemination of results, promote access and awareness in Monaghan and with stakeholders nationally and internationally.

Activities	Outcome	Impact
Publish Archaeological Monograph.	Permanent record of excavations and research available for scholars and researchers worldwide.	Increase in visibility among academic and research stakeholders of the significance of the monument for understanding the prehistoric and early medieval period.
Hold a research symposium.	Record the symposium presentations and make widely available on the internet.	Disseminate findings and discover new avenues for investigation, and potential collaborations.
Organise further research and excavation using new engagement methods.	Determine extent and significance of findings from 2019 geophysical survey	Involvement of new audiences in archaeological investigations in Monaghan to co-produce archaeological findings with experts.
Determine how best to enable public access to the monument.	Stretch owned by Monaghan County Council to be accessible by digital or physical means.	Add to the heritage tourism and educational offer and increase awareness of the site and its interpretation amongst visitors.
Publish book on Black Pig's Dyke for non-specialists.	Volume 3 of Monaghan's Heritage Series.	Increase local understanding of significance of the site.

Other priority themes in the county heritage and biodiversity plan relevant to this report include: climate change mitigation and adaptation, pre-historic archaeology, hedgerows and native woodland.

Relevant key strategies or courses of actions include:

- Accelerate and intensify our efforts to improve awareness and halt biodiversity loss in the county.
- Lead by example, demonstrating good custodianship of local authority-owned heritage including maintaining appropriate use, sensitive re-use and adequate repair of heritage buildings and effective management of biodiversity.
- Support multi-stakeholder partnerships for heritage promotion and conservation.
- Make heritage more accessible through digital and other means where appropriate.

Monaghan County Council Tourism Statement of Strategy and Work Programme 2017-2022

The County Monaghan tourism statement of strategy and work programme is a non-statutory document setting out the priorities and key actions to be undertaken to develop Monaghan's tourist sector. There are two goals for the plan. The second is of particular relevance for the Black Pig's Dyke:

2. To develop, protect, enhance and maximize the potential of the natural, cultural and heritage resources of County Monaghan.

There is one action in the work programme that specifically mentions the Black Pig's Dyke:

6.4.1 Improve access and infrastructure at: Lough Muckno, Dartrey Forest and lakes Rossmore Park ,Ulster Canal, Patrick Kavanagh Country, Black Pigs Dyke, Sliabh Beagh.

Monaghan Local Economic and Community Plan 2015 – 2021

Action 6.4.1 above was taken from the *Monaghan Local Economic and Community Plan 2015 – 2021*. Published by the Monaghan County Council Local Community Development Committee (LCDC), the Monaghan Local Economic and Community Plan 2015 – 2021 provides a roadmap for collection action in relation to the county's economic and community development. Action 6.4.1 is the only action in the document that explicitly mentions the Black Pig's Dyke. Nonetheless, there are a goal of

the plan that is of particular relevance to the Black Pig's Dyke at Aghareagh West and its future development:

High Level Goal 6 To protect, enhance and maximise the potential of Natural, Cultural and Heritage Resources of County Monaghan.

Monaghan Tourism Clusters Destination and Experience Development Plan

The County Monaghan Destination and Experience Development Plan is a non-statutory document providing a roadmap for improving the county's visitor proposition. The creation of the document was led by Fáilte Ireland and published in collaboration with Monaghan County Council. The Black Pig's Dyke is not specifically mentioned. Nonetheless, there are many aspects of the plan of direct relevance to developing the dyke at Aghareagh West.

The plan contains 11 target outputs, two of which are of particular importance:

3. Maximise and build on the potential of existing heritage assets.

8. Convey the rich 10,000 year history of the area to the modern day Monaghan story.

A key part of the plan is the development of key visitor hubs. The closest of these to the site is Clones (c.10km to the north). The flagship Ulster Canal project will run through Clones. An area of strategic focus in the plan is to build up these hubs and create reasons to visit and stay.

Heritage Ireland 2030: a framework for heritage

In February 2022, Ireland's new national heritage plan - Heritage Ireland 2030 - was published. It provides a framework for the protection, conservation, promotion and management of Ireland's heritage. Its vision is that:

Recognised for its contribution to society and well-being, Ireland's heritage will be valued, nurtured and protected and placed at the very centre of our decision making around Ireland's future.

Within the document climate change and biodiversity loss are a key focus. Objectives are grouped under three themes:

- Theme 1 Communities and Heritage
- Theme 2 Leadership and Heritage
- Theme 3 Heritage Partnerships

Particularly relevant objectives in the plan include:

Theme 1 Communities and Heritage

- 6. Enhance physical and digital access to heritage in public and private ownership
- 8. Support the contemporary presentation and interpretation of heritage, including through better use of technology
- 10. Integrate the role of heritage in place-making, economic development and sustainable tourism into all relevant strategies
- 11. Foster opportunities and training for community partners to be directly involved in the care and stewardship of our national heritage.

Theme 2 Leadership and Heritage

- 9. Identify opportunities for, and realise the potential of, heritage-led economic regeneration and sustainable business and tourism development
- 13. Strengthen engagement with partners in Northern Ireland, the United Kingdom and EU and with relevant legislation and programmes

To realise the plan’s objectives, a set of 158 actions were created. Both the objectives and actions will be added to, reviewed and amended as required. Relevant actions in the plan include:

- 26. Support nature-based solutions for land-use management.
- 31. Improve access to heritage through expanded visitor services and interpretation at national parks, nature reserves, monuments and historic properties in the care of the State.

36. Increase and improve universal access to heritage for the elderly, people with disability and children, including through the use of new technologies.

37. Integrate heritage considerations into urban and rural regeneration to ensure that built and natural heritage objectives underpin the planning and development process and inform the 'Town Centres First' policy approach.

58. Improve interpretation and visitor management at our national monuments, national parks, national nature reserves and at national heritage properties.

63. Collaborate with heritage partners in the EU, Northern Ireland and Britain on areas of mutual interest.

98. Support nature-based solutions for land-use management.

123. Use quality research to directly inform better visitor engagement and interpretation.

Climate Action Plan 2021: securing our future

The 2021 Climate Action Plan lays out the government's pathway to achieving a 51% reduction in national greenhouse gas emissions by 2030 and reaching net-zero by 2050. The plan follows on from commitments made in the Programme for Government and the Climate Act 2021. The plan's implementation will transform every aspect of economic and social life in Ireland. This includes areas of particular relevance to the Black Pig's Dyke at Aghareagh West, especially tourism. The public sector is to lead from the front in the shift to a net-zero society.

Relevant actions in the plan include:

Action no. 47 Promote sustainable destination management

Action no. 89 Minimise negative environmental impact of tourism

Action no. 97 Invest in developing our outdoor tourism offering, including outdoor activities, that enhances Ireland's international reputation of being a green, clean and sustainable destination

- Action no. 98 Increase nature connectedness and promote pro-environmental behaviours by developing outdoor recreation
- Action no. 206 Build public awareness of the risks of climate change (in general and for heritage) and of efforts to mitigate it and adapt to it
- Action no. 207 Integrate climate change adaptation into all heritage-management plans and policies as these are updated
- Action no. 231 Continue the improvement and expansion of the Active Travel and Greenway Network
- Action no. 234 Encourage an increased level of modal shift towards Active Travel (walking and cycling) and away from private car use
- Action no. 390 Protect, enhance, and increase the number of hedgerows and trees on farms
- Action no. 410 Engage stakeholders in all sectors to protect biodiversity in order to increase resilience to climate change

6.0 Policies and actions

6.1 Comparison/Benchmark Sites

As part of the process of crafting this report's policies and actions, we looked at the management structure and management plans of three comparable, internationally significant sites. To ensure the selection of appropriate places, the following criteria were used:

The site must be:

1. In a rural location
2. Comprise large linear earthworks
3. Internationally significant
4. A good example for the effective management of recreational users.

Ultimately, Hadrian's Wall (UK), Offa's Dyke (UK) and the Danevirke (Germany) were chosen. The Danevirke and Hadrian's Wall are both part of UNESCO World Heritage Sites (WHS).

Hadrian's Wall (UK)

In 1987, Hadrian's Wall was inscribed in its own right on to the UNESCO World Heritage Site List. Later it became part of the transnational property the Frontiers of the Roman Empire (UNESCO, 2008). Built in the 2nd century AD on the orders of Emperor Hadrian, the originally 118km long wall cuts across Britain from Bowness-on-Solway on the west to Wallsend on the east. Although in popular consciousness Hadrian's Wall is defined by its masonry wall, there is a large linear earthwork (vallum) running parallel no more than 700m to its south. The vallum comprises a c.6m wide ditch and two mounds either side of the ditch, about 6m wide and 2m high, set back c.9m from the ditch. There is also often a third mound immediately on the southern edge of the ditch (hadrianswallcounty.co.uk, accessed: 22/12/2021). The purpose of the vallum is unclear.

The Hadrian's Wall Path is a National Trail that brings walkers 135km across Northern England (nationaltrail.co.uk, accessed: 21/12/2021). Along the route are a series of tourist attractions associated with Roman Britain.

Parts of Hadrian's Wall are managed by eight different bodies for public use. Nonetheless, the vast majority of the Wall and vallum lie in privately owned lands. The Hadrian's Wall Partnership Board brings together the main national and local stakeholders and sets the strategy for its management. The Hadrian's Wall Management Plan provides a framework for management.

Offa's Dyke (UK)

Built in the 8th century AD, the purpose of Offa's Dyke was to define the cultural and political border between the Anglian King Offa's territory of Mercia and the native British people to the west in what is now Wales (Offa's Dyke Association, 2010). The earthwork consists of a large bank and western ditch which combined rise to 6m above the base of the ditch. The bank runs north to south from Treuddyn (Flintshire) to Sedbury Cliffs (Gloucestershire) and in some case still forms the modern border between Wales and England. There is 129km of proven continuous or near continuous monument along a 210km corridor. It is the largest and most complete early medieval monument in Western Europe (ibid).

In 1971, the Offa's Dyke Path National Trail was created which follows much of the monument. The dyke is owned by multiple people and agencies. Although some is in public ownership, most of the dyke is found in privately held lands, including domestic gardens. The designated status of the dyke, combined with the presence of the Offa's Dyke Path has created a high level of owner awareness about the monument (ibid). Management of the monument across two countries and six local authorities is framed by a conservation management plan. The plan was commissioned by a partnership of Cadw, Historic England and the Offa's Dyke Association.

Fieldwork for the conservation plan discovered that in general the dyke was in poor condition (Williams, 2020). Although issues associated with farming had an impact, the national trail which had raised so much awareness of the site had also led to much erosion on the dyke. This was primarily caused by the decision during the design phase for the path to have it run on the top of the bank. To counteract this, there has been a concerted effort to bring people off the top of the bank.

Danevirke (Germany)

The archaeological border complex of Danevike and Hedeby were inscribed in 2018 as a UNESCO World Heritage List (UNESCO, 2018). Hedeby is an emporium or trading town. The Danevirke is a fortification crossing the Jutland Peninsula. The Main Rampart of the Danevirke was constructed between the 5th and 8th centuries. Other ramparts are built in the 10th century (State Archaeological Department of Schleswig-Holstein, 2020). The Danevirke was at the core of the borderland between the Danish kingdom to the north and the Frankish empire to the south.

Management of the UNESCO site is framed by a conservation management plan. Funding for management provided is by the Federal State of Schleswig-Holstein and other public owners

(UNESCO, 2018). As with Hadrian's Wall and Offa's Dyke, a key concern is managing erosion caused by increasing numbers of recreational visitors.

6.2 Policies and Actions

Introduction

It is important to acknowledge that change is inevitable. The purpose of this report and the various policies and actions it contains, is to help manage that change. The conservation policies and actions below take into account the relevant constraints, opportunities, stakeholder requirements and following principles:

- retention of heritage significance;
- the use of professional advice and competent contractors where required.

The actions suggested in the document are not exhaustive. Nor do the authors of this report have a monopoly on ideas. The policies presented are a framework for decision making and resulting actions. Accordingly, any actions that are in keeping with the principals and policies of the plan are to be welcomed.

General policy

- This conservation, management and interpretation plan should provide the basis for all future decisions concerning the management of the Black Pig's Dyke and immediate surroundings in the ownership of Monaghan County Council at Aghareagh West.

Gathering data

Policy

You manage what you measure! Create a baseline dataset (qualitative and quantitative), updated at regular intervals that will allow decision makers to manage effectively and measure progress.

Actions:

- Contract an ecologist to conduct a natural heritage survey of the site.
- Install a counter at the site to quantify the number of visits.
- Talk to local landowners and community groups at regular intervals (e.g. every two years) to ascertain issues with the site's ongoing management.
- Assess economic impact of the site's development once completed and every five years afterwards.

- Due to the sensitivity of the archaeology at Aghareagh West and the narrowness of the public road, the site has an estimated carrying capacity of 20,000 per annum (this is far above expected annual visitor numbers of c.5,000). In conjunction with monitoring the impact of developing the site has on the local community and adjacent landowners, the impact to the site's archaeology should be monitored annually. This will help guide management of the site and better indicate its true carrying capacity.
- Quantify the carbon footprint associated with capital works for the development of the Black Pig's Dyke as a visitor attraction.

Measuring success:

- Visitor counter installed.
- Discussions held with local landowners and community groups at regular intervals.
- Ecology survey report completed.
- Economic impact ascertained.
- Impact to archaeology monitored and any necessary mitigations completed.
- Carbon footprint of capital works quantified.

Accidental or malicious removal of material by people

Policy

Ensure through signage and heritage interpretation that people know that the removal of material is illegal. Interpretation is also to be used to enhance broader knowledge about the monument and its benefit to the local economy (details provided in section 7).

Actions:

- Install clear, multilingual warning signage in a manner that does not damage existing archaeology.
- Instigate a programme of heritage interpretation actions that will increase knowledge about the site's archaeology and encourage visitors to become advocates for the Black Pig's Dyke.
- Maintenance staff to be trained to notice signs of disturbance to the monument and adjoining land and who to report this to.

Measuring success:

- No malicious instances of removal of material or unlicensed metal detecting.
- Any instances of removal of material or unlicensed metal detecting quickly investigated and actions taken to ensure such future behaviour is dissuaded (e.g. installation of CCTV).

Woody vegetation

Policy

Subject to an appropriate assessment and advice from an ecologist, all the trees and scrubs are to be removed from the dyke in Council ownership and replaced by appropriate native grasses. Detailed specifications for this action are required from a suitably experienced archaeologist and ecologist.

Actions:

- Over two/three phases carried out over 2/3 years carefully remove all woody vegetation and shrubbery. Roots are to be left to rot. Detailed specifications for this action are required from a suitably experienced archaeologist and ecologist.
- Replant with appropriate native grasses. The selected grass species to be planted on the monument should provide a strong protective carpet while at the same time not causing additional damage to archaeological features. Protect exposed areas with hessian or another appropriate material during the period between removal of trees and growth of the grass.
- Monitor annually for regrowth of woody vegetation. Cut and remove any saplings, do not pull out of the monument.
- Manage grass in a fashion likely to increase biodiversity. Any grass cuttings are to be given to local farmers.

Measuring success:

- Trees and shrubs removed.
- Strong carpet of native grass created that protects the monument.

Damage caused by animals

Policy

Ensure ingress by livestock is not possible.

Actions:

- Securely fence off any newly acquired land around the monument with a timber fence. The fencing should be able to keep out cattle. Careful consideration should be given to minimising any possible disturbance to archaeology. The existing gate and fence beside the road should be replaced.
- Earthen banks monitored annually for burrowing animals.

Measuring success:

- Appropriate fencing installed.

Inappropriate tourism

Policy

Create an offering at the site capable of hosting 20,000 visitors per annum. Seek to take pressure off the site by sending visitors to an installation in Scotshouse (details provided in section 7).

Actions:

- At the site in Aghareagh West purchase strips of land in the two adjoining fields from the respective landowners. Take care to listen to and incorporate their needs and concerns into the design of any visitor amenity.
- A complementary visitor amenity focused on the Black Pig's Dyke should be created in Scotshouse.
- Any amenity at the site in Aghareagh West or Scotshouse should be designed with sustainable tourism principles at its core.
- Travelling to the site at Aghareagh West using sustainable transport options (i.e. walking, cycling, bus) is to be encouraged and facilitated through appropriate signage and safety measures (large coaches are not appropriate due to width of road).
- High quality signage encouraging cycling and travel from the destination hub town of Clones to Scotshouse and onwards to the site at Aghareagh West should be created.
- The ethos of the final design of any visitor amenity should be one which works with the existing character of the surrounding landscape and seeks to use natural materials where practical.
- Both the amenities at Aghareagh West and Scotshouse should be designed to act as places where the local community can relax and play. Community and local landowner feedback is to be regularly collected.
- A research framework should be created to answer unresolved questions about the Black Pig's Dyke. Where appropriate, the community should be centrally involved in any archaeology research programme. Monaghan County Museum will be a key stakeholder in this initiative.
- All physical interventions at Aghareagh West will be carried out in accordance with national archaeological legislation and guidance. Designers are to be innovative in how they permit access while still protecting the archaeological resource (additional details provided in section 6.7).

Measuring success:

- Sufficient land purchased to facilitate visitors to the Black Pig's Dyke.
- Strong sustainable transport connections and facilities installed.

- Community feedback is regularly taken and concerns are addressed.
- Community archaeology programme created with additional information on the Black Pig's Dyke being discovered.
- All physical interventions at Aghareagh West carried out in accordance with national archaeological legislation and guidance.

Damage to its setting

Policy

Current protections from the National Monuments Acts and the County Development Plan are sufficient to protect the site's setting. These protection standards are to be maintained.

Actions:

- Local Authority Heritage and Planning staff to ensure that any future County Development Plans for Monaghan contain sufficiently strong policies to protect the site's setting.
- Local Authority Heritage and Planning staff to ensure that any future developments close to the site are in accordance with the National Monuments Acts and heritage protections policies in the County Development Plan.

Measuring success:

- Setting of the site is not denuded.
- Future County Development Plans for Monaghan contain sufficiently strong policies to protect the site's setting.

Climate Change

Policy

To be part of the solution to the challenge of climate change and implement actions that sensitively manage its inevitable impact on the Black Pig's Dyke.

Actions:

- Investment is required in sustainable transport infrastructure. Such investment could include bike racks and warning signage and safety measures on the road between the site at Aghareagh West and Scotshouse for the benefit of walkers and cyclists. This is to both encourage and support walking and cycling to the site. A bike repair station should also be provided in Scotshouse. A charging station for an EV car should be provided at the parking area in Scotshouse. Sufficient parking at the site in Aghareagh West should be provided for a 25-seater bus. In total, no more than seven car parking spaces are to be available at the site in Aghareagh West.

- The vast majority of newly acquired land is to be managed as a meadow. Due to the archaeological sensitivity of the land, it is best that the existing grassland is retained and managed appropriately. Any introduced species should be native. The meadow should be managed to increase biodiversity.
- As much of the existing hedgerows/ditches are to be retained as possible. The hedgerows are to be managed in accordance with the publication *Conserving Hedgerows* (published by The Heritage Council and Local Authority Heritage Officers).
- Should any trees be removed from the site, at least twice as many replacements are to be planted on Council land (due to the archaeological sensitivity of the site, tree planting would not be appropriate in or around the dyke). Any new trees planted should be native species.
- Create a community interpretation project involving the planting of 985 native oak trees to help sequester some of the carbon expended during construction for any development works and subsequent travel using unsustainable modes to the site at Aghareagh West. Appropriate locations away from archaeological sites are to be used. Should the initiative be successful, the numbers of oak could be expanded to planting 3,283 native Irish oaks (30cm width of excavated oak trunks across 9.85km = 3,283 trees).
- Ensure the water flowing in the ditches at the site at Aghareagh West is able to flow away from the site and does not cause localized flooding.

Measuring success:

- Strong investment in sustainable traffic completed.
- Wildflower meadow created and hedgerows appropriately managed.
- 985 oak trees planted in suitable locations by communities along length of Monaghan's Black Pig's Dyke.
- Water effectively managed at the Aghareagh West site.

6.7 Archaeological Management

Research value is a key driver for determining the methodology of investigation (i.e. what should be recovered, how and why). Specific management of archaeological resources should be tailored so that it is appropriate for realising this research value. One of the suggested actions of this report is the creation of a set of research questions to be answered.

Approach

If in the event of excavations being stipulated by the planning authority and/or National Monuments Service, the objectives of any physical investigation of the site should be focused towards realising the

research potential of the site. Only those areas that would be physically affected by the proposed development would be investigated and the depth of archaeological investigation would be limited to the depth of the proposed excavation for the purposes of the development project. Before any works are designed, great care should be taken by designers to avoid as much archaeology as reasonably possible.

Concerning the use of excavation to aid in the answering of research questions, it is only when all other non-invasive methods have been exhausted should excavation be considered. The locations of any such excavations should be guided by the knowledge gained from pre-existing studies of prehistoric Irish sites, and in particular, previous studies of the Black Pig's Dyke in Monaghan (e.g. excavation reports and geophysical surveys). Once all research questions are answered, and the research need for excavation is deemed unwarranted, all archaeological excavations must stop.

Monitoring

Archaeological monitoring refers to the observance by an archaeologist of excavation or grading works by a mechanical excavator within areas assessed as having archaeological potential. The objective of monitoring is to determine the nature and extent of surviving features and/or deposits, to identify and record these features and/or deposits and to determine if further investigation is warranted.

In the event that monitoring of the stripping of soil is stipulated by the local authority and/or National Monuments Service within the site's curtilage, the following methodology should be complied with:

The archaeologist will be able to provide guidance to the excavator on excavation methods, protective measures and/or stabilisation requirements. The initial stripping of soil should be undertaken well in advance of construction works. This will permit any necessary excavations to take place without interrupting the programme of works. It also provides the opportunity to possibly revise the design in order to avoid areas of archaeological deposits.

The archaeologist would require that site works be halted, as required, to undertake further investigation or detailed recording of any elements exposed during the monitoring process, or to address any conservation requirements. Monitoring of excavation will continue until:

- the archaeologist is satisfied that the research potential of the subsurface deposits has been realised; or
- culturally sterile deposits have been encountered across the site; or
- the maximum depth and extent of excavation have been reached.

Archaeological Excavation

Archaeological excavation refers to the manual excavation of an area to carefully recover physical evidence from the site. Archaeological excavation may be necessary in areas due for construction that have been found to contain archaeological material and for which the design cannot be suitably amended to avoid. Another reason for excavation is research need. Any archaeological excavation should be undertaken by a suitably qualified archaeologist and carried out according to best practice.

In Situ Retention of Archaeological Features

Archaeological fabric should only be removed in two circumstances. The first is where it is deemed essential for research purposes. The second valid reason is when removal is essential for the construction of any proposed development where the design cannot be suitably amended to avoid, in the areas identified in the architects'/engineers' drawings, and to the depth required to allow new elements to be installed. All other archaeological material should be retained in situ. Where excavation of archaeological material has taken place to the level required to enable construction, a layer of geotextile will be placed over the remains. This in turn will be covered by a layer of sand. This should protect any remaining archaeology and provide a separation barrier between old and new.

Archival recording and monitoring

Detailed records are to be taken by a qualified archaeologist before any works to the site are carried out. All archaeological recordings, surveys and excavation reports are to be completed in a timely fashion and copies deposited with the National Monuments Service, National Museum of Ireland, Monaghan County Library and Monaghan County Museum.

The site at Aghareagh West is to be monitored annually to ascertain any damage being done by visitors, livestock, etc. This will inform changes to the site's management both at a tactical and strategic level.

6.3 Funding

While it is desirable to carefully ascribe likely State, EU and non-governmental funding sources for the suggested actions, owing to the dynamic nature of funding streams in Ireland, this is of limited value. Nonetheless, the organisations listed below have through various grant programmes provided funding for tourism and heritage initiatives similar to those being recommended. Careful observation should be maintained of their grant programmes and how they could help fund the

suggested actions. It is important to find the right fit between an action and the aims of the various grant schemes. The following list of relevant State and NGO funding sources is not exhaustive:

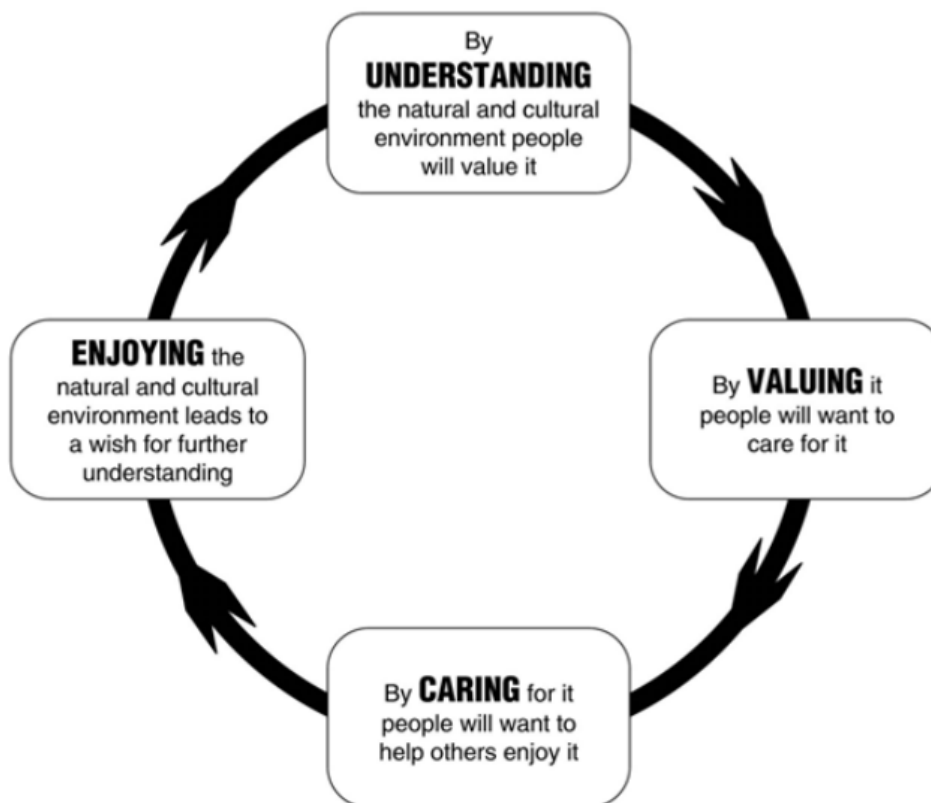
- Creative Ireland (interpretive events)
- Fáilte Ireland (interpretation and infrastructure)
- Heritage Council (conservation and interpretation, INSTAR archaeology research grant)
- National Monuments Service (conservation and interpretation)
- Royal Irish Academy (Archaeological Research Excavation Grant runs annually)

7.0 Site Interpretation and Management

7.1 The Role of Interpretation and a Review of Existing Site Interpretation

The Black Pig's Dyke in Monaghan which includes the area in the ownership of Monaghan County Council is a site of international significance. Unfortunately, its status as such is under threat from a combination of current neglect and the possible inappropriate facilitation of tourists. Within this, the use of heritage interpretation has an essential role to play. Strong, incisive interpretation has the ability to connect people with the story of a place more deeply than would otherwise happen. This in turn leads to an increase in the level of interest as to its management, improved personal behaviours and the advocating for its protection (figure 7.1). It also enhances the level of enjoyment.

Figure 7.1 Heritage interpretation virtuous circle



(Veale & Burke, 2008)

Another benefit of strong interpretation is by enhancing the visitor proposition the local economy is improved. The economic gains realised through environmentally sustainable tourism has in turn been shown to improve wider conservation behaviours (Park et al, 2019). Despite the possible threats concerning inappropriate or badly managed tourism levels, there are benefits beyond the

obvious economic ones. For instance, a place's uniqueness, attractiveness and coherence can be consolidated and strengthened when it needs to be articulated to a wider audience.

At present, there is no onsite interpretation at Aghareagh West. Online, www.blackpigsdyke.ie/ provides interesting information on the whole of the Black Pig's Dyke across eight counties. Several reports on the dyke are also available online. The recent publication of *Materialising Power: the archaeology of the Black Pig's Dyke, Co. Monaghan* by Ó Drisceoil and Walsh (2021) provides a large amount of fascinating information on the dyke in Monaghan. There is much on the section in public ownership at Aghareagh West. However, it is not a guidebook and is likely attractive only to people with a strong interest in the heritage of Monaghan and/or prehistoric Ireland. Nonetheless, it provides an excellent springboard for further interpretation efforts.

Despite being the most intact section of the Black Pig's Dyke, the dyke at Aghareagh West is difficult to find. There is no signage or GPS coordinates made available to the public (Clarke & Jackman, 2020). Similarly, there is no information about the site on the websites for Ireland's Ancient East or Tourism Ireland.

Although the present situation regarding interpretation of the Black Pig's Dyke in Monaghan generally and at Aghareagh West specifically, is very limited, it offers a great opportunity to create an exciting interpretive programme. Such a programme should enhance the visitor experience. It would also encourage appropriate visitor behaviour and help create environmentally sensitive, economic benefits for the locality.

In the three comparison sites of Hadrian's Wall, Offa's Dyke and the Danevirke, a common theme has been the need to correct management mistakes from the past and use heritage interpretation actions to bring people off the monument while at the same time enhancing the visitor experience. The story concerning the opening up of these three sites presents lessons that can inform the appropriate management of visitors to the Black Pig's Dyke at Aghareagh West.

7.2 Audiences

Neither local inhabitants nor tourists possibly interested in visiting the Black Pig's Dyke are a homogenous group. There are various audiences within each that may need different interpretation actions. A key demographic to ensuring the monument is valued and appropriately cared for are the locals themselves. The people of Currin should be proud that their parish hosts the most important

archaeological monument in the county, a site of true international importance (something they probably don't know). The key benefit of attracting visitors from outside the immediate area is to enhance the monument's economic importance and further encourage its appropriate management and conservation.

Fáilte Ireland have conducted extensive market segmentation research. For the Black Pig's Dyke, the two key international segments are those termed the Culturally Curious and Great Escapers. Of these, the Culturally Curious segment more closely matches the likely future visitor offering at the Black Pig's Dyke and Scotshouse. This segment tends to value the distinctiveness of places and are more likely to stay longer. The Culturally Curious are typically:

independent 'active sightseers' looking to visit new places, and expand their experience by exploring landscapes, history and culture. They are unlikely to return for some time once they have visited a new place, and often travel in a couple or as individuals and rarely in a family group. The age group for this demographic is 40 plus.

(www.failteireland.ie/International-sales/International-sales/Culturally-Curious.aspx)

Great Escapers are:

often couples, approximately 30 years old, some with babies or quite young children. Most are in serious need of time out from busy lives and careers. They are specifically interested in rural holidays and travel very much as a couple or family. Great Escapers are on holiday for a break, to get physical with nature, and to reconnect with their partner. More likely to take part in slightly more strenuous, but not extreme, exploration. More interested than other segments in getting connected to nature especially the more remote and exciting places.

(www.failteireland.ie/International-sales/International-sales/Great-escapers.aspx)

In 2016, there were 65,000 overseas visitors to Co. Monaghan, creating revenue of €27m (Monaghan County Council, 2019). Fine level data on the current profile of the tourism sector in Co. Monaghan is not currently available. Consequently, the character of domestic visits to the county is unknown. Anecdotally, it appears that most overnight visitors to Monaghan from the island of Ireland are for the purpose of business or attending events such as weddings.

Due to road width, the eventual final size of the modest car park and the constraints of the site, only smaller buses (i.e. 25 seats or less) should be encouraged to visit the site.

Target Groups	Interests and Expectations
Local Residents	Learning about what makes their parish different and the Black Pig's Dyke/Worm Ditch and by association their parish so special. Interesting and informative interpretation explaining the evolution of Currin within the context of prehistoric Ireland. Child friendly environment. A place to relax, learn and play.
Day Visitors from outside Currin	Learning about what makes the Black Pig's Dyke so special. Interesting and informative interpretation explaining the evolution of prehistoric Ireland. A place to relax and learn. Easily navigable cycles and drives between Scotshouse and Aghareagh West. Good quality directional signage from Clones.
Families on Holiday	Child friendly environment where children can explore and learn. An experience that the adults will enjoy. Easily navigable cycles and drives between Scotshouse and Aghareagh West. Good quality directional signage from Clones.
Older People	Accessible and easily navigable heritage attraction with high quality interpretation. Places to relax.
Irish Tourists	Learning about what makes the Black Pig's Dyke so special. Interesting and informative interpretation explaining the evolution of prehistoric Ireland. A place to relax, play and learn. Easily navigable cycles and drives between Scotshouse and Aghareagh West. Good quality directional signage from Clones.
Overseas Visitors	Learning about what makes the Black Pig's Dyke so special and how it fits into a wider European context. Interesting and informative interpretation explaining the evolution of prehistoric Ireland. A place to relax, play and learn. Easily navigable cycles and drives between Scotshouse and Aghareagh West. Good quality directional signage from

	Clones. They want an interesting experience and a sense that Monaghan is unique. They also want a sense that they are in a special place, not experienced by the vast majority of tourists.
School and Education Groups	Activity sheets and online material that are linked with the national school curricula. High quality interpretation that makes Bronze Age and Iron Age Ireland come to life.
Heritage Interest Groups (site is suitable for 25-seater or less bus due to road and site constraints)	High quality interpretation explaining the significance of the Black Pig's Dyke and its context within the story of Prehistoric Ireland. A discovery route that is easily navigable with points of interest that are readily accessible. Places to relax.

7.3 Key Messages and Stories

According to Fáilte Ireland, only a small percentage of the population have learning as a prime objective when visiting attractions. It is a secondary motivation to experiencing something authentic and enriching. The laying out of archaeological or historical facts on lectern units is interesting to only a narrow band of society. What's more, it fails to 'people' the place and give visitors a sense of what the site was actually like. All heritage interpretation should be interesting, informative and accessible. It does not necessarily need to be enjoyable. This is particularly the case for places where unsavoury episodes occurred. Interpretation should seek to enhance the experience for both visitors and locals and encourage them to learn more. This is accomplished by using the key messages and stories of the site. These messages and stories should emerge from the principal themes of the Black Pig's Dyke construction and likely uses.

A review of available research about the Black Pig's Dyke and specifically the dyke at Aghareagh West has provided significant information about the monument. This has been essential to deciding the stories through which the Black Pig's Dyke will be interpreted. The key stories are:

The cost! – both economic and environmental

Just because there was no money in prehistoric Ireland doesn't mean that there wasn't strong economic implications caused by constructing the dyke. This could come in the form of direct costs (e.g. feeding the workers, supplying equipment and materials) and indirect (e.g. the cost caused by loss of labour by taking people away from farming). Another cost is the environmental damage caused by tearing up the land, creating a division in the landscape and felling several thousand oak

trees for the palisade. There are obvious parallels with contemporary economic and environmental challenges.

- What did it take to support the construction of the dyke?
- Was the workforce made up of slaves?
- What does the dyke tell us of the social stratigraphy of society in Iron Age Ireland?
- What were the environmental consequences?
- How has local flora and fauna changed since the Bronze Age, Iron Age and now?

Borderland

Although the exact reason(s) behind the construction of the dyke are still unknown, it is likely that the dyke at Aghareagh West and across Monaghan served as some form of border. The creation of the dyke in the Iron Age was a strong message of power and control. There are clear parallels with today concerning the powerful wishing to control people and places. The Black Pig's Dyke challenges us to question our understanding of what defines a border.

- Has the definition of a border changed over time?
- What were the opportunities and risks associated with living on a borderland? How can these change over time?
- How has the story of the Black Pig's Dyke been used in the origin myths of Ulster Unionism/Loyalism?

A detective story

Using various methods archaeologists are piecing together the story of the dyke, Iron Age and Bronze Age Ireland. Much has been learnt in the last couple of decades but there are still gaps to our knowledge. The interpretation of the dyke in particular varies widely from being a defensive barrier, to ritual walkway to linear oppida (settlement).

- What do we know about the Dyke? What was its function(s)?
- How have archaeologists gained so much knowledge about the site?
- What don't we know and how can we collect more information?
- What have we learnt recently about Bronze Age and Iron Age Ireland? What does this tell us about the Bronze Age settlement in the two fields?
- How does the dyke fit in with the context of Iron Age Ireland and Europe?

7.4 Interpretation Objectives

After visiting the site, visitors should have significantly enhanced their understanding of the Black Pig's Dyke and why it is significant. They should also have greater knowledge of Bronze Age and Iron Age Ireland and how these periods impacted upon the Irish landscape. Below are the objectives of all future interpretation actions:

Knowledge and understanding

Visitors and locals will:

- learn about the complex relationship between the monument and the people of the Bronze and Iron Ages
- learn about the implications of large projects on the local economy and environment
- learn about how archaeologists piece together the story of a place
- learn about the various flora and fauna that exist on the site both now and during prehistoric times.

Skills

Visitors and locals will:

- be introduced to the concept of 'reading' the landscape for clues to its use and changes over time.

Enjoyment/inspiration

Visitors and locals will:

- have the satisfaction of learning about an archaeological monument of international importance
- have the satisfaction of learning about the development of the Bronze and Iron Ages in Ireland
- enjoy the sense of exploration and discovery.

Attitudes and values

Visitors and locals will:

- grow to appreciate the complexity of the past and its impact upon the present
- appreciate the valuable addition that heritage makes to the region's liveability and tourism attractiveness

- understand the importance of the Black Pig's Dyke as a monument of international significance
- understand the role the Black Pig's Dyke has in forming and grounding Ulster Unionist/Loyalist identity
- appreciate how archaeology and the landscape in general can inspire works of art
- appreciate how archaeologists piece together the story of a place and deepen their respect for archaeologists
- deepen their understanding of how humans can make a significant impact onto the local environment, even in prehistoric times, and that these impacts have consequences.

Activity and behaviour

Visitors will:

- wish to return
- encourage friends and family to visit
- wish to find out more about the sounding area
- wish to find out more about the Black Pig's Dyke in Monaghan
- feel compelled to visit other heritage sites
- support the work of Monaghan County Council, the local community and others in the conservation and presentation of the Black Pig's Dyke.

Locals will:

- wish to incorporate the site into their routines as a valuable amenity site
- have a deeper connection with the Black Pig's Dyke at Aghareagh West and elsewhere in Monaghan
- have a deeper interest in the Black Pig's Dyke future management and act as ambassadors for the monument
- support the work of Monaghan County Council, their own community and others in the conservation and presentation of the Black Pig's Dyke
- feel compelled to visit other heritage sites.

7.5 General Heritage Interpretation Guidelines

The role of all onsite heritage interpretation actions should be to develop the connection that both locals and visitors have with the Black Pig's Dyke. Through the use of story, the interpretation of the Black Pig's Dyke at Aghareagh West should provide clarity about its development, encourage

awareness and offer insight. Above all, the site's interpretation should enrich people's experience and encourage active engagement with the place.

All installations should be designed to cause the minimal disturbance to the cultural landscape. Care must also be made to not impede the activities of locals as they go about their daily lives. Proper adherence to the *National Monuments Act (1930-2004)* and various wildlife protection acts should be followed at all times.

To ensure the provision of high-quality interpretation and visitor management actions that are appropriate to the setting and heritage significance of the site, the following guidelines should be adhered to:

1. All interpretation actions should be tied in with the key messages and stories described in section 7.3.
2. All interpretation actions should be based on sound scholarly research.
3. Where there are conflicting interpretations consideration should be given to displaying the various versions and allowing the audience to make up their own minds.
4. Researchers and designers should reflect upon their own backgrounds and possible prejudices when devising interpretative schemes.
5. In general, do not use technical terms or complex words where simple ones will do.
6. Do not presume that people know about certain time periods. Interpretation should be aimed at the general audience.
7. The word length of panels and audio guides should be kept to a minimum.
8. Interpretation should be interesting and relevant.
9. All written material should be bilingual. All audio guides and any other aural material should be available in both Irish and English. To aid the tourism potential of the site, French and German versions of material should also be provided.
10. Interpretation should not needlessly or excessively damage the setting or the physical fabric of the place it is addressing.
11. All interpretive panels and directional signage should share a common design palate. The design should be high quality and contemporary while at the same time fitting in with the rural landscape and heritage of the dyke.
12. Where practical, all interpretation and visitor management infrastructure (e.g. gates, fences, platforms, fingerpost signage) should be made of high quality, natural materials.

13. All necessary physical risk control interventions are to be in keeping with the guidelines contained within the publication *Managing Visitor Safety in the Historic Built Environment: principles and practice* (2015).
14. Within the constraints of the site's heritage values and rural setting, inclusive access is to be provided in adherence with the advisory publication *Access: improving the accessibility of historic buildings and places* (2011).

7.6 On-site Interpretation and Visitor Management at Aghareagh West

The landowners of the two adjacent fields to the area of the dyke in public ownership have stated that they would be amenable in principle to sell a strip of land bordering the dyke (figure 7.2). This will permit visitor access to the site. Potentially there would be a requirement for a band of land to the east from landowner A up to 50m from the edge of the dyke, continuing parallel from the dyke between existing hedges/ditches. The requirement from landowner B to the west would be for a band of land up to 45m from the edge of the dyke, continuing parallel from the dyke between the existing hedges/ditch. The requirements of the existing landowners are addressed in section 5.2. Figure 7.2 Approximate possible area of future land acquisitions outlined in orange. Approximate area of Dyke already owned by Monaghan County Council outlined in red. Landowner A land. Landowner B land.

Figure 7.2 **Approximate possible area of future land acquisitions outlined in orange.**
Approximate area of Dyke already owned by Monaghan County Council outlined in red. Rehill land. McPhillips land.



(Source: modified from Google maps, accessed: 29/3/2022)

The proposals for the site at Aghareagh West in this chapter are designed for a maximum of 20,000 annual visitors. They take into account the wishes of the Monaghan County Council, adjacent landowners and local community. They also factor in the policies, principals and actions contained within section 6 of this plan. It is expected that should the actions as outlined in sections 6 and 7 of this report be completed that annual visits to the site would not exceed 10,000. Indeed, judging from visitor numbers to other comparable rural archaeology sites, it is likely that visits to the Black Pig's Dyke at Aghareagh West will be around 5,000 per annum. However, with strong marketing and promotion this number may increase significantly, albeit to a level unlikely to exceed 20,000 per annum.

After consultation with stakeholders, it was decided that the overall approach to developing the site for visitors should be one where proposals are in keeping with the setting. In practice, this means

keeping interventions to a minimum, using natural materials where feasible and providing access appropriate to the heritage significance of the site. Such an approach is also in keeping with heritage best practice.

Parking

There is a need for a bike rack at the site.

The current car park has a stone aggregate surface that can hold c.4cars. In order to accommodate the design a capacity of 20,000 per annum, the number of car spaces should be expanded to a total of seven.

The seven car spaces will be enough to accommodate a 25-seater bus. Larger coaches are not to be encouraged to visit the site due to the width of the road. This should be communicated on the Black Pig's Dyke website.

The car park surface should be hard top and be of sufficient quality to permit easy navigation by wheelchair users. The nearest car space to the site accessway is to be reserved for disabled parking permit holders. The main entrance to the field now in the ownership of the McPhillips family is to be fully accessible to wheelchair users.

Moving around the site at Aghareagh West

It is proposed that access be limited to the banks of land purchased from existing landowners. Most of this area is to be given over to a meadow, managed to increase biodiversity.

A wheelchair accessible pathway is to lead from the parking area to the middle of the land acquired from the McPhillips (figure 7.3). The path should provide good views of the site and contain appropriate interpretation which is easily legible for a person in a wheelchair. The path should be designed to cause minimal disturbance of the field's archaeology. The use of the existing geophysical survey will aid route selection. The path should also be planned to pass close to likely areas of future archaeological excavations. It should also provide access to at least one wheelchair accessible picnic table. This wheelchair accessible path will be the only hard top path on the site. Elsewhere, an approach that works with nature is to be used.

Figure 7.3

Wheelchair accessible pathway in Vindolanda Roman Fort, UK. Vindolanda is part of the Frontiers of the Roman Empire UNESCO World Heritage Site. It appears that the path is slightly raised up above the surrounding surface. This may mean that the path's foundations do not go deep into the pre-existing ground level, thereby avoiding archaeology.



Along the vast majority of the Hadrian's Wall route in North England walkers travel across open fields. Usually a c.1.5m wide strip of grass is cut to mark the way (figure 7.4). This ensures that walkers stick to the prescribed route. Over time, as the grass is regularly trimmed it becomes more concentrated and better to walk on. On occasions when the path begins to erode, a new 1.5m strip is simply mown a few metres away and the original route is left to regenerate. Signage is also used to inform walkers about avoiding areas of erosion. In marshy areas, any diversions are well marked or remedial actions are installed. Such actions include the installation of simple plastic grates in small boggy sections (figure 7.5). Overall, a flexible and adaptive approach has been taken as regards the management of visitors with regular inspections being carried out to ensure that walkers can easily navigate the route. It is important to recognise that despite in certain sections the Hadrian's Wall National Trail receiving over 100,000 visitors per annum, there is little hard top paving used in rural areas. Such an approach taken at Hadrian's Wall is to be used for the site at Aghareagh West. The

grass paths could link to a series of picnic tables in both areas of newly acquired land. To facilitate the use of the natural grass paths by wheelchair users and others with physical disabilities, an all-terrain wheelchair(s) could be made available from a location in Scotshouse or at Monaghan County Museum.

Figure 7.4 **Cut grass path in open field along Hadrian's Wall route with surrounding wildflower meadow**



Figure 7.5 **Simple plastic mesh along Hadrian's Wall route**



Timber Walkway

Given the delicate nature of the dyke in the ownership of Monaghan County Council, access to the top of the banks by visitors is not conducive to its conservation. One solution that satisfies the urge to climb has been implemented along Offa's Dyke. In 2017, Historic England installed a timber walkway over the bank (figure 7.6) (offasdyke.org.uk, accessed: 21/12/2021). The finished walkway has halted further erosion on this part of the dyke and has proven popular with walkers. Such a solution may be possible at Aghareagh West. The use of timber stairs up earthen slopes has also been used in the Danevirke UNESCO World Heritage Site. There may also be the possibility of using the walkway to illustrate the likely original heights/profile of the banks. This could be done by attaching an outline profile to the handrail or simply showing a notch at the top on the posts at the top of the walkway (figure 7.7). The timber walkway would also provide access between the two areas of newly acquired land.

Figure 7.6 **Timber boardwalk over Offa's Dyke**



(Source: Williams, 2020)

Figure 7.7 **Notch in interpretive panel along the River Nore, Kilkenny, indicates maximum height of 1947 flood waters**



Safety Signage

Clearly designed warning signs of possible hazards and responsibilities should be installed telling people how to behave when on site (figures 7.8 & 7.9). The behaviour guidelines should be clearly set out on a new information panel at the site's point of entry. Depending on the final site evaluation, visitors could be told to: lock their cars and ensure no valuables are visible, respect the archaeological monuments, not conduct metal detecting, not to climb the monument, keep dogs on a lead, bring home all rubbish, not to camp, not to light fires, close gates, not to enter neighbouring fields, etc. Visitors could also be told to be mindful of: livestock, uneven surfaces, traffic, slip hazards and trip hazards. Site visitors are to be reminded to be mindful of their own safety. The lack of toilets may also be mentioned. Parents should be reminded to supervise their children at all times. Finally, visitors must be told to respect the neighbouring landowners' property and their right to privacy. All warning signs are to be in both Irish and English. Warning symbols are to be used whenever possible. Preferably, safety signage should create a welcoming first impression (e.g. the sentiment in figure 7.9). It may be possible to integrate safety signage with site interpretation.

Figure 7.8 Safety information in Wharram Percy, UK



Figure 7.9

Safety information in Rindoon, Co. Roscommon



Marking the line of the Dyke in the road

The full width of the road L6680 where it cuts the line of the Black Pig's Dyke could be marked with cobbled paving or similar (23m wide defensive zone) (figures 7.10 & 7.11). This would give a sense of arrival to the site. It would also assist in slowing down traffic. Finally, installing natural stone would indicate that the road cuts across the route of the Dyke.

Figure 7.10

Cobbled paving marking line of medieval town wall, Fethard, Co. Tipperary



(Source: Google maps, accessed: 29/3/2022)

Fig. 7.11

Roman Gate markers, Carlisle



Interpretative Panels

The use of interpretative panels at the site is an effective way of accomplishing the interpretation objectives outlined in section 7.4. Due to the archaeological sensitivity of the site, the panels should not be set into the ground but rather rest on it (figures 7.12 & 7.13).

Figure 7.12 **The interpretive signage in the abandoned medieval town of Rindoon rests on the ground. The sawhorse is too big to be easily moved off site by possible vandals. Yet, it is light enough to be moved by the site managers.**



Figure 7.13 **The interpretive panels in Vindolanda, Hadrian's Wall, UK, are fitted onto concrete trays. This means that no excavation is required.**



All new panels associated with the Black Pig's Dyke are to be bilingual and in keeping with an agreed design palette. Text is to be kept to a minimum. Simple, easy to understand words are to be used. Authors of text should try to engage their audience and not bore them (figure 7.14). Panels should not simply be a list of facts. Instead, it should provide context and insight. This will be greatly helped by following one of the three key messages and stories as described in section 7.3 (i.e. the cost! – both economic and environmental, borderland, a detective story). Authors of the panels should be cognisant of the national school history curriculum. There should be three layers to the text. This allows visitors to read to a level they are comfortable with. Layer one tells the visitor what it is (i.e. name/aspect of heritage in question). Layer two comprises c.50 words in bold that gives basic information. The final layer (c.150-200 words) provides the reader with more detail on the aspect of heritage being focused on (e.g. natural heritage, archaeological investigations, political significance). The use of re-creation drawings for sites like the Black Pig's Dyke that have undergone severe changes can help visitors visualise what the place once looked like. Synopses should be made available in French and German (c.50 words).

Figure 7.14 **The bilingual text on the interpretation panels in Conwy Castle, UK, are a great example of brevity. The use of contemporary terms acts as a hook to attract visitors' attention.**



The location of signage must be carefully selected to not take away from a visitor's view of the site or disturb any archaeological or ecological heritage. Each panel could have a QR code linking to a YouTube video and/or audio guide where further information can be obtained. For those who really

want to learn more about the Black Pig's Dyke, the book *Materialising Power: the archaeology of the Black Pig's Dyke, Co. Monaghan* by O'Drisceoil and Walsh (2021) should be mentioned. All panels should also contain the address of the Black Pig's Dyke website.

Artworks

Art can be an excellent way of interpreting the past. Sculptures, murals, audio-visual works can all move people emotionally and leave a bigger impression than an interpretive panel ever could. However, the use of art at Aghareagh West should be carefully designed to complement the site's setting. It must also be directly influenced by the site's archaeology.

Excavation Open Days

If archaeological excavation is deemed necessary, publicised open days should be held. The local community should be encouraged to visit and take part. The open days could include lunchtime show and tells and walking tours of the site with an archaeologist. A key partner in any excavation is likely to be Monaghan County Museum.

7.7 Linking Aghareagh West with Scotshouse and beyond

Recreation of the Black Pig's Dyke in Scotshouse

At the Hadrian's Wall in North England there is only one small section where visitors are permitted to walk on the top of the Roman wall. However, signage indicates that the site's managers would prefer if people did not do so for conservation reasons. This simple sign has worked. Most people do not walk along the top of the wall. If visitors to Hadrian's Wall want to gain an appreciation of what it was like to walk on the walls, a full-scale interpretation of two phases of the wall has been built at the site of the Roman fort of Vindolanda, just south of the wall (figure 7.15). An Irish example of a recreated monument is the ringfort at the Irish National Heritage Park outside Wexford Town (figure 7.16).

Figure 7.15

Recreation of Hadrian's Wall at Vindolanda



Figure 7.16

Recreation of an early medieval ringfort, Irish National Heritage Park



A similar full-scale 30-40m length interpretation of what the Black Pig's Dyke once looked like could be created in nearby Scotshouse. Due to archaeological and geological sensitivities, the location of a full-scale reconstruction would not be appropriate at Aghareagh West. The locating of such a reconstruction at a prominent location in the nearby village with accompanying interpretation and picnic area would link the community more strongly with the monument. It would also increase the economic benefit to the area by improving the overall visitor experience and lengthening linger time. Finally, the recreated section would act as a local amenity. Interpretive signage should follow the guidance provided in the section 7.5.

Universal access should be provided to the taller northern bank. Appropriate parking, including a bike rack should be available. At least one car parking space should be reserved for disabled parking permit holders. Likewise, at least one of the picnic tables should be wheelchair accessible. There should be at least one EV charging point in the parking area. A bike repair station should be installed.

A key focus of the recreated section at Scotshouse is to provide wider context of the Black Pig's Dyke in Monaghan. Outside the Stonehenge visitor centre, there is a large rectangular providing the context of Stonehenge within a large prehistoric landscape including Neolithic avenues and Bronze Age burial mounds (figure 7.17). Something similar and smaller could be provided beside the recreated dyke in Scotshouse.

Figure 7.17 **Large display showing Stonehenge in context**



Experimental archaeology

As part of the process of constructing the recreated dyke section in Scotshouse, archaeologists and other volunteers could attempt to construct at least some of the dyke using likely tools and techniques available during the Iron Age. The crew could also be fed on a solely Iron Age diet. This experimental archaeology project would be useful in quantifying labour expenditure, ascertaining what tools and techniques were possibly used, and the nutrition needs. The results of such an experimental archaeology approach would raise interest about the Black Pig's Dyke, attract national publicity and serve to inform interpretation actions. The UCD Centre for Experimental Archaeology and Material Culture and Monaghan County Museum should be contacted to ascertain their interest in the initiative.

Education pack

Complementing the panels at Scotshouse and Aghareagh West should be education sheets linked to the primary school curriculum. Separate teacher notes should also be created. These could be made available on the Black Pig's Dyke website.

Guidebook

Once more information comes to light about the Black Pig's Dyke it would be beneficial to commission a c.50-page guidebook about the Black Pig's Dyke in Monaghan. The book should be well designed and be dominated by high quality images. It should be written for a general audience. Versions should be available in Irish, English, German and French.

Oak planting

The full length of the Black Pig's Dyke in Monaghan is 9.85km. It is very much possible that the oak palisade discovered at several locations along the dyke's length was present throughout the full 9.85km. As a way of commemorating this, restoring some of the historic environment and offsetting the carbon footprint of development works and tourist travel, the communities along its 9.85km length could be invited to plant 985 native oak trees. These would be located in suitable locations, away from archaeological sites. Should the initiative be successful, the numbers of oak could be expanded to planting 3,283 native Irish oaks (30cm width of excavated oak trunks across 9.85km = 3,283 trees). Advice from an ecologist on this initiative would be needed.

In 2021, the Co. Clare based landscape charity Burrenbeo launched the Hare's Corner project. Its objective was to help owners make a little more space for nature. A key part of the initiative was the

distributing of 1,800 saplings of the endangered Burren Pine to selected landowners. Such a project offers inspiration and lessons about how the planting of 985 oaks in Monaghan could be carried out.

Travel to Aghareagh West from Scotshouse and Clones

A strong transportation connection is required to be created between the site at Aghareagh West and Scotshouse. Such a connection would allow for greater awareness of the monument, spread visitation and increase the economic benefits for the parish. To make this possible, investment is required in directional signage and sustainable transport infrastructure. Sustainable transport infrastructure could include bike racks, warning signage and safety measures on the road to encourage cycling and walking between the two places. Directional signage is also required for people coming from the tourism hub town of Clones, especially, the future Ulster Canal greenway and marina in the town.

7.8 Events

Events can be fantastic at energising people about a heritage site they would otherwise not visit or even think about visiting. Below are some ideas for events associated with the Black Pig's Dyke. The list is not exhaustive and merely serves to inspire.

- Conference(s) focusing on various aspects of the Black Pig's Dyke and its international context. These events would benefit greatly from archaeological excavations and geophysical investigations. They would also serve to disseminate the findings of those investigations.
- The Black Pigs Run! 10km run with start/finish in Scotshouse crossing the course of the Black Pig's Dyke.
- Heritage Week walking tours of the site at Aghareagh West with an archaeologist.
- Iron Age re-enactments at Scotshouse and the Aghareagh West during Heritage Week.

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Appendix Online Survey Results