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Appendix D

RMP Sites within the surrounding area
Stray finds within the surrounding area
Legislative framework protection the archeological resource
Impact assessment and the cultural heritage resource
Mitigation measures and the cultural heritage resource

RMP No.:	WM027-002
Townland:	Newdown
Parish:	Killucan
Barony:	Farbill
NGR:	251305, 250363
Classification:	Ringfort
Dist. from development:	c. 120m southeast
Description:	<p>Ringfort shown in hashers on OS map. Photographic evidence of surviving banks/fosse also in file.</p> <p>Field Survey Notes 1971: "Much disturbed. A small circular uneven enclosure with a general slight slope from SSW-NNE, bounded by a steep scarp with remains of a steep-sided bank on its upper edge and with remains of a wide U shaped fosse at its foot from west-south-SSE. There is a steep-sided narrow counterscarp bank from west-south-SSE. Much of the scarp and bank has been quarried away on the southeast and north, also on the WNW. The ground outside the scarp from north-northeast-ENE has been dug away and the hole has been filled with old tree roots.</p> <p>The original entrance way is not recognisable. The interior and outer bank support large trees. Sited on the northeast slope of a gentle rise of good pasture. Wet hollow adjacent to the site on the northeast. The banks of this earthwork appear to be too steep and sharp looking to be those of a rath. The site may be a rath which was modified when the trees were planted. The fosse looks like the fosse of a rath and I do not know of any plantain or tree-ring with a counterscarp bank. Northeast-southwest diameter from top of inner bank 23.60m."</p>
Reference:	SMR Archive

RMP No.:	WM27-001
Townland:	Newdown
Parish:	Killucan
Barony:	Farbill
NGR:	250885, 250401
Classification:	Earthwork/Ringfort
Dist. from development:	c. 200m southwest
Description:	<p>Site shown in hashers on OS map first and second editions (1837 & 1876); also visible in aerial photography. A sub-triangular enclosure with some trees on the perimeter marked fort.</p> <p>Field Survey Notes 1971: "Completely levelled. No recognisable feature on the surface. The site, a gentle natural rise on gently undulating land of good pasture, would have been suitable for a rath. Boulders set against the modern field boundary on the southeast. Possible belonged to the monument and they look as if they were set there recently."</p>
Reference:	SMR Archive

RMP No.:	WM027-004
Townland:	Newdown
Parish:	Killucan
Barony:	Farbill
NGR:	250800, 250261
Classification:	Earthwork
Dist. from development:	c. 350m southwest
Description:	<p>Site is shown on first and second edition (1837 & 1876) OS map edition; as an irregular oval enclosure with a smaller almost circular enclosure inside it, marked fort. Also visible on aerial photography.</p> <p>Field Survey Notes 1971: "Completely demolished. No recognisable trace of the earthwork is visible on the surface. The site – a slight rise on gently undulating land of good pasture and tillage would have been suitable for a rath. Bog visible nearby to the south and southwest. There are large boulders piled against the modern field boundary on the northwest. They look as if they were only recently deposited there."</p>
Reference:	SMR Archive

RMP No.:	WM027-003
Townland:	Newdown
Parish:	Killucan
Barony:	Farbill
NGR:	251813, 250524
Classification:	Road/Togher
Dist. from development:	c. 500m east
Description:	The exact location of this monument cannot be identified with certainty. The associated documentary evidence does not show the precise location. No further description or detail on file.
Reference:	SMR Archive

RMP No.:	WM20-106
Townland:	Newdown
Parish:	Killucan
Barony:	Farbill
NGR:	251273, 251432
Classification:	Ringfort
Dist. from development:	c. 700m north
Description:	<p>Not marked on 1876 OS map.</p> <p>Field Survey Notes 1970: "Almost completely destroyed by quarrying for rock. The site is divided in two by a modern WNW-ESE field fence. There is a short segment of a well defined scarp on the west with a modern trench at its foot. This is the only part of the Rath which is recognisable. The outline of the perimeter is suggested by a very vague scarp from southwest-south-southeast.</p> <p>Situated on a natural rise on gently undulating land of average to poor pasture. Good views. Bog to the north. Height of scarp from bottom of trench=1.5m, Top width of trench=2.6m, Bottom width of trench=1.5m, Depth of trench=45cm."</p>
Reference:	SMR Archive

RMP No.:	WM020-105
Townland:	Newdown
Parish:	Killucan
Barony:	Farbill
NGR:	251048, 251537
Classification:	Ringfort
Dist. from development:	c. 800m north
Description:	<p>Shown in hashers on OS map.</p> <p>Field Survey Notes 1970: "The site is divided by a NNW-SSE modern field fence and that part of the earthwork which was to the north of where the fence is, is completely demolished. The surviving platform consists of two widely-shaped steep scarps boarding a sub-rectangular area. The inner scarp has no trace of a bank on its upper edge or of a fosse at its foot. The outer scarp has slight traces of a bank on its upper edge. It has a fosse at its foot from southwest-south-east. The fosse is best preserved from southeast-east. The outer scarp is disturbed in places by old quarry depressions. The original entrance is not visible.</p> <p>On the inside the outer scarp rises towards the centre approximately. It has definite traces of northwest-southeast cultivation ridges. The outer scarp supports some thorn trees on the south. Situated on a high natural rise. Good vies in all directions. Height of inner scarp at south= 1.1m, east-west diameter from upper edge of outer scarp=60m."</p>
Reference:	SMR Archive

RMP No.:	WM027-005
Townland:	Newdown
Parish:	Killucan
Barony:	Farbill
NGR:	251896, 249686
Classification:	Earthwork
Dist. from development:	c. 1.05km
Description:	<p>Earthwork is shown on the 1813 Estate Maps as small enclosure, partially circular with hashers.</p> <p>Field Survey Notes 1983: "A slight rise, the northern part of which has been quarried away. No trace of an earthwork or any archaeological feature."</p>
Reference:	SMR Archive

RMP No.:	WM020-104
Townland:	Greatdown
Parish:	Killucan
Barony:	Farbill
NGR:	250300, 251620
Classification:	Cist
Dist. from development:	c. 1.05km
Description:	<p>Account A: "The site was surveyed and partially excavated by Joe McCabe and Brian Rowayne on the 2nd, 3rd and 4th of April 1979. The owner was building a house and found the cist. Thinking that the 'cave' might run under his house foundations he pulled out all the large stones with an excavator and uncovered the crouched burial and food vessel. The food vessel was soft and damp but was preserved by the owner's wife who stored it indoors. The burial was severely disturbed and the skeleton seems to have been scooped out of the cist.</p> <p>When we arrived on the site we retrieved the food vessel and most of the skeleton but further excavation could only reveal the extent of the pit in which the cist had been built. The bones and pot were photographed in the survey office both by me and by Leo Daly, a local historian. As I recall a report appeared in a local newspaper. The skull was that of a full grown male and was remarkable for the extent to which both upper and lower teeth projected forwards."</p> <p>Joe McCabe's Account: "On the 29th of March 1979 I had a telephone call from Mr. Jeremiah Sheehan informing me that Mrs. Michael Byrne, Great Down, The Downs, Mullingar called to his Mullingar office to report the discovery by her husband of a skeleton and pot in a stone grave in his land at Great Down. Mr. Sheehan was of the opinion from Mrs Byrne's account of the find that we were dealing with a Bronze Age crouched burial in a short stone cist. Subsequent inspection of the pot-a bowl food vessel and of the cist itself together with Mr Byrne's recollection of the site as observed by him originally leaves no doubt about Mr. Sheehan's opinion.</p> <p>The cist was discovered by Mr. Byrne when digging a drainage trench beside his house, an investigation of the site by Mr. Brian Rowayne and myself revealed that the cist was constructed in a pit in the ground, that it measured about 80cm by 50cm and that the long axis had been aligned ENE-WSE approximately. While Irish Bronze Age cists have been found aligned in many different directions there is a noteworthy tendency for the long axis to lie in a general west-east direction.</p> <p>The cist contained a human skeleton lying on its left side with its head to the east and with the knees drawn up to the chin. Behind its shoulders was placed a well preserved bowl food vessel of a type that dates the burial to the Earlier Irish Bronze Age which on present evidence began shortly before 200BC. The bowl has a flat base 6.5cm in diameter. It is 15.7cm in diameter at the rim and 12cm in height. It is light brown in colour. The upper portion</p>

	<p>is almost vertical and has four narrow horizontal ridges perhaps primarily intended to strengthen the vessel. The rim is round and slightly everted. Decoration consists mainly of panels of square toothed comb impressions which extend to the inside of the rim and to the outer edge of the base.</p> <p>The cist is the most common form of Irish Bronze Age grave. About 700 have been recorded. About 30 sites with cists have been recorded for Co. Westmeath. They were used mainly by the Food Vessel people. The remains were either cremated or inhumed. Cremation was about twice as frequent as inhumation. In the vast majority of cases the cist contained one burial representing a single burial tradition in contrast to the communal burials of the earlier Neolithic. Cists can occur singularly or in cemeteries. The cemeteries may be flat as at Ballybrennan, Co. Westmeath or the can occur in artificial mounds as at Knockast, Co. Westmeath."</p>
Reference:	SMR Archive

RMP No.:	WM019-086
Townland:	Greatdown
Parish:	Killucan
Barony:	Farbill
NGR:	250177, 251638
Classification:	Holy Well
Dist. from development:	c. 1.1km northwest
Description:	No details.
Reference:	SMR Archive

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Information on artifact finds from the study area in County Westmeath has been recorded by the National Museum of Ireland since the late 18th century. Location information relating to these finds is important in establishing prehistoric and historic activity in the study area.

Museum No:	1929:1516
Townland:	Newdown
Parish:	Killucan
Barony:	Farbill
Find:	Gold Ornament
Find place:	Discovered in June 1929 by Thomas O'Hara of The Downs Mullingar while cutting turf on the Bog of New Down (also known as Woodfort and Dysart).
Description:	The piece was found in the second 'plour' of black peat i.e. about 14 feet below the surface of the bog. No other finds at the time. About 20 years previously a shapeless lump of gold was found some distance away in the same stretch of bog.
Reference:	NMI Topographical Files

Museum No:	1948:17
Townland:	Newdown
Parish:	Killucan
Barony:	Farbill
Find:	Lignite Ring
Find place:	Found in July 1948 while cutting turf in a bog about 15 feet below the surface.
Description:	The object is most likely a bracelet or anklet
Reference:	NMI Topographical Files

Museum No:	IA/213/64
Townland:	Newdown
Parish:	Killucan
Barony:	Farbill
Find:	Bog Road
Find place:	Bog
Description:	<i>1964 Notes "During a visit to the neighbourhood of Killucan Co. Westmeath I was shown an old road through the bog in the townland of Newdown. Only a very short stretch of this road remained but my informant told me that during turf-cutting operations it had been encountered right across the bog. Running in a straight line from the remaining stretch. The road could be seen in three or four places, nowhere clearly and it seemed to consist chiefly of grey maul and gravel about 10-15cm thick. A layer of brushwood was laid transversely across the marl and gravel. It seemed to be about 4-5ft wide and 1.25m below the surface of the bog. Local tradition of some calling it 'The Old Coach Road' a portion of which is still in existence (OS 6, Sheet 27). A gold clasp like the handle of a kettle or the ear of a pot is said to have been found on this road about 50 years previously."</i>
Reference:	NMI Topographical Files

Museum No:	1979:109, 1979:110
Townland:	Great Down
Parish:	Killucan
Barony:	Farbill
Find:	Food Vessel-Bowl Type (1979:109), Human Bone (1979:110)
Find place:	Description relates to cist discovery at Great Down. 29 th March 1979. Bronze Age crouched burial in a short, stone-lined grave discovered during digging of drainage ditch for Mr. Byrne's house.
Description:	Food vessel of ribbed bowl type intact except for some ancient clipping on the rim and base. Portion of the rim inside and out is cracked in a calcitic connection? The vessel is of a coarse fabric, light brown in colour containing many granite grits up to 4mm in length. The neck is upright with an internally bevelled rim. There are four inscribed?? ribs of the body and below the vessel tapers to a narrow base. The rim, body and base all covered with comb impressions. These are arranged horizontally at rim and base and vertically on the body. The neck is further decorated with a row of light finger tip impressions while the lower body bears a row of continuous v-shaped impressions. Height 12cm, Diameter at Rim 15cm, Max Diameter 16cm, Diameter of Base 6.2cm, Found with a collection of human bones, un-burnt said to be of an adult. Skull missing.
Reference:	NMI Topographical Files

Museum No:	IA/79/67
Townland:	Greatdown
Parish:	Killucan
Barony:	Farbill
Find:	Quern (?) and Stone Head (Both granite)
Find place:	1967 Found in a farm of a man called Burns in the townland of Newdown where there is a Holy Well called St. Kieran's Well and also the site (only a green mound) of a reputed small monastery
Description:	It is a stone built well but on the top stone is a long oval stone the size of a human head elongated horizontally, with a face on either end. The stone is rough and of poor quality 28cm long and 15cm wide and 17cm high. The face is flat has pointed oval slightly hollow eyes and straight sided squared ended nose. This stone was dug up near the well. In the same farmers yard is a very large granite quern stone in perfect condition with its grinding stone. The lower stone is 109cm in outer diameter and 39cm high. It is hollowed out to a depth of 33cm, the side sloping inwards from the top. There are two drainage holes from the bottom both running through the walls on opposite parts of the 'trough'. Upper stone is 67.5cm in diameter and has a flat underside, vertical outer edge and convex upper surface.
Reference:	NMI Topographical Files

Museum No:	1976:39-40
Townland:	Knockmant
Parish:	Killucan
Barony:	Farbill
Find:	Bronze strip, Iron Object
Find place:	Gravel pit
Description:	Dates for Knockmant IA/37/76 = 1165+/-35 BP. 95.4% Calibration= AD 770-980. A souterrain passage was found during quarrying operations at a gravel pit in 1975. The gravel pit was situated in Knockmant, Killucan, Co. Westmeath. A preliminary investigation of the site was carried out in May 1975 by Dr. J Raftery. A full investigation followed. When examined a portion of the passage had been exposed in the quarry face and some of the wall stones and roof stones had been dislodged. The passage walls were of dry-stone and it was roofed with lintels. Excavations revealed the Souterrain entrance and bee-hive chamber. The passage decreased in internal height from 1m at the entrance to 85cm at a point where a bend in the passage occurred 1.5m west of the entrance. The chamber was perfectly preserved. It was bee-hive and had 7 courses of corbels in its construction. The only artefact associated with the Souterrain was a small strip of bronze (1976:39). This was found over the bend in the passage immediately W of the entrance. A pointed iron object was found in topsoil 4m to N of the entrance. Parallel sided strip of corroded bronze. Broken at back end. Small circular rivet hole 4mm from one end. This is 1mm in diameter. Max Length of strip 4.6cm, Width 1.25cm, Thickness 6mm. Heavily corroded iron object consists of a bar of rectangular cross section which begins to taper to a point approx. 3cm from one end. Max Length 6.6cm, Max dimensions of cross section 9mmx7mm. Charcoal sample recovered from Souterrain identified and sent for AMS dating.
Reference:	NMI Topographical Files

Museum No:	1965:70
Townland:	Knockmant
Parish:	Killucan
Barony:	Farbill
Find:	Human Skeleton Fragments
Find place:	sandridge
Description:	Fragments of long bones, pelvis etc of a skeleton found 20cm below surface of sandridge. A tree on the site is called the 'Bishops' Bush' possibly a sacred tree? Described by J.B. Coakley as 'Fragments of human skeletal remains of an individual aged about 16 years. Very fragmented.
Reference:	NMI Topographical Files

Museum No:	1964:223-224 & 1964:240
Townland:	Knockmant
Parish:	Killucan
Barony:	Farbill
Find:	Bronze Pin (1964: 223) Human Bones (1964: 224) Lump of Iron Slag (1964:240).
Find place:	Sandpit
Description:	Disc headed bronze pin in very good condition except that the stem is broken into two parts and that about ¼ of the edge of the disc head is ragged. The stem is very long, round in cross-section and tapers to a sharp point. The disc head is at right angles to the stem. It is thin and flat except for a very slight and thin ridge around the top. Length 47.7cm, diameter of disc head 4.7cm, diameter and height of central cone 9.9mm and 1.025cm respectively. Un-burnt skeleton of what appears to be a young person. Found buried in the top of a sandpit, lying face downwards head to the W and feet to the east. Fairly large lump of iron slag. Some gritty grey clay adheres to the underside, presumably from contact while still hot with the bottom of the furnace. Weight 1lb, 8 oz. Found in 954 at the bottom of a 'burnt area' in a sandpit about 15 yards from where the burial was found.
Reference:	NMI Topographical Files

Museum No:	IA/213/64
Townland:	Knockmant
Parish:	Killucan
Barony:	Farbill
Find:	Bog Butter
Find place:	Bog
Description:	A large lump of bog butter was found in this bog circa 1934. No details except that it did not seem to be contained in any wooden, leather or other protection.
Reference:	NMI Topographical Files

Museum No:	1966:184–192
Townland:	Knockmant
Parish:	Killucan
Barony:	Farbill
Find:	Food Vessel (184) & Cremation (186), Cinerary Urn Crimsherd (185) & Skeleton (188), Skeleton A (187), Skeleton B (188) , Skeleton C (189), Skeleton D (190-191), Skeleton F (192), Skeleton E (186).
Find place:	
Description:	<p>1966:184: The internal surface of the urn is decorated in horizontal row of triangular impressions. Externally the neck bears a well pronounced band of horizontal chevron executed in false relief technique. From the shoulder to the base the surface is divided into vertical panels divided from one another by groups of from 4-7 plan incised lines. The ware is reddish-brown on the outer surface and brown on the inner surface. Height 9.8cm, Rim Diameter 10.2cm, Middle Diameter 12.2cm, external Base Diameter 4.8cm, Thickness 1.2cm. The vessel was found standing upright and filled with clay. A spread of cremated bone 10cm thick was found on the N & W sides of the food vessel.</p> <p>1966:185 A small fragment of thick rim sherd which may represent portico of the rim of a cinerary urn. Portion of the inner surface of the body wall, portion of the inner level of the rim as well as a portion of the outer surface of the rim is present. It would appear that the rim is an everted rim. The ware is dark brown in colour on the outer and inner surfaces. Height of sherd 2.8cm, Thickness of rim 1.4cm, Thickness of body wall 1.6cm. Found close to the left arm of skeleton (188).</p> <p>1966:186 Cremated Human Bone found associated with & beside an upright food vessel (1966:184) at a depth of 75cm below the surface of the sand & gravel ridge. The burial was about a meter E of a tree known as 'Bishop's Bush'. In the near vicinity a number of excavated skeletal burials. The skeletons were about 1 meter apart and parallel to each other in a row roughly E-W. The skeletons were orientated NE-SW.</p>
Reference:	NMI Topographical Files

Museum No:	1982: 26
Townland:	Knockmant
Parish:	Killucan
Barony:	Farbill
Find:	Polished stone axehead
Find place:	No details
Description:	No details
Reference:	NMI Topographical Files

Museum No:	1984:106
Townland:	Windtown
Parish:	Mullingar
Barony:	Moyashel and Magheradernon
Find:	Spherical Stone
Find place:	No details
Description:	Spherical stone of almost perfect symmetry. The surface is pocked and bears an iron oxide encrustation. D 7.4cm, Weight 645.5g. Found during tillage operations on land adjacent to a bog. The stone was identified as either Dolerite or Gabbro and it probably originated from Co. Antrim.
Reference:	NMI Topographical Files

Museum No:	1928:835
Townland:	Windtown
Parish:	Rathaspick
Barony:	Moygoish
Find:	Stone axe (broken)
Find place:	Found in the back of a private house garden at Windtown.
Description:	No details
Reference:	NMI Topographical Files

Museum No:	1988:114
Townland:	Windtown
Parish:	St. Feighins
Barony:	Fore
Find:	Fragment of Bronze Cauldron
Find place:	Found on 'big island' on Lough Lene.
Description:	No details
Reference:	NMI Topographical Files

Museum No:	1988: 37-40
Townland:	Windtown
Parish:	St. Feighins
Barony:	Fore
Find:	Flat Bronze Axe (1988:37) Socketed Bronze Axe (1988:38) Flat Bronze Axe (1988:39) Bronze Bell (1988:40)
Find place:	Found on island site on Lough Lene.
Description:	No details
Reference:	NMI Topographical Files

Protection of Cultural Heritage

The cultural heritage in Ireland is safeguarded through national and international policy designed to secure the protection of the cultural heritage resource to the fullest possible extent (Department of Arts, Heritage, Gaeltacht and the Islands 1999, 35). This is undertaken in accordance with the provisions of the *European Convention on the Protection of the Archaeological Heritage* (Valletta Convention), ratified by Ireland in 1997.

The Archaeological Resource

The *National Monuments Act 1930 to 2004* and relevant provisions of the *National Cultural Institutions Act 1997* are the primary means of ensuring the satisfactory protection of archaeological remains, which includes all man-made structures of whatever form or date except buildings habitually used for ecclesiastical purposes. A National Monument is described as 'a monument or the remains of a monument the preservation of which is a matter of national importance by reason of the historical, architectural, traditional, artistic or archaeological interest attaching thereto' (National Monuments Act 1930 Section 2).

A number of mechanisms under the National Monuments Act are applied to secure the protection of archaeological monuments. These include the Register of Historic Monuments, the Record of Monuments and Places, and the placing of Preservation Orders and Temporary Preservation Orders on endangered sites.

Ownership and Guardianship of National Monuments

The Minister may acquire national monuments by agreement or by compulsory order. The state or local authority may assume guardianship of any national monument (other than dwellings). The owners of national monuments (other than dwellings) may also appoint the Minister or the local authority as guardian of that monument if the state or local authority agrees. Once the site is in ownership or guardianship of the state, it may not be interfered with without the written consent of the Minister.

Register of Historic Monuments

Section 5 of the 1987 Act requires the Minister to establish and maintain a Register of Historic Monuments. Historic monuments and archaeological areas present on the register are afforded statutory protection under the 1987 Act. Any interference with sites recorded on the register is illegal without the permission of the Minister. Two months notice in writing is required prior to any work being undertaken on or in the vicinity of a registered monument. The register also includes sites under Preservation Orders and Temporary Preservation Orders. All registered monuments are included in the Record of Monuments and Places.

Preservation Orders and Temporary Preservation Orders

Sites deemed to be in danger of injury or destruction can be allocated Preservation Orders under the 1930 Act. Preservation Orders make any interference with the site illegal. Temporary Preservation Orders can be attached under the 1954 Act. These perform the same function as a Preservation Order but have a time limit of six months, after which the situation must be reviewed. Work may only be undertaken on or in the vicinity of sites under Preservation Orders with the written consent, and at the discretion, of the Minister.

Record of Monuments and Places

Section 12(1) of the 1994 Act requires the Minister for Arts, Heritage, Gaeltacht and the Islands (now the Minister for the Environment, Heritage and Local Government) to establish and maintain a record of monuments and places where the Minister believes that such monuments exist. The record comprises a list of monuments and relevant places and a map/s

showing each monument and relevant place in respect of each county in the state. All sites recorded on the Record of Monuments and Places receive statutory protection under the National Monuments Act 1994. All recorded monuments on the proposed development site are represented on the accompanying maps.

Section 12(3) of the 1994 Act provides that 'where the owner or occupier (other than the Minister for Arts, Heritage, Gaeltacht and the Islands) of a monument or place included in the Record, or any other person, proposes to carry out, or to cause or permit the carrying out of, any work at or in relation to such a monument or place, he or she shall give notice in writing to the Minister of Arts, Heritage, Gaeltacht and the Islands to carry out work and shall not, except in the case of urgent necessity and with the consent of the Minister, commence the work until two months after the giving of notice'.

Under the National Monuments (Amendment) Act 2004, anyone who demolishes or in any way interferes with a recorded site is liable to a fine not exceeding €3,000 or imprisonment for up to 6 months. On summary conviction and on conviction of indictment, a fine not exceeding €10,000 or imprisonment for up to 5 years is the penalty. In addition they are liable for costs for the repair of the damage caused.

In addition to this, under the *European Communities (Environmental Impact Assessment) Regulations 1989*, Environmental Impact Statements (EIS) are required for various classes and sizes of development project to assess the impact the proposed development will have on the existing environment, which includes the cultural, archaeological and built heritage resources. These documents' recommendations are typically incorporated into the conditions under which the proposed development must proceed, and thus offer an additional layer of protection for monuments which have not been listed on the RMP.

The Planning and Development Act 2000

Under planning legislation, each local authority is obliged to draw up a Development Plan setting out their aims and policies with regard to the growth of the area over a five-year period. They cover a range of issues including archaeology and built heritage, setting out their policies and objectives with regard to the protection and enhancement of both. These policies can vary from county to county. The Planning and Development Act 2000 recognises that proper planning and sustainable development includes the protection of the archaeological heritage. Conditions relating to archaeology may be attached to individual planning permissions.

County Westmeath Development Plan 2008-2014

Policy

P-EH113 It is the policy of the Council to preserve *in situ* all archaeological remains and sites of importance, such as National Monuments, Recorded Monuments, their setting and context and zones of archaeological potential. Within zones of archaeological potential and in the vicinity of Recorded Monuments, development will only be permitted where the Council considers the importance of the proposed development or other material considerations outweigh the value of the remains in question.

Aims

O-EH43 To strictly control development that may be detrimental to any feature or site of archaeological significance or that may seriously detract from the interpretation and setting of these sites.

O-EH44 To carry out further research into the archaeological potential of areas around the County, taking account of existing Urban Archaeology Studies and other research, and of incidences of chance finds of archaeological objects around the County

Policy

P-EH114 It is the policy of the Council to promote public awareness of the rich archaeological heritage that exists in County Westmeath through publications, research and the availability of information

Aims

O-EH45 To endeavour to ensure that all reports, excavation results and other information relating to the archaeological heritage be made available for public viewing at libraries or where otherwise appropriate and in a timely manner.

O-EH46 To create and maintain a database of all archaeological reports and Environmental Impact Statements and make it available for public viewing.

O-EH47 To promote pre-planning consultations in relation to proposed developments that may potentially impact upon archaeological heritage.

O-EH48 To provide guidance to developers and landowners in relation to proposals for development that may potentially impact upon the archaeological heritage, drawing their attention to additional published government guidance available such as 'Framework and Principles for the Protection of the Archaeological Heritage, 1999'.

O-EH49 To endeavour to improve access to Uisneach, in support of the County Heritage Plan and with the involvement of landowners and relevant authorities.

O-EH50 The Council shall seek in consultation with the National Monuments Service of the DoEHLG to designate Kilbixy and the Hill of Uisneach as Archaeological Landscape Areas in recognition of their high density of archaeological monuments and national heritage significance

Policy

P-EH115 It is the policy of the Council to ensure that all sites of archaeological potential are protected from development that may injure any potentially important archaeological features or sites.

Aims

O-EH51 To require, where appropriate, that an archaeological assessment be carried out by a suitably qualified person prior to the commencement of any activity that may impact upon the archaeological heritage.

O-EH52 To ensure that any development taking place either above or below ground which is within, adjacent to, or might affect sites and features of historical and archaeological interest shall respect the character of the archaeological site and its setting and shall be sited and designed with care for the character of the site and setting.

O-EH53 To define buffer zones, where appropriate, for the prohibition or limitation of development or for the requirement of archaeological assessment to be carried out prior to development, in the vicinity of areas of archaeological importance.

O-EH54 To impose conditions on development that will affect sites of archaeological potential to ensure that appropriate measures are taken for the identification and mitigation of the archaeological impacts, including a licensed excavation and recording of remains prior to commencement of development where appropriate.

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Potential Impacts on Archaeological and Historical Remains

Impacts are defined as 'the degree of change in an environment resulting from a development' (Environmental Protection Agency 2003: 31). They are described as profound, significant or slight impacts on archaeological remains. They may be negative, positive or neutral, direct, indirect or cumulative, temporary or permanent.

Impacts can be identified from detailed information about a project, the nature of the area affected and the range of archaeological and historical resources potentially affected. Development can affect the archaeological and historical resource of a given landscape in a number of ways.

- Permanent and temporary land-take, associated structures, landscape mounding, and their construction may result in damage to or loss of archaeological remains and deposits, or physical loss to the setting of historic monuments and to the physical coherence of the landscape.
- Archaeological sites can be affected adversely in a number of ways: disturbance by excavation, topsoil stripping and the passage of heavy machinery; disturbance by vehicles working in unsuitable conditions; or burial of sites, limiting accessibility for future archaeological investigation.
- Hydrological changes in groundwater or surface water levels can result from construction activities such as de-watering and spoil disposal, or longer-term changes in drainage patterns. These may desiccate archaeological remains and associated deposits.
- Visual impacts on the historic landscape sometimes arise from construction traffic and facilities, built earthworks and structures, landscape mounding and planting, noise, fences and associated works. These features can impinge directly on historic monuments and historic landscape elements as well as their visual amenity value.
- Landscape measures such as tree planting can damage sub-surface archaeological features, due to topsoil stripping and through the root action of trees and shrubs as they grow.
- Ground consolidation by construction activities or the weight of permanent embankments can cause damage to buried archaeological remains, especially in colluviums or peat deposits.
- Disruption due to construction also offers in general the potential for adversely affecting archaeological remains. This can include machinery, site offices, and service trenches.

Although not widely appreciated, positive impacts can accrue from developments. These can include positive resource management policies, improved maintenance and access to archaeological monuments, and the increased level of knowledge of a site or historic landscape as a result of archaeological assessment and fieldwork.

Predicted Impacts

The severity of a given level of land-take or visual intrusion varies with the type of monument, site or landscape features and its existing environment. Severity of impact can be judged taking the following into account:

- The proportion of the feature affected and how far physical characteristics fundamental to the understanding of the feature would be lost;
- Consideration of the type, date, survival/condition, fragility/vulnerability, rarity, potential and amenity value of the feature affected;
- Assessment of the levels of noise, visual and hydrological impacts, either in general or site specific terms, as may be provided by other specialists.

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Potential Mitigation Strategies for Cultural Heritage Remains

Mitigation is defined as features of the design or other measures of the proposed development that can be adopted to avoid, prevent, reduce or offset negative effects.

The best opportunities for avoiding damage to archaeological remains or intrusion on their setting and amenity arise when the site options for the development are being considered. Damage to the archaeological resource immediately adjacent to developments may be prevented by the selection of appropriate construction methods. Reducing adverse effects can be achieved by good design, for example by screening historic buildings or upstanding archaeological monuments or by burying archaeological sites undisturbed rather than destroying them. Offsetting adverse effects is probably best illustrated by the full investigation and recording of archaeological sites that cannot be preserved *in situ*.

Definition of Mitigation Strategies

Archaeological Resource

The ideal mitigation for all archaeological sites is preservation *in situ*. This is not always a practical solution, however. Therefore a series of recommendations are offered to provide ameliorative measures where avoidance and preservation *in situ* are not possible.

Full Archaeological Excavation involves the scientific removal and recording of all archaeological features, deposits and objects to the level of geological strata or the base level of any given development. Full archaeological excavation is recommended where initial investigation has uncovered evidence of archaeologically significant material or structures and where avoidance of the site is not possible.

Archaeological Test Trenching can be defined as 'a limited programme... of intrusive fieldwork which determines the presence or absence of archaeological features, structures, deposits, artefacts or ecofacts within a specified area or site on land or underwater. If such archaeological remains are present test trenching defines their character and extent and relative quality.' (IFA 2001c, 1)

Archaeological Monitoring can be defined as a 'formal programme of observation and investigation conducted during any operation carried out for non-archaeological reasons within a specified area or site on land or underwater, where there is possibility that archaeological deposits may be disturbed or destroyed. The programme will result in the preparation of a report and ordered archive.' (IFA 2001b, 1)

Underwater Archaeological Assessment consists of a programme of works carried out by a specialist underwater archaeologist, which can involve wade surveys, metal detection surveys and the excavation of test pits within the sea or riverbed. These assessments are able to access and assess the potential of an underwater environment to a much higher degree than terrestrial based assessments.