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Site:	Pigeon House Fort	Nat. Grid Ref:	320380
	233650		
Road:	Pigeon House Road	O. S. 6" Sheet No:	DU 019
Townland:	Ringsend	Arch-Tech Project Ref:	09-005
Parish:	Donnybrook	Excavation Licence:	09E 259
County:	Dublin 4	RMP Ref.:	DU019-027

## 1.0. INTRODUCTION.

- 1.1. This report is an archaeological and architectural survey of the Pigeon House Fort, an 18th century artillery fort on the South Wall of the Poolbeg Peninsula in Dublin Bay (refer Fig. 1).
- 1.2. The report includes the results of a detailed inspection of the site, a digital, drawn and photographic record (refer Figs. 8-15 and 17) of the accessible portion of the upstanding remains, an architectural inventory, and conservation assessment of degradable features. Vegetation clearance and minor sub-surface archaeological investigations have also been conducted at the site under license from the Department of the Environment, Heritage and Local Government and National Museum of Ireland. Previously documented historical information on the fort has been summarised and supplemented with newly identified photographic sources, and the files of Dublin City Council relating to the monument have been examined.
- 1.3. Based on this work, this report defines the existing extent of the monument on the ground and identifies its constituent features and areas of potential sub-surface archaeological material. The report concludes by recommending ways in which the Pigeon House Fort can be incorporated, and protected, within any future development scheme on the Poolbeg Peninsula.

- 1.4. The building survey was limited by ongoing gardening and landscaping work, and by travellers who have moved onto the monument.
  
- 1.5. Plates 1 to 4 were kindly provided by Pat Higgins at the Dublin City Council Wastewater Treatment Works. Acknowledgement should also be given to the Dublin City Archaeologist, Dr. Ruth Johnson, who allowed us to search through her files.

## 2.0. ARCHAEOLOGICAL BACKGROUND.

### 2.1. Record of Monuments and Places.

- 2.1.1. The files of the Record of Monuments and Places (commonly known as the RMP), which form part of the archives of the Department of Environment, Heritage and Local Government, are one of the primary repositories of potential information on the archaeological record (refer Fig. 6).
- 2.1.2. The Pigeon House Fort complex is designated Recorded Monument DU019-027 (Fort). The RMP files contain a short historical summary of the fort (excerpt from De Courcy 1996, 298-302), which was in use from 1798 to 1897. The files note various constituent elements of the fort complex, including soldiers' quarters, stores, magazines, a hospital, a canteen, a handball alley, a prison, water tanks, defensive gateways at each end of the South Wall protected by trenches and drawbridges, an armoury and guardhouse commanding the road from Ringsend, and guns trained on the South Bull sands and the mouth of the Liffey.
- 2.1.3. As well as the fort, the Great South Wall itself is also designated as a Recorded Monument (DU018-066 & DU019-029 – Sea Wall). The RMP Files explain how the sea wall was constructed from 1715 and linked the channel of the Liffey from Corn Exchange Place to the Poolbeg lighthouse (De Courcy 1996, 374-8).
- 2.1.4. Recorded Monuments in the vicinity of the Pigeon House Fort also include shipwrecks, which are recorded on the Maritime Sites and Monuments Record. Just under fifty shipwrecks have been recorded for the River Liffey at Poolbeg, Ringsend, and the Great South Wall, and these are listed in Appendix 18.2 of the Poolbeg Planning Scheme EIS (Chapter 18, Effect on the Environment: Material Assets – Archaeological Heritage, Cunnane Stratton Reynolds, February 2009). These do not have an immediate bearing on the monument itself so are not repeated here.

## 2.2. Topographical Files of the National Museum of Ireland.

2.2.1. Collectively known as the Topographical Files, these files form an important part of the archive material held within the National Museum of Ireland. As a body of information, they provide information on artefacts, their find spots, and any field monuments that have been reported to or investigated by officers of the National Museum.

2.2.2. Two files are of relevance to the Pigeon House Fort. The first file relates to the discovery of a portion of a medieval jug at Pigeon House, Ringsend in 1954 (NMI Ref. 1954:4). The second file relates to the discovery of a glass bead in 1918, in the water at the Pigeon House Fort by a museum attendant (NMI Ref. RIA 1918:368). The file notes that the bead is 'blue with white and blue ridges and white and blue spiral knobs with yellow insets, a good deal broken'.

## 2.3. Previous Archaeological Investigations.

2.3.1. Summaries of all licensed archaeological excavations in the Republic of Ireland from are published in the *Excavations Bulletin* edited by Isabel Bennett, various publications of which list excavations between 1970 and 2005. Only one previous investigation is recorded as having taken place in the vicinity of the Pigeon House Fort.

2.3.2. The excavation licence in question concerned archaeological monitoring carried out in 2004 during dredging work at Poolbeg Yacht and Boat Club, in association with the development of a marina on the River Liffey in Dublin Port (Kiely, Excavations Ref. 2004:0579; Licence No. 04E0740). The dredged material consisted of two layers. The upper layer consisted of a soft brown silt with much modern debris. This debris included several modern mooring blocks, engines and tyres. Three modern vessels were recorded within this layer. The underlying stratum was a sterile grey silt. No archaeological stratigraphy or finds were recovered during monitoring.

## 2.4. Protected Structures and Industrial Heritage.

2.4.1. Protected Structures considered being of special architectural, historical, archaeological, artistic, cultural, scientific, social or technical interests are listed in the Dublin City Development Plan 2005-2011 (refer Fig. 7). A number of structures along Pigeon House Road have protected structure status including the surviving remnants of the Pigeon House Fort.

RPS Ref. 6928	Great South Wall
RPS Ref. 6929	Former Pigeonhouse Hotel
RPS Ref. 6931	Remnants of Pigeonhouse Fort
RPS Ref. 6932	Pigeon House power station (former red-brick electricity generating station)

2.4.2. The Dublin City Industrial Heritage Record 2007 also lists features of industrial archaeological interest along the Pigeon House Road and in the vicinity of the fort. Those in the immediate vicinity of the fort are listed below (refer Fig. 1).

DCIAH 19-9-004	Dublin Corporation Outfall Works	(OS 1908)
DCIAH 19-9-005	Lifeboat House	(OS 1908, 1936)
DCIAH 19-9-006	Electricity Works	(OS 1908, 1936)
DCIAH 19-9-012	(Former) Slip	(OS 1864, 1908, 1936)

2.4.4. The Dublin Docklands Master Plan 2008 environmental protection objectives (Section 6, Objectives UD 55 & UD 63-68) seek to record and protect sites of archaeological and industrial archaeology within the Docklands area, and specifically mentions the importance of protecting, and possibly restoring, part of the Great South Wall.

2.5. Files of Dublin City Council.

- 2.5.1. The Dublin City Archaeologist with Dublin City Council's files regarding planning and development in Ringsend and on the Poolbeg Peninsula were examined for information relevant to this study.
- 2.5.2. The files mention the site of a lifeboat house located in the northeastern corner of the Outfall Works which is marked on the 1907-8 OS map and which was identified during the compilation of the Dublin Docklands Master Plan: Inventory of Architectural and Industrial Archaeological Heritage. As noted above, this is not a Protected Structure, but it does appear on the Dublin City Industrial Heritage Record 2007 (and refer Fig. 1).
- 2.5.3. The files contain records of previous archaeological assessments conducted at the Pigeon House Fort for extensions and renovations to the Ringsend Wastewater Treatment Works. Of particular interest were proposals put forward by Archaeologist Neil O'Flanagan in 2002 for the long-term conservation and presentation of the complex to the public, and these are not dissimilar to those discussed further below in Section 6.0.
- 2.5.4. The files also contain an assessment of a large quantity of granite blocks, probably originally part of the sea wall, found during the 'Dublin Waste to Energy' development along the Pigeon House Road (Frazer, Archaeological Assessment dated Nov. 2008 MGL Archaeology). The report concluded that the blocks were not of archaeological interest, but that they should be kept on site and reused in a future development in the area. They are owned by Dublin City Council. Some of these blocks could be reused in the restoration works proposed for the Pigeon House gatehouse (refer Section 6.0).

### 3.0. SUMMARY OF HISTORICAL BACKGROUND.

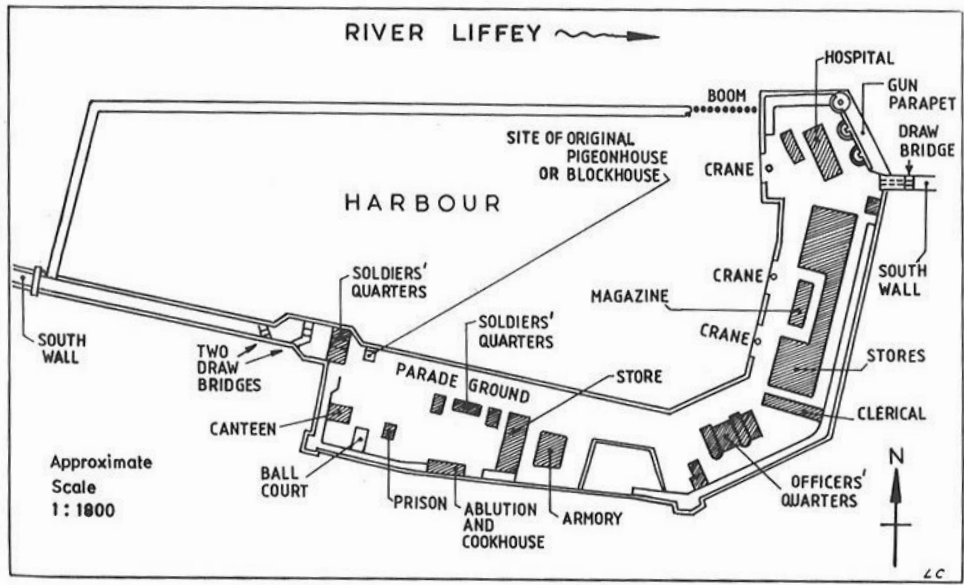
- 3.1. A detailed historical background of the Pigeon House Fort has already been compiled for the Poolbeg Planning Scheme EIS (Chapter 18, Effect on the Environment: Material Assets – Archaeological Heritage, Cunnane Stratton Reynolds, February 2009). That information is repeated in this section of the present report for ease of reference. Reference should be made to historical maps from 1800, 1837, 1899 and 1909 (refer Figs. 2, 3, 4 & 5) and to photographs from 1895 to 1999 (Plates 1-4).
- 3.2. 'The banks of the Liffey estuary may have been used on a temporary basis for hunting and fishing in the prehistoric period. Archaeological material associated with this form of exploitation includes fish traps, other fishing structures such as wooden posts and dug out boats. During recent archaeological monitoring undertaken on the north bank of the river at North Wall Quay deposits of estuarine silts and gravel shorelines have been found representing a bank of the river channel or an island within the Liffey estuary (McQuade and O'Donnell 2006, 569; O'Sullivan and Breen 2007). The deposits, which contained the remains of fishtraps, were dated to around 7000 BP or the Late Mesolithic period. The deposits were found at a depth of 6.3m below mean sea level indicating significant changes in the ground level conditions. The site was located under land reclaimed from the Liffey, but would originally have been on the foreshore of the river'.
- 3.3. 'The earliest references to the Poolbeg area date to the later part of the medieval era and it was known by that name (which means 'Little Pool') from at least 1488. Poolbeg is known to have been part of the lands of Thorncastle in 1306, but is not named specifically in the documents at this time. The 1673 map of Dublin by De Gomme depicts 'Poole Beg' as the channel between the North and South Bulls indicating that it was defined as a smaller area than it was in the 19th century when it stretched from the lighthouse all the way to the Pigeon House precinct (De Courcy 1996, 310- 311; D'Alton 1838, 853)'.



- 3.4. 'The Pigeon House precinct ... was known at the end of the 17th and beginning of the 18th century as the Green Patch and was a small, isolated area used as an early staging place for ships unloading in the estuary (De Courcy 1996, 298). At this time the River Liffey ran in an irregular channel, shallow in places and with few quay walls. From early in the 18th century it was decided to construct a breakwater running eastwards from Ringsend which would contain the river and allow the channel to be deepened. The earliest breakwater consisted of a double row of timber piles, known as 'the Piles', driven into the sandbanks. Stones, gravel and shingle were then laid along the line of the timbers'.
- 3.5. 'Construction began at the mid-point of the piles and progressed eastwards and westwards from there. By 1731 the piles ran from the future site of the Pigeon Harbour as far east as the future site of the Pigeon House Lighthouse, a distance of over 3km (De Courcy 1996, 375-6). They are shown on Rocque's Actual Survey of the City of Dublin, 1760.'
- 3.6. 'Up until the construction of the piles and later the Great South Wall, the sandbars at the mouth of the river were treacherous to shipping. Whilst the majority of recorded shipwrecks are within the channel of the river, early 19th century cartographic sources also show shipwrecks on the South Bull. The South Bull was an area of shifting sand which developed to the south of the wall and could be covered at high tides.'
- 3.7. 'By the mid-18th century the Ballast office suggested constructing a stone river wall to bridge the gap between Ringsend Point and the west end of the Piles. The construction of a double wall, 'the Ballast Office Wall' was completed by 1759. The construction of a stone river wall along the line of 'the Piles' began soon after and was completed between 1792 and 1795 as far as the Poolbeg Lighthouse.'

- 3.8. 'Part of this project saw the construction of the Pigeon House Harbour and the Blockhouse. This later building was used as a storehouse and became known as the Pigeon House, after a John Pidgeon became its resident supervisor and caretaker in 1761. His name was also lent to the part of the Salmon Pool 'the Pigeon House Hole' which was used as a mooring place for cross-channel boats. Many of the people passing through here would stop for refreshments at the resting place established by Pidgeon and his family. Development continued in the 18th century, as further wharfs, accommodation, a Revenue Barracks (DU018-05305), a storehouse and a wall protecting the south shore of the precinct from waves were added. In 1791 a new harbour was planned which used the South Wall as its southern and eastern quays and a new wall in the channel of the Liffey as its northern and western sides (De Courcy 1996, 298-99; Pearson 2000, 451). This was known as the Pigeon House Harbour or Dock and came into service in 1793. In that same year the ornate and imposing Pigeon House Hotel was constructed to accommodate the increasing cross-channel passenger traffic (De Courcy 1996, 298- 299; Pearson 2000, 451).'
- 3.9. 'As a result of the 1798 uprising, the Pigeon House precinct, which was deemed a worthy strong-point, became occupied by the military. This phase in the area's history witnessed the increased development of the site as buildings necessary for military occupation such as soldier's quarters, stores, magazines, a hospital, a canteen, a handball alley, a prison and water tanks, were gradually added. Defensive measures such as gateways at each end of the South Wall protected by trenches and drawbridges, an armoury and guardhouse commanding the road from Ringsend and guns trained on the South Bull sands and the mouth of the River were also instituted. This site was henceforth known as the Pigeon House Fort (DU019-027) (De Courcy 1996, 299- 300). In the late 19th century military occupation of the area was no longer deemed necessary and it was sold to the Dublin Corporation.'

**Plan of 'Pigeonhouse fort, 1861' from De Courcy 1996, 301.**



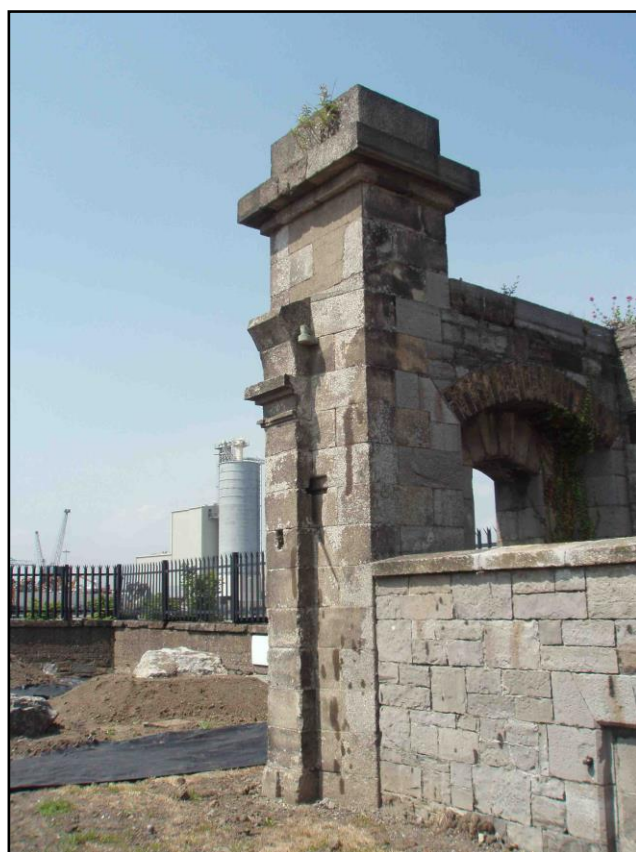
#### 4.0. SURVEY OF PIGEON HOUSE FORT COMPLEX.

##### 4.1. Introduction.

4.1.1. The Pigeon House Fort complex was inspected in detail over a number of days between May and June 2009. These inspections, combined with the research on the historical, archaeological, architectural, cartographic and photographic sources relevant to the site, identified several distinct elements which make up the complex. These are described below and are depicted on Figure 1. The photographic survey of the complex is included on a separate CD (and refer Fig. 17).

##### 4.2. Western Gatehouse.

4.2.1. A portion of the western gatehouse or guardhouse survives on the northern side of Pigeon House Road. It comprises part of the entrance archway into the fort, and flanking the gate a gun platform accessed by steps and a small guard-room with musketry-loops overlooking the (now in-filled) harbour basin. Part of a the wall of the soldier's quarters building shows evidence for a previous non-military function, and may be associated with the site of the original Pigeonhouse blockhouse of c. 1760. The gatehouse building was constructed in 1798-1813 and originally stretched across the Pigeon House Road. It is marked as the 'Soldier's Quarters' in De Courcy's reconstruction of the Pigeon House Fort c. 1861 (1996, 301).



- 4.2.2. The entire upstanding portion of the gatehouse complex covers a maximum area of 22.5m east-west and 8m north-south. It is in relatively good condition. It was covered with ivy at the time of inspection, and this was partially cleared in order to facilitate recording of the remains. The interior of the guard-room is filled with rubbish. The granite capping on the solid balustrade and parapet wall, and much of the granite landing paving, has been removed. A detailed written, drawn and photographic survey of the gatehouse complex is included in this report (refer below Section 5.0).
- 4.2.3. The area immediately surrounding the gatehouse has been recently landscaped by Dublin City Council Parks Division, in order to neaten the amenity and discourage vandalism. The work significantly improves the overall look of the gatehouse, however it is unfortunate that the landscaping did not take into account the nature of the site. Partial archaeological monitoring of the gardening works exposed the cement northern kerb of the road (the original Pigeon House Road) which ran through the fort. The kink in the northern wall either side of the gatehouse appears to predate the fort, and may relate to the original Pigeon House blockhouse. There are no traces of either of the two drawbridges and triangular salient that were located to the east of the gate.
- 4.2.4. This element of the fort complex is protected under Record of Monuments and Places and the Record of Protected Structures.
- 4.2.5. The western gatehouse is a vital part of the fort complex, marking the primary approach into the Pigeon House Fort complex from the mainland. Almost all of the other elements in the Pigeon House Fort complex are visible from the gatehouse, including particularly impressive views of the Pigeon House Power Plant, making it an ideal location for visitors to the complex to get their bearings. Furthermore, the surviving fragment of archway with fittings and guard-hut with obvious defensive gun-loops clearly indicate its function as a gateway to a military complex even to non-specialist visitors. Additional features of less obvious function visible in the walls of

the fort add interest and, with the provision of associated information, demonstrate the changing function of the site in the 18<sup>th</sup> century.

#### 4.3. Northern Fort Boundary Wall.

- 4.3.1. The northern boundary wall of the fort runs for over 260m east-west on the northern side of the Pigeon House Road, running from the western gatehouse to the Pigeon House Harbour. The wall is of limestone and granite 0.74m thick, pierced at intervals with musketry-loops, granite-lintelled openings with machine-made red-brick surround, usually arranged in groups of three, overlooking the harbour. Parts of the wall have been pierced in the more recent past, mostly to facilitate the Wastewater Works, and the wall in these areas has been replaced with modern or replica-masonry walling.

Various iron metal fittings are present along the course of the wall, and may have served a variety of functions, including possible breeching line eyelets (refer Fig. 16).



- 4.3.2. The northern boundary of the fort appears to

have been built directly over the Bull Wall, the above-ground parts of which appear to have been completely rebuilt in 1798-1813 in order to incorporate gun loops. The original Bull Wall can still be seen bounding the northern end of the Pigeon House Road to the east of the fort complex.

#### 4.4. Pigeon House Outfall Works.

- 4.4.1. The Pigeon House Outfall Works were constructed by Dublin Corporation as part of the '1906 Main Drainage Scheme for Dublin' within the Pigeon House Harbour, which

had ten years earlier been purchased from the British War Office following years of acrimonious dispute. The construction of the Outfall Works formed part of a huge infrastructural investment by Dublin Corporation in period 1890-1910, which included critically important improvements in drainage and sewerage, electrical services (see the power plant below) and road improvement and tram electrification, and all of which somewhat alleviated the chronic unemployment of that time. The treatment plant remained largely unaltered from 1906 until the 1970s, when a completely new plant was built on the opposite side of the Pigeon House Road (just outside of the Pigeon House Fort), and which was expanded in 2003 (Corcoran 2005, 98-99)

4.4.2. The outfall works are not presently protected, however they are included in the Dublin City Industrial Heritage Record 2007. They cover an area of *c.* 4,000m<sup>2</sup>.

4.5. Southwestern complex of structures.

4.5.1. This comprises the southwestern boundary wall, the handball court, overgrown ruined structures, and one surviving structure (known locally as 'the stables' but really a former grain store). Most of this area contained the former barracks accommodation, canteen, toilets, cookhouse, prison, armoury and stores, but the majority of the structures were demolished in the late 20<sup>th</sup> century by Dublin City Council. All of these features are protected as Recorded Monuments and Protected Structures.

4.5.2. *Boundary wall and platform.*

The boundary wall runs southwards from the Pigeon House Road for a distance of *c.* 42m returning eastwards for a further *c.* 125m. The wall is mostly constructed from limestone with granite basal courses, however large parts of



the east-west wall are of yellow brick and some altered portions, particularly in the southwest corner, have been reconstructed from concrete blocks (c. 7-8m on either side of the corner). Large blocked limestone-surrounded round-headed windows are situated along the western wall face, facing onto the main approach to the fort, and in the same manner as the gatehouse these were likely to have held cannons positioned on a raised platform adjacent to the wall. This area is presently heavily overgrown, but the platform and steps are still likely to survive. Blocked red-brick-surrounded opes are also visible. The wall currently forms the boundary of the Ringsend Waste Water Treatment Plant, and is in reasonably stable condition. There are no openings in the wall at present, however openings could easily be made by unblocking earlier opes without affecting the integrity of the monument.

#### 4.5.3. *Handball Alley.*

The most visible structure in the southwestern portion of the fort complex is the very tall limestone and cement handball alley. This does not appear to be marked on the 1830s OS map, however it does appear to have



been constructed by the time of the 1910 Edition OS map, and De Courcy (1996, 300-301) suggests that it had been constructed by 1861. The alley is heavily overgrown, but its form is clear comprising three walls in the usual arrangement and measuring approximately 18m by 9m in size, the size of the standard 'Big Alley' prior to the 1970s. Handball Alleys are a vernacular building form unique to Ireland and are



considered to be of architectural heritage interest by the National Inventory of Architectural Heritage. They were often constructed in army barracks and other institutions from the 1880s to the 1970s, with many of them dating to the 1910s. This relatively early example could easily be restored to its original purpose and form part of any future development scheme (refer Appendix for more on the re-use of the alley).

#### 4.5.4. *Ruined structures.*

Several ruined structures are located in this overgrown open area. These were too overgrown to be surveyed, but they contain the ruins of accommodation barracks, canteen, prison, toilet, cookhouse, armoury and stores shown on the OS maps of 1837-1910 and aerial photographs. These were demolished by Dublin City Council in the late 20<sup>th</sup> century.

Preservation *in situ* of these ruined structures is probably not practical, and of limited interest.

#### 4.5.5. *Extant*

##### *Structure/Grainstore.*

Known locally as 'The Stables', the single remaining roofed



building in the southwestern quadrant is in terrible condition and unsafe to enter. It was assessed in 1999 by Neill O'Flanagan who noted few original features surviving in the interior except, remarkably, the crane on the upper floor. The façade, however, is of attractive limestone and occasional granite construction with a large masonry pediment and brick-surrounds on door, window and crane opes. The outer façade of

this structure could be retained and the structure re-used within any future development in the area.

#### 4.6. Pigeon House Hotel.

4.6.1. The Pigeon House Hotel is a handsome and ornate Georgian building situated somewhat

incongruously on the Pigeon House Harbour at the foot of the hulking mass of the power plant. It is, in fact, the earliest upstanding element of the complex, predating the fort. It was constructed in 1793 to accommodate the



increasing cross-channel passenger traffic (De Courcy 1996, 298- 299; Pearson 2000, 451). The hotel, and later the fort, derived its name from John Pidgeon who had established a popular restaurant and bar called 'Pidgeon's House' to cater for the passing traffic in 1761. After 1798, when the hotel and harbour were requisitioned by the British Military and the artillery fort was established, the hotel was converted to officers' quarters. The hotel is a Protected Structure, and, as part of the military fort, a Recorded Monument. It is currently in use as Dublin City Council ESB offices and is in good condition.

#### 4.7. Pigeon House Power Station.

4.7.1. The large red-brick Pigeon House Power Plant was constructed 1903 to supplement (and later replace) the Fleet Street plant. Construction of the plant involved the demolition of numerous military buildings, and the plant was extended a number of

times so that it presently takes up much of the northern end of the former fort. The harbour frontage of the fort to the west of the plant appears to have been completely reorganised during the 20<sup>th</sup> century to cater for the power plant's requirements. At present the power-plant has lost much of its roof and numerous



ominous cracks are visible at the northern end of the structure. It is in terrible condition and urgently requires a full survey and restoration. The plant is a Protected Structure, but not a Recorded Monument, and also appears on the Dublin City Industrial Heritage Record 2007.

#### 4.8. Circular structure (gun emplacement).

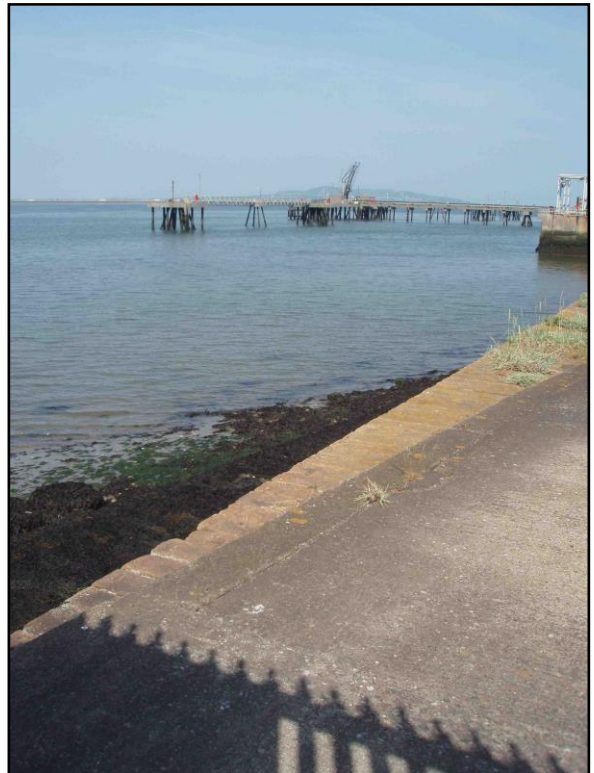
4.8.1. To the north of the power plant, and situated at the edge of the harbour, a small rectangular structure is situated on a large masonry circular base. Although the rectangular structure may be more recent, the circular base clearly belongs to the



military fort and formed part of the military defensive rampart protecting the harbour. Comparisons with 19<sup>th</sup> century cartographic sources suggest that the circular structure in the northernmost (n only surviving element) of three gun emplacements overlooking the harbour. It appears to have held a rear-pivoted gun with fields of view east and northeast (Kerrigan 1995, 177)

#### 4.9. Eastern gate and Slip.

4.9.1. The eastern gate of the fort complex has been completely modernised and is barely recognisable from the original feature, which had a draw-bridge over a drain, river or moat defended by two flanking structures. The drain, however, is still visible as a narrow concrete-culverted channel crossed by a concrete slab bridge. The original harbour wall and boat slip are still visible and in good condition just outside of the gate.



#### 4.10. Pigeon House Harbour.

4.10.1. The western pier of the Pigeon House Harbour is presently concealed by the Outfall Works, but is likely to survive. A granite slipway in the northeast corner of the Outfall Works may be an original harbour feature and/or be associated with the site of a lifeboat house mentioned in the Dockland Master Plan.

The eastern harbour wall is still present and part of the harbour basin is still potentially useable. The harbour predates the Pigeon House Fort, however a number of military defences were installed around it during the late 18<sup>th</sup>



and 19<sup>th</sup> century which are still present, particularly the gun loops in the northern boundary wall of the fort. The existing elements of the harbour were heavily reconfigured during and after construction of the Pigeon House Power Station in 1903, but earlier 18<sup>th</sup> century elements are still visible throughout. Fragments of timber and rusty metal machinery and harbour fittings are present.

#### 4.11. Great South Wall.

4.11.1. The Great South Wall (Recorded Monument DU018-066 & DU019-029) is situated below the ground, and is not presently visible. Its presence has been noted in previous unmonitored excavations by Dublin City Council in two locations in the Pigeon House Fort complex (personal comment by Dublin City Council Wastewater Works employee).

#### 4.12. Pigeon House Road and modern elements.

4.12.1. The current course of Pigeon House Road was driven through the centre of the former fort complex during the 20<sup>th</sup> century, replacing the route of the earlier road. As a result, large portions of the former fort are now demolished and the foundations of these may be preserved under the road. Traces of the earlier road still survive as a sub-surface concrete kerb circa 6.5m to the north of the present road (identified during

archaeological monitoring by the author). The reconfiguration of the modern road layout to reflect the earlier fort would not be worthwhile.

4.13. Associated material outside of the fort boundary.

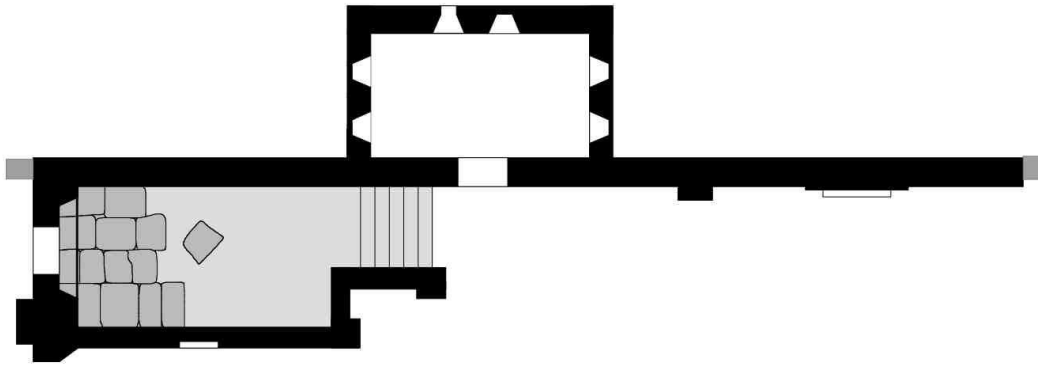
4.13.1. There are two areas of particular relevance to the military fort situated outside of its former boundaries. The first is the modern cannon emplacement to the southeast of the former fort and outside of the ESB compound. Three cannons are arranged on a road



corner near the gate, placed on sensitively-constructed modern wooden frames, in an attractive setting which includes lighting. These cannons are may have originally come from the western gatehouse of the fort complex. Indeed, a photograph from 1898 shows two cannons half-buried vertically in the ground just outside of the gate in use as bollards. As a result, the cannons should be considered to form part of the Recorded Monument of the fort. Despite the pleasant presentation of the cannons, their location divorces the features from the Pigeon House Fort. It would be better if these were relocated to the western gatehouse at the entrance to the fort.

4.12.2. A second area of particular relevance outside of the former fort boundaries is the location of the rubbish dumps dating to the time of the fort's use. Because of the isolation of the fort from the rest of the city, these rubbish deposits are likely to contain all of the non-degradable waste from the history of the complex, and their study would be of exceptional interest to archaeologists, providing information on diet, daily life in

the fort, and distinctions between British and Irish material culture and society. The location of these deposits is, unfortunately, unknown, as is their survival, however the most likely place for them is behind the southern fort boundary in the grounds of the present Sewerage treatment works. This area (shown on Fig. 1) should be considered to be part of the Recorded Monument of the fort, and would be an excellent area for future archaeological research excavations.



Plan of western gatehouse (north to top of page). Not to scale.

## 5.0. ARCHITECTURAL SURVEY OF THE GATEHOUSE.

5.1. A detailed architectural survey of the gatehouse was conducted in June 2009. The drawn surveys are presented in Figures 8 to 12 and the photographic surveys are presented in Figures 13 to 15 and 17, and what follows here is a written record of the gatehouse.

### 5.2. West-facing Façade.

Square coursed granite gate pillar to south measuring 1.6m E-W by 0.9m N-S and 5.8m in height, with coursed granite gate pier abutting to south (0.6m E-W by 0.4m N-S) topped with broken spring of gate arch, also granite. Gate pillar and pier have simple architectural details at top and base.

Coursed limestone wall abuts north of gate pillar, and measures 3.3m N-S, 0.6m in thickness and 4m in height. Pierced off-centre with a single arched

gun-embrasure. The base of the ope is 1.5m above ground level. Minor graffiti and paint splashing noted on wall surface.



### 5.3. Fixtures and fittings on the gate pier.

Two gate fittings are visible in the west-facing façade of the gate pier: one iron loop fitting situated 0.4m from ground level, fitted with lead (refer Section 5.7.4 below - Object 3); and one rectangular gate slot (0.35m long, 0.15m wide) situated 2.1m from



ground level which travels through the width of the gate pier and comes out on the opposite side, and appears to be filled with lead.

Four fittings are visible in the south-facing façade of the gate pier. One comprises a centrally located rectangular groove in the basal skirting block (0.22m long, 0.1m wide and 3.5m deep). A second is directly above this, at 1.88m



from the ground, and is a rectangular slot (0.16m high, 0.09 m wide) for a missing metal fitting, filled with lead. A third comprises a tapered 0.08m wide angled groove up to 0.05m deep beginning at 1.5m above ground level on the northern side of the gate pier and meeting with the other end of the rectangular slot in the west-facing façade of the gate pier described above. The fourth is a bronze hinge at the top of the gate pier (refer Section 5.7.5 below – Object 4).

#### 5.4. South-Facing Façade: main wall.

The western portion of the main southern wall is constructed from limestone to a height of 4m and runs for 14.5m eastwards. At this point, the wall is constructed of brick, and continues for a further 7.5m to a total length of 22m, at 4.8m in height, with a series of blocked red-brick features visible.



he eastern (masonry) half of the wall is

pierced by the low doorway into the guard hut at *c.* 10m from the western end of the wall. The doorway shows signs of extensive re-working, and was either inserted or re-sized at some point after the wall was constructed. The doorway has a timber lintel. On either side of the low doorway granite and brick features measuring 1.1m across and 0.3m high are built into the wall 1m off the ground.

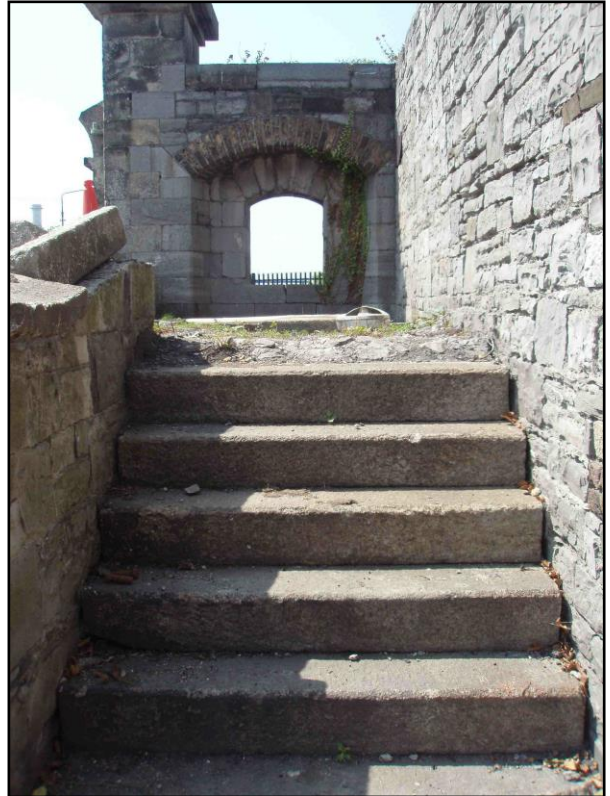
The western (brick) portion of the wall is likely to be older than the rest of the gatehouse, and may be the gable wall of the original Pigeon House or blockhouse, or an associated building, constructed in *c.* 1760. The south-facing façade of the wall displays a granite-lintelled fireplace with possible chimney



elements above, with two very large windows situated to either side overlooking the harbour. Timber lintels and brick surrounds are still visible, although these features were all filled in, probably during the construction of the military fort in 1778 or soon after.

#### 5.5. Platform, steps and balustrade/parapet wall.

The platform retaining and parapet wall measures 1.7m in high, constructed of limestone, and capped with triangular-sectioned granite for a further *c.* 0.1m in height. The wall takes a dog-leg to the east where it retains and forms the balustrade of the platform steps. The top of the wall slopes down with the steps to a height of 1.45m plus a further 0.1m granite capping.



The granite capping of the parapet/balustrade wall are partially missing: six capstones are *in-situ*, one capstone has been concreted (during recent restoration works) in the wrong place, and two capstones are missing. The capstones are of different lengths, averaging 0.86m by 0.58m in size and 0.10-0.15m in thickness.

A low opening in the south-facing façade of the wall measures 0.79m high (from the present ground level) and 0.77m wide, and is blocked with limestone similar in style to the rest of the wall. This implies that there is a space beneath the platform, which may be of interest in terms of future investigation at the site. Two iron fittings are visible here: one hinge fitting to the upper left side of the opening 0.57m off the ground (refer Section 5.7.2 below – Object 1), and one bolt-loop fitting located centrally on the right side of the opening 0.32m off the ground (refer Section 5.7.3 below – Object 2).

The 1.5m high platform measures 6.5m E-W by 0.3m N-S, and is accessed by six granite steps (*in situ*) to the east. The uppermost step, smaller than the others, has been moved onto the top of the staircase balustrade.

The westernmost third of the granite paving of the platform remains *in-situ*, comprising 17 blocks averaging 0.76m by 0.70m in size and 0.10m in thickness, and one block *ex-situ*, bundled with rope, which was in the process of being stolen over the course



of June and July 2009. An area of approximately 11m<sup>2</sup> has lost its paving.

#### 5.6. Guard Hut.

The guard hut is a small (4.8m N-S by 2.7m E-W) unroofed room, constructed from limestone, and accessed through a low raised doorway (1.4m high and 1.1m wide) set centrally in its southern wall and providing access to the main fort entrance. The northern, western and eastern walls are pierced with three pairs of musketry-loops (six in total), of which all except for one (the westernmost in the north wall) are blocked up with brick. A thick layer of rubbish filled this room during the survey. The musketry-loops of the room overlooked and defended the Pigeon House Harbour basin, now infilled with the Outfall Works.

#### 5.7. Metal fittings: Conservation Report by Aldara Rico Rey.

##### 5.7.1. *Introduction.*

The metal artefacts discussed in this section comprise three pieces of iron and one piece of bronze located *in-situ* in the walls of the western gate of the Pigeon House Fort. They are inserted in the stone with only a third to a half of the object still visible.

The building is located close to the sea which is an important fact to consider in terms of conservation.

The three iron objects represent one hinge fitting, one bolt fitting and one indeterminate fitting (possibly a breeching eye, see below). The bronze object is another hinge associated with the large entry gates to the fort.

All the iron artefacts were fitted into the masonry walls with lead sealing the area in contact with the stone. The reason for the use of lead in this case is not known, and could have been used as a fixative, or as a protection against the deterioration of the metal within the stone. The application of the lead is probably contemporary with the restoration works carried out on the building recently.



#### 5.7.2. *First Object, Bolt.*

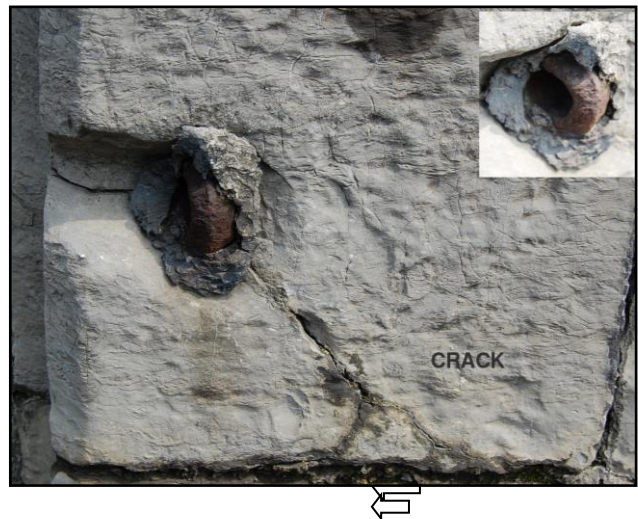
Object 1 consists of an iron fitting inserted almost fully in to the stone, with only the head visible. It is located on the left (east) side of an opening, which has been blocked at some stage.

The object presents a relatively good state of conservation, the internal structure is still in perfect condition and has stabilised with the environmental conditions. Despite this, there are a number of alterations to consider.

- The original surface suffers superficial corrosion presenting the characteristic dark-orange red colour of iron corrosion.

- In addition, almost the entire fitting has been covered with lead, which (as mentioned above) is likely to have been done during a previous phase of conservation work.

- The main alteration to consider is the appearance of a crack in the stone that continues along the lower left corner. This crack is due to the corrosion of the metal within the stone, or to a poor re-fitting of the object.



### 5.7.3. *Second object, Hinge.*

Object 2 is located on the opposite side of the blocked opening to the first object. Like Object 1, the state of conservation is very good. Lead has been used to line the internal areas of the fitting between stone and iron, and is visible around the section of the object. The visible part of the object has the typical orange corrosion and no deformations or loss of material is noticeable. In addition, no physical alterations to the

stone are apparent, which indicates that the iron is in good condition in the non-visible area.

5.7.4. *Third object, possible breeching line eye or gate fitting.*

Object three is located on the front (west) of the building about fifty centimetres from the ground. It is a small iron loop. The original use is still unknown, however there is a possibility that it was an eye for taking breeching lines (refer Fig. 16), or a gate fitting. The state of conservation of this is similar to the other objects. Very superficial corrosion presenting the characteristic red-orange colour, without significant loss of material or deformation. One of the three sections presents a clean fracture. This may have happened during the period of use of the object.

The other alteration related with this object is visible on the stone where it is inserted:

- Chromatic alteration: black colour on the lower part, produced from the use of chemicals.
- Pulverisation of the stone in the area above the object: the stone suffered pulverisation in this area due to several possible factors: (a) as it is close to the edge of the block, (b) it suffered forces of traction which damaged the fabric of the stone during the use of the object or (c) the presence of salt in the air.



5.7.5. *Fourth object, Hinge.*

Object 4 is located on the eastern side of the gate pier. It is a large hinge made of bronze. The visible alterations look like they are superficial: scratches, deformities on

the surface, and the characteristic irregular patina. This alteration does not affect the integrity of the object, which appears to be in good condition overall.





#### 5.7.6. *Treatment options.*

Taking into consideration the state of conservation of these objects and their stabilisation with the environment over the course of one or two centuries, there are two possible alternatives to be carried out with these metals:

##### **Option one: conservation treatment:**

- Analysis of the contents of salts
- Application of chemicals on the surface to protect the metal (each type of material would require different chemicals.) This treatment should be done over the whole surface, meaning that the pieces would need to be removed from the walls.
- Consolidation of stone around the third object.
- Reintegration and fixation of the metal fittings to their original position.

##### **Option two: monitoring of the objects every few years to see their evolution.**

- Check for loss of material.
- Check for new fractures on the metal.
- Check for new fractures on the stone and widening of the existing ones.
- Check for the pulverization of stone.

#### 5.6.7. *Recommendations.*

Keeping in mind the state of conservation of these metals after so long in their present environment, it is recommended that the best option is to monitor them and see if they are still stable in a few years time. It looks like the metals have attained a good balance with the maritime environmental conditions, with the consequence of stabilisation.

Chemical treatment of the objects would be lengthy and expensive, if done correctly, and would modify the object's external appearance. With this in mind, the less invasive approach (Option two above) is considered more appropriate in this case.



## 6.0. POTENTIAL FOR REDEVELOPMENT OF THE SITE.

6.1. This section of the report outlines options for the potential redevelopment of the Pigeon House Fort and the general improvement of the amenity in terms of public presentation, long term conservation, heritage potential and increased understanding of the character and development of the complex.

### 6.2. Proposals for the redevelopment of the Pigeon House Fort.

6.2.1. Although no concrete proposals have been put forward to redevelop the fort, this area is part of the Draft Planning Scheme Area for the Poolbeg Peninsula as set out in Ministerial Order 297/2007. This planning scheme envisages a mixed use development of 750,000m<sup>2</sup> of commercial, residential, retail, cultural and community development, including a cultural quarter in the Pigeon House dock, along the line of the Pigeon House Road and surrounds and including most of the area comprising the former Pigeon House Fort. This scheme has been the subject of an Environmental Impact Assessment in February 2009 (Poolbeg Planning Scheme EIS by Cunnane Stratton Reynolds).

6.2.2. In addition to this, there is a possibility that the Dublin City Council Ringsend Wastewater Treatment Plant situated directly to the south of the former fort might in the future require additional space to expand, possibly encroaching onto the former fort lands. Finally, parts of the former fort, particularly around the Pigeon House Power Plant and including the former Hotel, are in use by the ESB as offices and storage facilities.

### 6.3. Existing levels of protection for the fort complex.

6.3.1. Much of the extant portion of parts of the fort complex are protected under national and local authority legislation and policy, by listings on the statutory Record of Monuments and Places (RMP) and on the Dublin City Development Plan Record of Protected Structures (RPS). The protection this affords to the defined elements of the

fort complex has been discussed above (refer section 4.0) and are summarised on the following page and on Figure 7.

6.3.2. On the whole, the protection of the complex is adequate, however three suggestions for addition to or clarification of the protected status of features have been made. Firstly, the Pigeon House Harbour is not clearly protected under the existing legislation, as although it is certainly part of the curtilage of the former fort, it was constructed at an earlier time and is not a military element as such. Secondly, the status of the three cannons moved to the entrance of the ESB offices outside of the fort should be clearly included as part of the Protected Structure and Recorded Monument of the fort as they form integral elements of the complex, even in this inappropriate location. Finally, the area immediately outside of the fort boundaries, particularly to the south and east where rubbish may have been deposited over the course of the fort's use, should be considered to be an integral part of the Recorded Monument of the Fort, but not of the Protected Structure. A summary of the protection is provided below and on Figure 7.

Individual Element of Complex	Existing Protection	Recommended Changes
Western gatehouse	RMP & RPS	-
Northern boundary wall	RMP & RPS	-
Outfall Works	None	-
Southwestern boundary wall (SW)	RMP & RPS	-
Handball alley (SW)	RMP & RPS	-
Ruined Structures (SW)	RMP & RPS	-
Upstanding structure (SW)	RMP & RPS	-
Power Plant	RMP & RPS	-
Pigeon House Hotel	RMP & RPS	-
Circular rampart building	RMP & RPS	-
Eastern gate	RMP & RPS	-
Pigeon House Harbour	RMP & RPS	Clarify RPS
Great South Wall	RMP & RPS	-
Pigeon House Road & modern	RMP	-
Cannon emplacement (modern)	Unclear	Clarify RMP & RPS
Potential rubbish deposits	Unclear	Clarify RMP

6.4. Potential for improvement of site and future development at the fort.

6.4.1. As mentioned above (Section 6.2), future development may take place at the Pigeon House Fort, and whilst this will be constrained by the protected nature of the monument and existing structures, such development may offer an opportunity to improve the heritage value of the monument, increase understanding of its character, and protect its extant elements.

6.4.2. *Western gatehouse.*

6.4.2.1. As noted above, the western gatehouse is a vital part of the fort, marking the primary approach into the Pigeon House Fort complex from the mainland. Almost all of the other elements in the Pigeon House Fort complex are visible from the gatehouse, including particularly impressive views of the Pigeon House Power Plant, making it an ideal location for visitors to the complex to get their bearings. Furthermore, the surviving fragment of archway with fittings and guard-hut with obvious defensive gun-loops clearly indicate its function as a gateway to a military complex even to non-specialist visitors. Additional features of less obvious function visible in the walls of the fort add interest and demonstrate its continued use over the course of the 19<sup>th</sup> century. Finally, existing historical photographs of the gatehouse in operation (refer Plates 1 and 2) provide directly relevant material for potential display.

6.4.2.2. Together, these factors make the gatehouse particularly suitable for conversion into a small visitor and orientation space for the fort. This could be carried out with minimal cost: involving the replacement of stolen granite balustrade capping and paving (from the DCC granite store nearby); the erection of a sign visible from the Pigeon House Road stating that a visitor is entering the Pigeon House Fort complex; the unblocking of five blocked gun-loops within the guard hut; and the placement of historical information and photographs in the interior of the guard hut (suggested historical photographs are included as Plates 1-3). The metal fittings of the gatehouse have been analysed by a conservator and they will not require any special treatment to conserve. Serious consideration should also be given to moving the three cannons

from their present inappropriate location outside of the fort to the gatehouse, as these would serve to further stress the nature of both fort and gatehouse.

6.4.3. *Southwestern complex of structures.*

6.4.3.1. This complex is presently overgrown and in bad condition. The upstanding structures of the boundary wall, handball alley and former barracks building (grain store) are either in poor condition and dangerous to visit, or unsightly in their present condition. The area is not conducive to being visited by the public, and unlike the gatehouse it is difficult to visualise its historical character. Its location on the southern side of the Pigeon House Road and abutted by the Ringsend Waste Sewerage Treatment Plant severs it from the rest of the fort complex to the north and northeast.

6.4.3.2. As a result, this area could be redeveloped without compromising the historic integrity of the fort, so long as such development is sensitive to its character. However, any future redevelopment of this area should be conditional on the small-scale renovation works suggested for the western gatehouse above (refer Section 6.4.2) and its ongoing maintenance.

6.4.3.3. The upstanding structures in this area should be retained within any redevelopment, and these include the boundary walls (which could however be pierced with new entrances, or preferably have older entrances re-opened) and possible surviving platform, handball alley (which could be retained within a new building, or preferably restored for use as a handball alley – refer appendix) and former barrack structure (which would need to be gutted but has an attractive façade which should be retained if possible). Any other ruined fragments of buildings, of which there are some under the overgrowth, could be recorded and removed.

6.4.3.4. One future development strategy might entail the construction of modern buildings in the footprints of the demolished former barracks building and to the same heights as the former buildings, however such an approach may not be suitable for some types of

schemes. Any future development will require archaeological investigation both before (to record all upstanding remains and possibly conduct trial-trenching) and during (to monitor groundworks) any proposed groundworks.

#### 6.4.4. *Outfall Works.*

6.4.4.1. The large footprint and marine location of the Outfall Works make these an excellent candidate for future redevelopment. The works are not protected under existing national or local authority ownership, however they are of industrial archaeology and industrial heritage interest, and should be fully recorded by a qualified professional in the event of any future redevelopment. In addition, any future redevelopment of this area should be conditional on the small-scale renovation works suggested for the western gatehouse above (refer Section 6.4.2) and its ongoing maintenance.

6.4.4.2. One idea for redevelopment would be to record and demolish the Outfall Works, and restore the line of the original Pigeon House Harbour wall, which still exists along the boundaries of the works, and to re-use this space as a marina and/or harbour-focused park associated with redevelopment of other parts of the fort complex and Poolbeg peninsula.

6.4.4.3. Any plans for future redevelopment of the outfall works should take views from the western gatehouse to the rest of the Pigeon House Fort complex into account, and should ensure that existing views from the proposed orientation and visitor space at the gatehouse to the rest of the complex are not blocked.

#### 6.4.5. *Pigeon House Hotel.*

6.4.5.1. This attractive building is in good condition and would not require much work to restore it to good condition. The building could be reused in a variety of ways, and it would be beneficial for the building and the fort complex for it to be renovated and reused, so long as the attractive original features of the structure are retained and respected.

6.4.6. *Pigeon House Power Plant.*

6.4.6.1. The power plant is a huge, iconic and genuinely fantastic building which has the potential to be (or form part of) a large-scale redevelopment of the Pigeon House Fort, however it will be very expensive to restore. The building is protected and should not be demolished, however in the event that it was redeveloped it is extremely unlikely that it will be possible to fully preserve all of the existing building elements, fixtures and fitting and machinery both within and outside the building. Despite this, redevelopment of this building would enormously enhance the heritage of the fort, as otherwise it will eventually collapse. In the event that the challenge to restore this building was attempted, it will be necessary for the design team to include both a conservation architect and an industrial archaeologist to advise on the project.

6.4.7. *Circular rampart building.*

This small building is in relatively good condition and should be preserved completely within any future development of the area.

6.4.8. *Eastern gate and pier.*

The eastern gate of the fort complex has been severely compromised and could be significantly altered without affecting the heritage or character of the former fort, however any alteration should attempt to mark the presence of the former gate in some way.



## 7.0. CONCLUSIONS.

- 7.1. The Pigeon House Fort complex covers a large area of the Poolbeg Peninsula, and extends over part of the area covered by the 'Draft Planning Scheme Area' which envisages extensive future development over this part of Dublin.
- 7.2. This report has demonstrated that, despite the significant protection afforded to the monument and its curtilage (as both a Recorded Monument and a Protected Structure), future development within the Pigeon House Fort could be possible, and furthermore that it could significantly enhance the heritage and historical character of this amenity.
- 7.3. The western gatehouse of the fort, in particular, could be converted into a visiting and orientation space for the fort complex as a whole with relatively little further work or expense. Small measures such as the erection of signage and historical information outside and within the small guard-hut, the replacement of the stolen granite paving and balustrade capping using the granite owned by DCC and stored near the site, and the relocation of the cannons to the gatehouse, could transform this area from a run-down ruin into a historic monument marking the old entrance to the artillery fort and providing information to visitors on the fort and its components.
- 7.6. The Pigeon House Fort complex represents a unique and little-known part of both Civic and National heritage, spanning the critical period from the late 18<sup>th</sup> century to the early decades of the Irish State. It can be seen as a concrete representation of the interplay of international links and internal developments, of military tensions and peaceful progress. While ensuring an appropriate future for the complex should be the priority for any proposals, it is also essential that the area maintain its active role in the city's development.

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Figure 16. Example of cannon fitting (breeching line holder) in use. 'Firing of a 18-pound gun', Louis-Phillippe Crépin 1772 Paris - 1851 (Source: <http://upload.wikimedia.org/wikipedia/commons/b/b5/Tir.jpg>)

Figure 17. Overview of Pigeon House Fort complex, showing location and direction of photographs in digital photographic survey. Scale 1:2,000.

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