

Chapter 11 Cultural Heritage

11. Cultural Heritage

Introduction and Methodology

- 11.1 This chapter assesses the cultural heritage baseline context associated with the site and its wider context.
- 11.2 Northern Ireland has a rich cultural heritage with evidence of circa 9000 years of human activity having been found scattered across the region. This evidence manifests itself as archaeological and historic features such as tombs, forts (typically known as raths) and castles, churches, townhouses and farmhouses, industrial features and planned parklands.
- 11.3 A number of these known sites are in the general vicinity of the application site and it is likely that the wider area has been inhabited and utilised, both permanently and transiently, at all periods of human activity in Ireland.
- 11.4 There have also been numerous artefact finds which provide evidence of the day to day activity of people's lives, as well as more high status items. There are also, of course, likely to be many unknown artefacts still to be identified.
- 11.5 For the purposes of the assessment, cultural heritage includes known and unknown archaeology, buildings of historic and archaeological interest (including those 'listed' by DoE Planning Service), Conservation Areas and industrial archaeology.

Method of Assessment

- 11.6 A number of cultural heritage studies of the general area around the proposed development have been carried out previously. These studies include the following:
- Environmental Statement into a proposed extension to the quarry carried out by EDAW on behalf of Wimpey Minerals Ltd, February 1995; and
 - EIA Baseline Report of the proposed MBT Facility Hightown, carried out by John Cronin & Associates on behalf of RPS Planning & Environment, May 2009.
- 11.7 The EIA Baseline Report of May 2009 carried out by John Cronin / RPS is a comprehensive and thorough study into known cultural heritage features and includes a walkover survey of the general area by a licensed archaeologist. The report carried out by EDAW on behalf of Wimpey Minerals Ltd in February 1995 is of limited value for this assessment, though its contents have been noted.
- 11.8 It is recognised that unknown features of cultural heritage significance can be uncovered at any time, or that databases can be updated. Therefore the databases held by NIEA Monuments and Buildings Record (NIEA MBR) have been revisited. Searches of the following databases were undertaken in October 2012:

- **Sites and Monuments Record (SMR):** The locations of all known archaeological sites, whether upstanding or sub-surface are held on Ordnance Survey maps (this database also includes information on known Wedge, Passage and Portal Tombs);
- **Historic Buildings Record (HBR):** Buildings throughout the area have been inspected by DoE (NI) in order to list those having special architectural or historic merit. Files are held on all such listed buildings, as are records of other buildings which were inspected but not listed;
- **Industrial Archaeology Record (IAR):** All industrial sites cited on OS maps from the 1830's first edition onwards are recorded in this archive;
- **Register of Historic Parks, Gardens and Demesnes:** A record of historic parks and gardens in Northern Ireland. The areas delineated identify cores, usually in the vicinity of the main houses with remaining interesting layout and planting, which retain historical value as planned landscapes;
- **Defence Heritage Record:** A record of structures and sites related to WWI, WWII and Cold war defences within N. Ireland, including pill boxes, airfields and communication centres;
- **Areas of Significant Archaeological Interest:** Areas of Significant Archaeological Interest identify particularly distinctive areas of the historic landscape in Northern Ireland. They are likely to include a number of individual and related sites and monuments and may also be distinguished by their landscape character and topography;
- **Scheduled Areas:** A record of the area defined around a particular monument, protecting it under the Historic Monuments and Archaeological Objects (NI) Order 1995.

11.9 The above databases can be examined at the following weblink:

http://www.doeni.gov.uk/niea/built-home/information/online_data/online_maps.htm

11.10 Due to findings made as part of the above review of the NIEA databases and following consultation with NIEA, a specialist industrial archaeologist consultant (Fred Hamond) was appointed to examine the heritage value of a bridge and culvert located on Boghill Road and produce an appropriate Industrial Heritage Assessment. The findings of this Industrial Heritage Assessment are detailed below and are provided in full in Appendix 11.2.

11.11 The National Museums of Northern Ireland (NMNI) has also been contacted regarding the Find Spots Register which they hold. This register (and associated Collection Management System) holds details of artefacts held by NMNI, as well as details of objects reported to NMNI under the terms of the Historic Monuments and Archaeological Objects Order, but have since gone back to private hands. NMNI confirmed that they held no record of any artefacts found in the following areas (which cover the red line application site boundary and beyond):

- Mallusk;

- Boghill (Road);
- Flush (Road);
- Aughnabrack (Road);
- Sealstown (Road);
- Bernice (Road);
- Shanboy;
- Hillcrest; and
- Lakeview.

11.12 This chapter includes advice / information from NIEA, as well as the general advice given in Planning Policy Statement 6 – Planning, Archaeology and the Built Heritage, published in 1999. This PPS sets out planning policies for the protection and conservation of archaeological remains and features of the built heritage and advises on the treatment of these issues in development plans.

11.13 The chapter has also considered the terms of The Historic Monuments and Archaeological Objects (NI) Order 1985, which protects historic monuments and buildings, archaeological objects and wrecks and which requires the reporting of the discovery of any archaeological object.

11.14 Within this chapter, predicted environmental impacts are identified and appropriate mitigation for each of the identified impacts is proposed. Mitigation can be applied at both the operational stage and during the construction phase of the proposals.

11.15 In order to assess the significance of environmental impacts (after mitigation) the following criteria have been used:

- Neutral: where there will be no overall impact;
- Slight: where impacts will be observable but where the scale of the impact is unlikely to be of material significance in the locality;
- Moderate: where impacts could occur which will have effects on factors recognised as being of local importance or implication;
- Substantial: where impacts could occur which have implications for factors which are of recognised regional importance; and
- Severe: where the potential impact is likely to affect a factor of recognised national or international importance, or affect a recognised national or international guideline or

standard, or to be of major implication to the character or context of the area in which the feature or factor is located.

11.16 As part of this cultural heritage assessment, indirect impacts, cumulative impacts and impact interactions have also been considered.

Explanation of Baseline Conditions

11.17 From the databases that have been reviewed (as described above) there are a number of different known features of cultural heritage interest which provide evidence that the general area of the proposed development has been utilised over a wide range of periods of human activity.

11.18 Table 11.1 and associated Figure 11.1 provide details on these features (within a 1km radius of the development site):

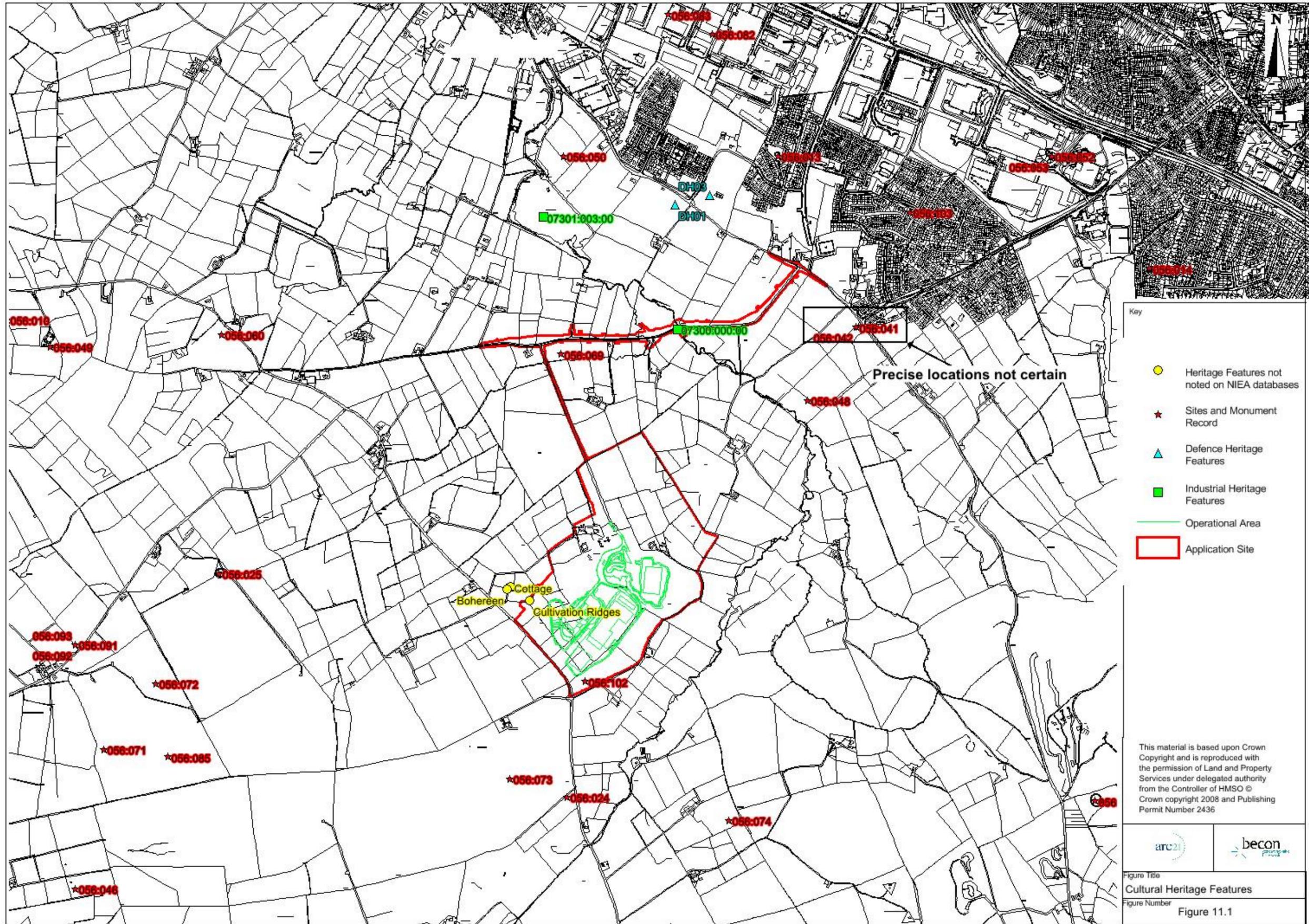


Table 11.1 – Known features of Cultural Heritage Interest

NIEA Reference Number	Type of Feature	Description	Within 'Red Line' of Application site? (Yes/No)	Likely Impact due to this proposed development?
07300:000:00	Industrial Heritage	<p>Bridge – This bridge (known as Blacks Bridge) has been the subject of a specific industrial heritage assessment undertaken by industrial archaeological consultant Fred Hamond who determined that it is a single arched basalt rubble structure of later 18th Century / early 19th Century date. This bridge is of local industrial heritage merit, primarily on account of its age, but is a typical example of hundreds of such structures erected in the 18th / 19th Centuries in Co. Antrim and beyond. Although this bridge is included in the NIEA database, it is neither Scheduled nor Listed as being of special architectural or historical significance. The bridge's lack of embellishment and relatively small scale make it of no particular architectural merit. The assessment report forms Appendix 11.2 to this chapter and should be referenced accordingly.</p> <p>Note that a culvert (located along Boghill Road over a tributary of the Flush River) of similar construction and date to Blacks Bridge was also examined. This culvert is not detailed in the NIEA database and is not scheduled or listed and is of no particular architectural or</p>	Yes	Yes – This bridge and nearby culvert will be demolished due to the need to upgrade the Boghill Road as part of the proposed development

NIEA Reference Number	Type of Feature	Description	Within 'Red Line' of Application site? (Yes/No)	Likely Impact due to this proposed development?
		historic merit at a local, regional or national scale.		
07301:003:00	Industrial Heritage	Mill Pond / Hydepark Dam	No	None likely
DH01	Defence Heritage	Site of a Heavy Anti-Aircraft Battery	No	None likely
DH02	Defence Heritage	Small Arms Range	No	None likely
DH03	Defence Heritage	Site of a Radar Platform	No	None likely
056:069	Archaeological Heritage (Circular Cropmark)	On reasonably level ground in a slight hollow, with good views E & S. A small, dark complete circular cropmark 25m in diam. was seen on Aerial Photographs (APs) There are one or two undulations in this area of the field. A small bump, which seems to lie slightly NW of the location shown on the maps, may be natural. It is very approx. 19m N-S x 17m E-W. The other visible feature is a faintly discernible ridge running N-S which would seem to relate to an old lane, shown on the 6" map, on the E side of the field. The land-owner did not know of	No	None is considered likely as this site is outside the red line boundary, and will not be subject to construction activity. It is noted though that it is in close proximity to the boundary – as

NIEA Reference Number	Type of Feature	Description	Within 'Red Line' of Application site? (Yes/No)	Likely Impact due to this proposed development?
		anything in this field, but said that the ground is quite wet.		such close attention will be paid to this potential archaeological site during the construction period.
056:102	Archaeological Heritage (Booley Huts)	Excavations in 1996, prior to extension of a quarry here, uncovered the remains of 2 small, sub-circular huts. Both were c.2m in diameter & defined by double rows of small stones, which probably functioned as footings. The footing was better defined in Hut 1, which also had a thin smear of clay around the stones, probably the remains of walling material, possibly sods. A similar clay could be seen on the N side of Hut 2. There was a suggestion in both huts of a central partition. In Hut 1, this consisted of a line of small pebbles running through the middle of the hut and this line was repeated in Hut 2, with slightly larger stones. No archaeological finds were associated with either hut. Further topsoil stripping in and around the quarry in subsequent years (1998 & 2000) did not reveal anything more of archaeological significance.	Yes	No impact is considered likely as although within the red line boundary, this site is at the top of the quarry face and will not be subject to any construction activities (though it should be noted that the quarry wall may be subject to stabilisation activities). Careful

NIEA Reference Number	Type of Feature	Description	Within 'Red Line' of Application site? (Yes/No)	Likely Impact due to this proposed development?
				attention will be paid to this site during the construction period.
056:073	Archaeological Heritage (Prehistoric Settlement Complex)	This site was picked up on APs as an enclosure consisting of an upstanding bank, defining an irregular area, 110m x 55m. No further details available at present.	No	None likely
056:024	Archaeological Heritage (Megalithic Tomb)	Part of the forecourt of this court tomb was excavated in 1937, revealing some Neolithic pottery, a flint scraper & some Iron Age (or Medieval?) pottery. The site consists of a roughly semi-circular court formed by at least 8 possible stones, some very large, 2 portal stones with a sill between them & 4 recumbent stones lying further down the slope along the estimated line of the gallery. The entrance to the tomb faces approx. NNW. A wall, which was rebuilt after excavation, runs across the N side, closing off the court. The portal stones are 1.09 & 1.02m high & stand 0.42m apart (0.51m at the base). The furthest gallery stone stretches to c.10.7m out to SSE from the portals.	No	None likely

NIEA Reference Number	Type of Feature	Description	Within 'Red Line' of Application site? (Yes/No)	Likely Impact due to this proposed development?
056:074	Archaeological Heritage (Circular Cropmark)	In the SE part of what is now 4 fields made into one, on damp pasture which rises to the top of Squires Hill at SE. Views to NW & SW are good & fair to W. Higher ground obscures the outlook at N. There are several faint dips, presumably drainage channels, in the field. A dark circular cropmark 28m in diam., with a gap at NNW was seen on APs. There are apparent traces of lazy-bedding, especially at the NE side of the field, but no archaeological features could be discerned at the location of the cropmark.	No	None likely
056:019	Archaeological Heritage (Early Christian Cashel)	On the W slopes of Cave Hill, this cashel has a magnificent view S over Belfast. The site consists of a wall of tumbled stones, 2.5m thick, 0.3m high externally & 0.6m above the interior, which is 44m N-S x 46m E-W. The wall is not particularly wide, but has the appearance of reasonable antiquity. The remains of a rectangular structure 8.8m x 12.1m, of similar construction lie just along the perimeter at W, straddling the wall - apparently a later feature. The wall has been removed along the E & many stones have been re-deposited around an old thorn tree at SE.	No	None Likely
056:042	Archaeological Heritage	Late Medieval Castle (Site has not been located precisely)	NIEA and other	No impact considered most probable

NIEA Reference Number	Type of Feature	Description	Within 'Red Line' of Application site? (Yes/No)	Likely Impact due to this proposed development?
	(Castle)		sources have tentatively placed this site well outside the Red Line of Application Site and therefore it is considered very unlikely but as the precise location of this castle has not been identified, the possibility	outcome but mitigation measures proposed will ensure that if the remains of this castle are discovered, these can be properly addressed.

NIEA Reference Number	Type of Feature	Description	Within 'Red Line' of Application site? (Yes/No)	Likely Impact due to this proposed development?
			cannot be discounted entirely.	
056:103	Archaeological Heritage (Prehistoric Bronze Age Occupation Site)	<p>An archaeological excavation was carried out after monitoring of topsoil stripping on the site revealed areas of potential archaeology. A curving gully filled with charcoal rich soil and containing Middle Bronze Age Pottery and worked flint was excavated in Phase 1. During Phase 2, an area of charcoal and heat shattered stone was uncovered. This proved to be the truncated remains of a burnt mound or Fulacht Fiadh. A large pit was found under this deposit and has been interpreted as a trough [ADS, 1999].</p> <p>Futher work in the fields to N revealed two more areas of potential archaeology. These were excavated and found to be fulachta fiadh or cooking places. The first comprised a layer of burnt mound material, under which were found 3 troughs. The first trough was 2m x 1.6m x 0.5m deep, filled with charcoal rich clay and heat shattered stone. A number of small stakeholes were cut into its base. Trough 2 was 2.2m x 1m x 0.6m deep and was cut to the W by trough 3, which in turn was 1.15m in diam., & 0.35m deep. A random scattering of</p>	No	None likely

NIEA Reference Number	Type of Feature	Description	Within 'Red Line' of Application site? (Yes/No)	Likely Impact due to this proposed development?
		stakeholes was found around troughs 2 & 3. The 2nd burnt mound, to SE, measured 7.5m x 4.75m across and covered 2 troughs. Trough 1 was oval, 2m x 1.2m x 0.45m deep; the 2nd was also oval, 0.75m x 1.15m x 0.55m deep. No artefacts were recovered from either site [ADS, 2001].		
056:014	Archaeological Heritage (Rath)	This rath, which was excavated prior to destruction, consisted of a platform 39.7m x 35.7m across, enclosed by a denuded perimeter bank & an outer ditch 4.3m wide & 0.2m deep. The platform stood 0.8-1m above the ditch. The site was bisected by a hedge boundary. The W portion of the site was excavated first, revealing a series of curvilinear gullies & shallow postholes, but no firm structural traces. Finds were few, consisting only of shreds of souterrain ware. The E half was then excavated & also revealed curvilinear gullies, but no hearths or occupation material.	No	None likely
056:025	Archaeological Heritage (Rath)	On a small E-W ridge, with excellent views W, NW, NE & E. The site straddles the ridge, created a domed interior, 33m x 35m across, enclosed by a bank & outer ditch. The bank is 4.5m wide, 0.25m high internally & 0.9m above the ditch, which is 2.4m wide & 0.35m deep. At the centre of the rath, a raised circular feature may be the remains	No	None likely

NIEA Reference Number	Type of Feature	Description	Within 'Red Line' of Application site? (Yes/No)	Likely Impact due to this proposed development?
		of a mound with the centre quarried out - or may be a circular structure. There is no visible stone. Along the W, the ditch has been recut to create a field fence.		
056:072	Archaeological Heritage (Enclosure)	On a NW-facing slope with excellent views W & NW. The land is rough rocky pasture with weeds, extremely wet & marshy in places. A roughly D-shaped enclosure, 65m E-W x 55m N-S, consisting of a bank & outer ditch, was picked up on APs. It is visible on the ground as a grass-covered bank forming a sub-circular enclosure which is open on the S-SW side. The enclosure is 67.4m NNW-SSE & the bank stands 0.4m high at N. An area of dark wet churned up ground with some rushes growing, on the outer NE, E & SE sides especially, seems to represent the ditch, which is c.2.6m wide at NE. The outer side is not very well defined.	No	None likely
056:085	Archaeological Heritage (Early Christian Settlement Site)	Linked to ANT 056:071 by old field system. This site was first noted from APs; excavations revealed an extensive complex of enclosures, some containing the remains of small houses. The total excavation of one house revealed a succession of occupations defined by a series of hearths, providing material for C14 dating. Four phases of occupation were uncovered, all associated with souterrain ware,	No	None likely

NIEA Reference Number	Type of Feature	Description	Within 'Red Line' of Application site? (Yes/No)	Likely Impact due to this proposed development?
		suggesting an Early Christian date which was confirmed by the C14 dates. There are up to 23 houses on the site & this may be a village type settlement. A 2nd site nearby was also excavated, consisting of a small enclosure attached to 2 circular house foundations, which was radiocarbon dated to the Late Bronze Age.		
056:070	Archaeological Heritage (Circular Enclosure)	On the N side of a small valley with good views S, W & N. A slightly upstanding enclosure, defined by a bank & ditch, 40m in diam. & overgrown at the NW side, was visible on APs. The layout of the area has changed; a new lane has been constructed, meandering along the edges of fields. The location is difficult to pinpoint, as the field boundaries to W do not seem to tally with those on the IG map. The site location would appear to lie E of the boundary which runs directly down the valley. As this location is a slightly higher area of ground, like a small rise or platform c.33-35m across N-S. This could be natural, but is uncertain.	No	None likely
056:048	Archaeological Heritage (Enclosure)	This site, described by O'Lavery as a rath formerly 1.5 furlongs SSE of the Castle (Ant 056:041), cannot now be located & there is no local knowledge of the site.	No	None thought likely though it should be noted that the precise location of this

NIEA Reference Number	Type of Feature	Description	Within 'Red Line' of Application site? (Yes/No)	Likely Impact due to this proposed development?
				feature is unknown. Mitigation measures proposed will ensure that if the remains of this site are discovered, these can be properly addressed.
056:060	Archaeological Heritage (Non-Antiquity Drainage Feature)	This site, thought to be an antiquity from APs, is in fact a drainage feature.	No	None likely
056:050	Archaeological Features (Fortified House and Earthwork Defences)	This site was described in 1611 "upon a hill side, a large house with chimneys, which is enclosed by a rampart of earth sods & flankered..." No local tradition of the site survives & the site cannot now be located.	No	None thought likely though it should be noted that the precise location of this feature is unknown. Mitigation measures

NIEA Reference Number	Type of Feature	Description	Within 'Red Line' of Application site? (Yes/No)	Likely Impact due to this proposed development?
				proposed will ensure that if the remains of this site are discovered
056:047	Archaeological Features (AP Site – Cropmarks)	This site cannot be precisely located.	No	None thought likely though it should be noted that the precise location of this feature is unknown. Mitigation measures proposed will ensure that if the remains of this site are discovered
056:052	Archaeological Feature (Souterrain)	This site cannot be precisely located.	No	None thought likely though it should be noted that the precise location of this feature is unknown. Mitigation measures

NIEA Reference Number	Type of Feature	Description	Within 'Red Line' of Application site? (Yes/No)	Likely Impact due to this proposed development?
				proposed will ensure that if the remains of this site are discovered
056:013	Archaeological Feature (Mound)	<p>On the N-facing slope at the edge of a ridge, with land rising to S. The site consists of a low, flat topped mound, 1.5m high & 13m x 15m across, built of earth, with some large stones in its make-up. The scarp has been eroded in some places by cattle & a steel box has been built into the N face.</p> <p>Topsoil stripping was carried out on an area W of the mound under archaeological supervision (AE/03/58), prior to development. An area approx. 150m E-W x 40m N-S was stripped. No finds or features of archaeological significance were uncovered [ADS, Aug. 2003].</p> <p>Groundworks for the final phase of development at Mayfield Village were carried out under archaeological supervision. Previous excavations in the area had uncovered a Fulacht Fiadah (cf ANT 056:103, AE/01/25) & a prehistoric occupation site (cf AE/02/45). During this phase, topsoil stripping uncovered a number of shallow linear features and 2 pits, but no datable evidence was recovered</p>	No	None likely

NIEA Reference Number	Type of Feature	Description	Within 'Red Line' of Application site? (Yes/No)	Likely Impact due to this proposed development?
		from any of them - the linear features are most likely the remains of plough furrows [ADS, 2004].		

11.19 As demonstrated in Table 11.1 and noted in the archaeological report produced by John Cronin & Associates in May 2009 (contained within Appendix 11.1), there is evidence of utilisation of this region for over 6,000 years. In addition to the features noted in the database, a walkover survey noted evidence of ridge and furrow cultivation (lazy beds) and a ruined cottage and associated 'bohereen' (laneway) in the vicinity of the quarry site. See Figure 11.1 for the location of these features.

11.20 It should be noted that no features were recorded on the site or in its vicinity in relation to the following databases:

- Areas of Significant Archaeological Interest;
- Register of Historic Parks and Gardens;
- Listed Buildings; and
- Scheduled Areas.

11.21 In addition no objects / features were noted by NMNI in any of their databases (e.g. Find Spots Register) for the study area.

Predicted environmental effects and their significance (construction and operational)

Potential Impacts - Construction

11.22 There are a number of known sites of cultural heritage interest in the area around the proposed development site. It is likely, therefore, that the site and nearby areas, would have been utilised in the past and, as such, it is likely that remains are present in this area.

11.23 However, the application site is located, for the most part, in a working quarry where any archaeological remains are most likely to have been displaced by past operations. During Tarmac's tenure of the site topsoil stripping has been carried out in consultation with NIEA and relevant heritage legislation has been adhered to.

11.24 In addition the majority of the known sites listed in Table 11.1 will not be directly or indirectly affected by the construction or operation of the proposed scheme.

11.25 In their consultation response NIEA made specific reference to the terms of Planning Policy 6 Planning, Archaeology and Built Heritage – in particular Policy BH2. This policy states "*Development proposals which would adversely affect archaeological sites or monuments which are of local importance or their settings will only be permitted where the Department considers the importance of the proposed development or other material considerations outweigh the value of the remains in question*".

11.26 There are three known sites (see Figure 11.1) of archaeological interest within, or in very close proximity to, the application site boundary as follows:

- Site 056:102, which is the site of ‘Booley Huts’ excavated in 1996 (see Table 11.1 above for a full description). As noted by NIEA, “excavations in 1996, prior to extension of a quarry here, uncovered the remains of two small, sub-circular huts. Both were c.2m in diameter & defined by double rows of small stones, which probably functioned as footings. The footing was better defined in Hut 1, which also had a thin smear of clay around the stones, probably the remains of walling material, possibly sods. A similar clay could be seen on the N side of Hut 2. There was a suggestion in both huts of a central partition. In Hut 1, this consisted of a line of small pebbles running through the middle of the hut and this line was repeated in Hut 2, with slightly larger stones. No archaeological finds were associated with either hut. Further topsoil stripping in and around the quarry in subsequent years (1998 & 2000) did not reveal anything more of archaeological significance”. Although located within the application site these huts will not be disturbed by the proposed development.
- Site 056:069, which is located outside but in very close proximity to the application site (within a field adjacent to the boundary), is described by NIEA as “a circular ‘crop mark’ (of c.25m diameter). It is shown on aerial photographs and is on reasonably level ground in a slight hollow, with good views E & S. There are one or two undulations in this area of the field. A small bump, which seems to lie slightly NW of the location shown on the maps, may be natural. It is very approximately 19m N-S x 17m E-W. The other visible feature is a faintly discernible ridge running N-S which would seem to relate to an old lane, shown on the 6" map, on the E side of the field. It is noted by NIEA that the landowner did not know of anything in this field, but said that the ground is quite wet”.
- Industrial Heritage Site 07300:000:00. This site (known as Blacks Bridge) on the Boghill Road will be directly impacted by the proposed development which will result in this feature being removed and replaced with a modern bridge as part of the upgrading of this access route. There is also a small culvert located along the Boghill Road (across a tributary of Flush River) which will also be demolished and replaced with a modern structure. NIEA stated in their consultation response that if Blacks Bridge cannot be retained then as per Policy BH4 of PPS 6, discussion regarding the appropriate mitigation required to record the bridge prior to development would be necessary.

11.27 A licensed Industrial Archaeologist has carried out a detailed survey of this bridge (see report in Appendix 11.2). This survey determined that the bridge is a single arched basalt rubble structure of later 18th Century / early 19th Century date. It is of local industrial heritage merit, primarily on account of its age, but is a typical example of hundreds of such structures erected in the 18th / 19th Centuries in Co. Antrim and beyond. Although this bridge is included in the NIEA database, it is neither Scheduled nor Listed as being of special architectural or historical significance. The bridge’s lack of embellishment and relatively small scale make it of no particular architectural merit.

11.28 As with the site of the ‘Booley Huts’, there are other aspects to the proposed scheme that will involve disturbance to areas not previously impacted by the quarrying operations. For example, Boghill Road will be widened into areas which are currently in agricultural use. It is quite

possible that these areas will have unknown features of cultural heritage present and these features could be disturbed / destroyed by activities connected to upgrading these routes. These activities will include stripping of the topsoil (the layer in which most archaeological artefacts would be present).

11.29 There are also two important features detailed in the archaeological heritage database, the locations of which are known to have been in the general area of the application site but which have not been accurately identified. These features are the 'Chapel of Westone' and the site of a Late Medieval Castle. The report carried out by EDAW on behalf of Wimpey Minerals Ltd (see Appendix 11.3) suggests tentatively that these features may have been located at an area known as Hightown Terrace, due to documentary evidence dating from 1880. It is possible that these sites, or features associated with them, could be uncovered during construction of the proposed development (most likely during construction of Boghill Road widening).

11.30 It should be noted that a culvert (located along Boghill Road over a tributary of the Flush River) of similar construction and date to Blacks Bridge was also examined. This culvert is not detailed in the NIEA database and is not scheduled or listed and is of no particular architectural or historic merit at a local, regional or national scale.

Potential Impacts - Operation

11.31 The operation of the proposed facilities will have no impact on the cultural heritage of the area. Any features which are undisturbed by the construction phase will remain so.

Description of proposed mitigation measures (construction and operational)

Mitigation – Construction

11.32 Due to the potential for unknown items of cultural heritage to exist in the general area of the proposed development (in particular areas adjacent to Boghill Road), a licensed archaeologist will be appointed to carry out a watching brief of topsoil stripping (not including the removal of overburden from the quarry area).

11.33 Prior to construction, the archaeologist will agree a programme of works with NIEA. In addition to any requirements from NIEA, the following measures will be undertaken as part of these works and are included within the Construction Management Plan, located at Appendix 3.1:

- A licensed archaeologist is to be present during topsoil stripping along Boghill Road in order to monitor disturbance.
- The potential for archaeological excavation is to be taken into account in the construction timetable and contract, with the appointed contractor to be made aware of the need to work with the archaeologist and the potential for the use of new working methods to accommodate the archaeologist's requirements.
- Any test trenches required by the archaeologist are to be excavated using a smooth edged bucket on a back acting mechanical excavator.

- Each excavating machine is to be observed by an archaeologist.
- The relevant NIEA case officer will be kept informed at all stages of the works and NIEA will be consulted to agree the appropriate course of action in the event of the discovery and identification of any archaeological remains. Excavation may be required and the agreement for this or other preservation methodology will be made between project promoter and NIEA.
- If required, the archaeologist will undertake post excavation works and complete a full report on the artefact finds and all other aspects of their role in the project. This report will be submitted to NIEA for approval and subsequent inclusion in relevant databases.

11.34 In relation to the site of 'Booley Huts', whilst there is no proposal for it to be disturbed, should it become necessary for any earth movement or other works to take place in relative proximity to this area, close monitoring by a licensed archaeologist will be undertaken (due to the potential that other 'Booley huts' remain undiscovered).

11.35 Details of both Blacks Bridge and the small culvert over the tributary of Flush River are contained in the report by specialist archaeologist, Fred Hamond, provided within Appendix 11.2 This report met the requirements of NIEA in relation to Policy BH4 of PPS 6 and, as required with any archaeological reports, it has been submitted to NIEA for subsequent inclusion in relevant databases. NIEA noted that Black's Bridge has now been comprehensively surveyed both photographically and by way of a measured survey and agree with the report's finding that the bridge is of local heritage interest. They note that the bridge is one of hundreds of similarly designed bridges built throughout Co. Antrim in the 18th and 19th century. Taking this into consideration NIEA: Historic Monuments Unit have confirmed they have no objection to the bridge being removed as part of the proposed development.

11.36 It should be noted that under the terms of The Historic Monuments and Archaeological Objects (NI) Order 1995, it is a requirement to report the discovery of any archaeological object to the statutory body. Any appointed contractor and their staff working on this scheme will be made aware of the possibility of uncovering unknown artefacts or other features and will be advised of their responsibilities under this legislation.

Mitigation – Operation

11.37 As the proposed development will have no impact on the cultural heritage of the area no mitigation measures are required for the operational period.

Description of Residual effects and their significance taking mitigation into account (construction and operational)

11.38 The effect on the cultural heritage of an area can be one of the most uncertain areas of a development as it is always possible that not all features are recorded in written archives. While the majority of the known archaeological features are not located near to the proposed development and the area of the proposed development will for the most part be on areas that

were previously disturbed, the known archaeological record and the nature of the surrounding area suggests that there is a potential for the occurrence of previously unknown cultural heritage resources.

- 11.39 It is considered that the proposed mitigation measures of having an archaeologist present during any topsoil stripping and the requirement for all staff working on the project to be made aware of the possibility of unknown artefacts and of their responsibilities if a feature is uncovered. This, alongside the requirement to agree (with NIEA) suitable recording, excavation and (if applicable) preservation of any found features of interest, will mitigate successfully for the most part the impact on cultural heritage.
- 11.40 There will be a permanent impact due to the demolition of Blacks Bridge which, although of very limited cultural heritage interest, will give rise to a Moderate Negative Impact at a local level during the construction phase.
- 11.41 During the operational phase there will be no impact on the cultural heritage of the area.
- 11.42 As part of this heritage assessment, indirect impacts, cumulative impacts and impact interactions have been considered.
- 11.43 In terms of indirect impacts it is considered that impacts on a feature of cultural heritage i.e. the demolition of Black's Bridge could potentially have indirect impacts on the Water Environment. The mitigation measures relating to this are further described in Chapter 7: The Water Environment and should be referenced accordingly. It is considered that these are sufficiently robust to ensure that there will be no indirect impacts on the water environment.
- 11.44 Cumulative Impacts are impacts that result from incremental changes caused by other past, present or reasonably foreseeable actions together with the project under consideration. No cumulative impacts in terms of Cultural Heritage have been identified.
- 11.45 Impact interactions are the impacts of the various stages of the project, during construction and the operational stage of the proposed development. It is considered that with the implementation of the appropriate mitigation there will be no impact interactions during the construction and operational stages.