THE EMERALD ISLE & WATERS DEEP:
VIKING DUBLIN'S URBAN INTERSECTION OF HINTERLAND AND SEA

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HIST 413 Medieval Celtic Civilization
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Introduction: The Black Pool

Where the River Poddle meets the River Liffey, it forms a deep, dark pool: aptly called *Duiblinn* in Old Irish, "black pool."[1] Today, Dublin Castle stands in the crux of the curve where the Poddle swings up to meet the Liffey, and the Dubhlinn Gardens are situated atop the old black pool.[2]

Duiblinn is conveniently situated as an entrance into the interior of Ireland via Liffey and an exit into the Irish Sea, straight across from the tip of the Isle of Anglesey.[3] Furthermore, the coastal flatlands surrounding the black pool are cradled by the Wicklow Mountains to the south.[4] This created a perfectly defensible harbor to shelter ships and men in the winter, and an easily accessible port for trade coming from many different directions over the sea.[5]

The beginning of Dublin, established by the Vikings first as a base camp from 840-902 AD and later re-established as a town in 917 AD,[6] owes its urbanity and organization to this intersection of land and sea. This essay examines the overarching urban plan of Viking Dublin as well as the specific domestic buildings and property plans in light of the demands of maritime

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[1]Andrews, J. H, "The Oldest Map of Dublin," *Proceedings of the Royal Irish Academy: Archaeology, Culture, History, Literature,* 83 (1983): 212.
[2] Andrews, "Oldest Map of Dublin," 212.
[3] Ibid.
[4] Ibid.
[5] Ibid.
[6] Holm, Paul, "Viking Dublin and the City-State Concept, Parameters and Significance of the Hiberno-Norse Settlement," In *A Comparative Study of Thirty City-State Cultures: an Investigation*, edited by Hansen, Mogens Herman, 252. Copenhagen: Reitzels, 2000.

shipping and terrestrial population upkeep to demonstrate the organization of Viking Dublin maximized its position as both a maritime and terrestrial center.

This essay will begin with a brief overview of the history of the Vikings in Ireland and the first phase of Viking settlement in Dublin from *circa* 840-902 before the return of the Vikings in 917 AD. In examining the second phase of Viking settlement, the essay will discuss the urban plan of Dublin, the topographical features it makes use of, and the specifics of domestic dwelling-plot complex. Thirdly, it will examine the influence of the sea and land on the population to discuss Dublin's urbanity as both a response and a reason for this confluence.

Viking Dublin Phase I

The first Viking attacks in Ireland were recorded in 795 AD and by 822 AD became annual occurrences.[7] Throughout the 830s and 840s, Ireland faced raids throughout its interior by Viking crews that used the interior waterways to launch surprise attacks, most famously by the chieftain Turgeis.[8] 841 AD was the first winter that the Vikings stayed in Ireland, as opposed to returning to Scandinavia for harvest,[9] and seems to mark a shift in Viking attitudes towards Ireland. Ninth century annals note a number of *longphorts* established by the Vikings as permanent base camps or trading outposts.[10] *Longphort* can be translated from Old Irish as "defended ship camp," or "shore fortress," which aligns with the annals recording *longphorts* by

[7]Holm, "Viking Dublin," 252.
[8] Ibid.
[9] Ibid.
[10] Ibid.

location next to a navigable river.[11] In what would be Dublin, a *longphort* was established in 841.[12][13]

Poul Holm, in his discussion of the Viking *longphorts* at Dublin in "Viking Dublin and the City-State Concept Parameters and Significance of the Hiberno-Norse Settlement," suggests that these *longphorts* were proto-towns.[14] *Longphorts* began as winter camps, "at places which offered safe anchorage and beaching for the ships in addition to some natural features which rendered the site defensible." Holm contends they were mainly warrior camps, which attracted craftsmen and merchants for commissions by the band camped already there, perhaps with some additional trade between the indigenous Irish in the immediate countryside.[15]

As Holm acknowledges, after 853 AD, the various Viking bands must be understood as being involved in and perceptive of local politics, although mostly as mercenary hire for the highest Irish bidder.[16] The Vikings' astute knowledge of social-political climate in Ireland can be most clearly seen in the Viking warlord called Amlaíb Conung in Old Irish (Óláfr in Old Norse) who declared himself the first King of Dublin in 853 AD (d. *circa* 874).[17] His reign was marked with alliances with Irish kings, such as Cerball mac Dúnlainge the King of Osraige, against other Norse factions as well as Irish enemies and include a possible marriage alliance with a Celtic princess.[18] Amlaíb acts as a king with a kingdom, even if the assessment is that the *longphort* at

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[11] Ibid. *Longphorts* established by the Vikings include not only Dublin by the River Liffey, but Waterford by the Barrow, Limerick by the Shannon, and Anagassan by the Boyne; later camps include Wexford and Cork.
[12] Ibid.
[13] Wallace, "The Archaeology of Viking Dublin," 1985, 108.
[14] Ibid.
[15] Ibid.
[16] Ibid.
[17] Ó Corráin, Donnchadh, "The Vikings in Scotland and Ireland in the Ninth Century," *Peritia* 12 (1998): 296–339.
[18] Ó Corráin, "Vikings in Scotland and Ireland," 30.

Dublin was little more than a base camp. However, Holm contends there is no evidence of "full-blown urban culture"[19] by the time the Vikings of Dublin were expelled from Ireland by an Irish coalition in 902.

While it is not the intention of this essay to argue over the definition of a kingdom, this point is worth considering in light of the expulsion of the Vikings from Dublin in 902 and their return to Dublin in 917. In the re-establishment of Dublin in 917, the Vikings were familiar with Dublin: not only its topography, but the Irish hinterland, sea, and waterways, as well as the benefits and disadvantages of permanent settlement in the area. Dublin, founded in 917, is a planned city, and the Vikings planning it had the benefit of previous knowledge and even firsthand accounts of the situation at hand. The planning of the intended urban center could be executed with an understanding of how to best take advantage of Dublin's resources and geography.

Viking Dublin Phase II: Urban Plan

Phase II of Viking Dublin, beginning with the reestablishment of Dublin in 917 AD, is where the archaeological record begins.[20][21] Unfortunately, Phase I's archaeological remains cannot be accessed; it is currently unknown if they are simply directly below Phase II or if Phase I is possibly located in a different location than Phase II that has yet to be located.[22]

Viking Dublin's archaeological is preserved remarkably well, with organic material like timber preserved intact, due to the damp and watery nature, everything was preserved in anoxic

[19] Holm, "Viking Dublin," 252.
[20] Wallace, "Archaeology of Viking Dublin," 107.
[21] Edwards, et al, "Feasibility and Utility of Microsatellite Markers in Archaeological Cattle Remains from a Viking Age Settlement in Dublin," 2006, 411.
[22] Holm, "Viking Dublin," 253.

conditions.[23] Beginning in 1961, the National Irish Museum launched a series of excavations into the contiguous sites of Fishamble Street (labelled sites I-III), John's Lane, Winetavern Street, Christchurch Place, and Wood Quay, under the direction of Patrick F. Wallace.[2425] Over 200 buildings have been excavated since then, including an additional six buildings at the site of Dublin Castle.[26] The sites of Fishamble Street and John's Lane comprise ninth and eleventh century remains, while the Wood Quay site includes twelfth century, including Anglo-Norman structures built around and after the conquest of Ireland by Henry II of England in 1170.[27] There is a clear chronological divide in the site itself, as seen in Figure 1, with the two stone walls, one built *c.* 1100 and another built *c.* 1300.[28] The 1100 wall was the waterfront wall for the Hiberno-Norse settlement, as the 1300 wall built by the Anglo-Normans included land reclaimed in the thirteenth century.[29]

By the time of the tenth century, the Irish annals describe Viking settlements with the word *dún,* meaning "fortress."[30] Holm gives the example an explicit difference drawn between two in a 1026 chronicle, which labels the town with the town *dún* and the king's encampment outside the town is the *longphort.*[31]

As a fortress-town, or at least defended town, Viking Dublin built up ramparts along its already natural defensible position.[32] Earthen banks surrounded the entire town, of which the

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[23] Edwards, et al, "Archaeological Cattle Remains," 411.
[24] Knudson, et al, "Migration and Viking Dublin: Paleomobility and Paleodiet through Isotopic Analyses," 2012, 312.
[25] Wallace, "The Viking Age Buildings of Dublin," 1992, 5.
[26] Ibid, 7.
[27] Ibid, 5.
[28] Wallace, "Archaeology of Viking Dublin," 104-106. Figure 1 is from page 104.
[29] Ibid, 104.
[30] Holm, "Viking Dublin," 253.
[31]Holm, "Viking Dublin," 253.
[32] Wallace, "Archaeology of Viking Dublin," 106.

1100 stone-built wall was Viking Dublin's northern most expanse.[33] The 1100 wall, which ran along what was at that time the bank of the Liffey, provided an overlook for the Liffey.[34] By the time of *c.* 1100, Viking Dublin encompassed approximately 600 meters from east to west along the river and 300 meters inland north to south, roughly 180,000 m², and was densely inhabited.[35]

The pattern of inhabited land follows: a rectangular plot, generally between 120-180 m², was fenced in with post-and-wattle.[36] Streets or pathways separated these plots, also lined with wattle. The main dwelling, which was generally between 8m x 4m, was placed with its entrance directly on the street (Figure 2).[37] This meant access to the plot was predominantly gained by passing through the main house, though access was possible around the house, passing between the walls and the fencing.[38] Mainy of the plots also included an ancillary structure, drastically smaller in size than that of the main dwelling.[39] While the exact function of this ancillary structure is not certain, the essay will discuss the possibilities of its functions in a later section.

Holm estimates a total of between 600-900 plots in the entirety of Viking Dublin, and putting the average household at roughly five people, calculates a population of Viking Dublin between 3-4,500 people.[40]

Viking Dublin Phase II: Urban Dwellings

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[33] Ibid.
[34] Ibid.
[35]Holm, "Viking Dublin," 255-256. Holm's numbers for space come from O Riordain, and he builds estimates of population off of Graham-Campbell
[36] Ibid.
[37] Boyd, "Irish Viking Age," 274. Figure 2 is sourced from here.
[38] Ibid, 286.
[39] Wallace, "Viking Age Buildings," 14-16.
[40] Holm, "Viking Dublin," 256.

Many of these plots and dwellings were continuously inhabited from the tenth to twelfth centuries.[41] However, the houses themselves had a lifespan of roughly ten to twenty years due to the nature of the roofing and walls.[42] Dublin overwhelmingly used straw thatch and post-and-wattle construction for its building types.[43] Due to Ireland's damp climate and the wear of the materials, the straw and wattle had to be replaced at multiple times throughout the house's lifespan (within the aforementioned 10-20 years) before the house's posts had rotted, marking the end of the lifespan.[44] When this happened, the house would be razed to the rotted posts and built over again.[45] The debris would either be matted down into the floor, or used as insulation with the wattle.[46]

Within the stratigraphy of the archaeological site, there are 13 separate levels of human debris and habitation material (totalling 3 meters).[47] This great accumulation of material, including roofing, flooring, and building materials as well as general human debris meant that the floor level had risen as much as 20 centimeters each successive time the house was rebuilt.[48] However, whenever house was rebuilt, it was not reoriented: it would take the same shape and dimensions its predecessor had, with very minute changes, if there were any at all.[49]

Patrick Wallace, who oversaw the major excavations of Fishamble Street, John's Lane, and Wood Quay, between 1974-1981 organized urban housing into a Hiberno-Norse Building

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[41] Wallace, "Archaeology of Viking Dublin," 106.
[42] Ibid.
[43] Ibid.
[44] Wallace, "Viking Age Buildings," 13.
[45] Ibid.
[46] Ibid.

[47] Wallace, "Archaeology of Viking Dublin," 106.
[48] Ibid.
[49] Wallace, "Viking Age Buildings," 12.

Typology based off ground plan and building support (Figure 3).[5051] His assessment includes 7 Types, in addition to "unclassifiable," but only Types 1-3 are pertinent to this paper.[52] Type 1, as Wallace puts it, is "the Dublin house *par excellence*" until the Anglo-Normans popularized timber- and stone-built houses in the later twelfth century.[53] In addition, Type 1 comprises 80% of the morphology types of the 127 buildings on Fishamble Street. Types 2 and 3 can only be analyzed in conjunction with Type 1, as will be addressed later.[54]

Type 1 is of a one-story rectangular shape, placed on the end of a long, fenced plot fronting the street, as discussed above. The dwelling was centered around the hearth, which was placed directly in the center of the house, and was stone-curbed.[55] Type 1 includes two post-and-lintel doors, one on each end-wall, facing each other; the first for access into the street and the second for axis into the yard.[56] This created a hearth-door axis, as the hearth would directly placed between the two opposing doors.[57] There were two pairs of internal, free-standing piers to support the roof, creating a tripartite space in conjunction with the hearth-door axis.[58]

The nave created by the hearth-door axis defined the living space, as the two side-aisles divided by the internal piers on the longitudinal walls were filled with box-beds or sleeping benches called *immdaí* in Irish.[59] These most likely did not ever reach above 0.45 meters in height; however, the "box" underneath has been suggested alternatively as storage or as a

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[50] Wallace, "Viking Age Buildings," Chapter 2.
[51] Boyd, "Irish Viking Age," 273. Figure 3 is sourced from here.
[52] Ibid.
[53] Ibid, 9.
[54] Ibid.
[55] Ibid, 10.
[56] Ibid.
[57] Ibid.
[58] Ibid, 11.
[59] Ibid, 12, 38.

method of insulation, filling the box with sod and then topping it off with layers of straw or other bedding material.[60] This method of bedding is described in Icelandic sagas, such as *Eyrbygga Saga,* which differentiates between broad *(set)* and narrow *(pallr)* benches, the former for sleeping and latter for sitting.[61] The idea of the bottom of a box-bed being accessible is seen in *Eyrbygga Saga,* where a man hides within the box.[62]

The exact nature of the *immdaí* is debated. Hilary Murray in "Documentary Evidence for Domestic Buildings" attempts to reconstruct *immdaí* from their descriptions in Irish classics.[63] Like the Icelandic differentiations between *set* and *pallr,* the Irish *immdaí* is paired with the word *chóemdai*, which Murray interprets as "large *imdae*."[64] There are clear references to *immdaí* in the eighth-century Irish classic *Críth Gablach* in relation to two farmer classes, the *ócaire* and *aire túise.*[65] The former, the lowest class of Irish freeman, is described with "an oak plank between every two *chóemdai.*"[66] The latter, a noble farmer, is described as having "eight *imdai* in his house with their full furnishing."[67] In *Togail Bruidne Da Derga,* two mentions are made of "silvery" *immdaí.* "An *imdae* more beautifully decorated than the other *imdai* in the house. A silvery curtain hung around it and beautiful ornaments in it," along with a description of many *immdaí* in the same larger space: "twelve men on silvery hurdles [*imdai]* around the room."[68] However, the multiplicity of descriptions and lack of premanufacture or standardization instead points to the *immdaí* as dependent on the owner's resources and personal opinions.

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[60] Ibid, 83.
[61] Murray, "Documentary Evidence," 87.
[62] Wallace, "Viking Age Buildings," 83.
[63] Murray, "Documentary Evidence," 87-88.
[64] Ibid, 88.
[65] Ibid, 88.
[66] Ibid, 88.
[67] Ibid, 88.
[68] Ibid, 88.

In the town of Dublin, which grew in prominence and wealth due to trade, it is important to note the modern bias against wattle as a "fine" resource in favor of stone or wood. While there are a limited number of houses noted to be of stave or stone build, this does not necessarily indicate a higher class. King Henry II's palace at Dublin, for example, was built out of post-and-wattle.[69] Meanwhile, the lower class *ócaire* that made use of an oak plank in his construction. Post-and-wattle construction should be noted as by far the most preferred and ubiquitous building material in Dublin. Construction of *immdaí* and walls does not demand the use of wattle, and descriptions above show that the *immdaí* were constructed of various materials, such as wood panels; however, post-and-wattle was the clear preference across the tenth to twelfth century.

Insulation is an important matter to consider when discussing Viking Dublin houses, which utilize post-and-wattle construction in favor of wattle-and-daub.[70] As Dublin does not make use of daub, it instead favors double- or triple-walled wattle for insulation purposes.[71] Two instances found fern and moss between these layers of wattle, but the overall lack of insulation between layers suggests that houses instead utilized an inward-out method of insulation by using panels or wall-hangings.[72] No houses were recorded with any windows, which would support the idea of hangings, as it could better insulate a wall without holes in it.

The walls themselves were not load-bearing, a signifying marker of the Viking Dublin house style.[73] Instead, the interior supports, driven into the ground for stability, supported the

[69] Wallace, "Viking Age Buildings," 90.
[70] Ibid, 13.
[71] Ibid, 13.
[72] Ibid, 13.
[73] Ibid, 13.

weight of the roof, which Wallace argues was trussed.[74] Even the minority of houses that utilized buttressed stave-built walls with clay-daub infills and walls built on baseplates did not have load-bearing walls and are unlikely to have windows.[75]

The floor space in Type 1 buildings is limited to the nave and any other space not used by the *immdaí* and the hearth. The foundation of the house were layers of compacted sod, which perhaps even reached up along the walls, for maximum insulation.[76] Atop the sod, the floors were usually compacted gravel or even paving stones before an overlay of organic material, including woodshavings, straw, rushes, wattles, textile fragments, and animal bones, giving it a spongy, peat-like consistency, though the heat of the stone-curbed hearth frequently dried out the floor.[77] Some of the larger Type 1 houses from the tenth century pave the nave with stones, laid atop of wattle mats.[78] The generally unpaved floors, then, contrast sharply with the corner compartment.

The majority of Type 1 houses contain a small area next to the box-beds or *immdaí* on the longitudinal walls.[79] Noticeably, this corner compartment is not only walled off, but the walls reach lintel height and is accessible only by internal door.[80] The space was precisely levelled by piling sod to make a flat surface, and then stone-paved, wattle-floored, or barrel-stave-covered. Whichever method, it was clearly the intention to create a private, flat, and dry space.[81] Wallace suggests several reasons for this separate, levelled space: a cooler atmosphere for water, dairy

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[74] Ibid, 67.
[75] Ibid, 13.
[76] Ibid, 24-34.
[77] Ibid.
[78] Ibid.
[79] Ibid, 12.
[80] Ibid, 12.
[81] Ibid, 12.

products, or meats, or perhaps a flat surface for churns, workbenches, or barrels, under the assumption that the domiciles were equally for crafting and dwelling.[82] The latter seems unlikely due to the lack of light into this workspace. However, the reasoning of the former is forestalled by the fact that paving was on the decline in the eleventh century.[83] While there was still a separate, level space in the corner compartment, any benefit (or not) derived from paving it was negligible as it went out of fashion so easily.

Several scholars have associated these separated space with the Irish *airchae,* an ambiguous space described in several Irish works. Hilary Murray notes the *airchae* is described either from or to the main house.[84] In *Críth Gablach,* the house of a *mruigfer,* a normal small farmer is described as "a dwelling of twenty-seven feet with an *airchae* of seventeen feet."[85] The *Críth Gablach* describes the farmer dividing his food rent in the *airchae.*[86] The *airchae's* association with food has also led to further association with the *cuile, cúile,* or *cúilteach,* which is also understood to be annexed with the main building and perhaps used for storing food.[87]

While the description of the Type 1 house may paint a picture of homogeneity, the shared features that distinguish this building type do not imply anything premanufactured about it. Not a single house excavated is exactly the same size or scale.[88] While these homes share a universality, it is only in their nature as vernacular architecture: any man could build any of these homes, himself, from scratch, requiring limited specialized knowledge. This gives these homes their dual nature of peculiarly similar yet entirely unique. They are not specialized enough to

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[82] Ibid, 12-13.
[83] Ibid, 13.
[84] Murray, "Documentary Evidence," 88-89.
[85] Ibid, 89.
[86] Ibid, 89.
[87] Ibid, 88.
[88] Wallace, "Viking Age Buildings," 12.

require a specific craftsmen to make homes on a calculated prefabricated basis, yet they all share the same features and general layout because of their easy build.

"The type 1 building was dominant at all times and apparently in all places in the tenth- and eleventh-century town. It was already present and fully evolved at the very lowest tenth-century levels even before the plots were fully laid out," writes Patrick Wallace.[89] The Type 1 house, at its core, can be narrowed down to three characteristics: (1) rectilinear post-and-wattle structure (2) internal free-standing roof supports (3) three-aisle layout.[90] Wallace surveyed a catalogue of Irish, Anglo-Saxon, North Sea, and Scandinavian domestic structures to attempt to account for this "fully-evolved" form.[91] Wallace found no direct predecessors or stages of evolution, and so suggested an indigenous origin, perhaps from introduction of Christianity with its need for rectilinear spaces for worship. However, further survey in 2005 of all the Irish materials concluded that indigenous Irish rectilinear buildings did not share enough characteristics to be related architecturally.[92] Wallace himself in 2008 reassessed the origin of the Type 1 house, writing of the design, "this type of three-aisled house type came from the broader North Atlantic area."[93] In Wallace's catalogue of North Atlantic structures, he narrows down seven shared topographical and design traditions.

> "(i) continuity of property boundaries, (ii) the rebuilding of houses in roughly the same positions with ends to the streets, (iii) the relatively short life-spans of houses, (iv) the use of post-and-wattle pathways, (v) the central location of fireplaces, (iv) the absence of chimneys, and (vii) the use of raised wall benches/bedding areas." (Wallace, 89)

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[89] Wallace, "Viking Age Buildings," 65.
[90] Ibid.
[91] Wallace, "Viking Age Buildings," Chapter Six.
[92] Boyd, "Irish Viking Age," 275, from Connell 2005.
[93] Boyd, "Irish Viking Age," 275.

All seven of these characteristics have been discussed above as features of the Viking Dublin Type 1 house typology. In addition, the essay observed how scholars, in their attempt to understand the use and function of all parts of the house, drew from literary sources from multiple traditions, including Icelandic sagas. While it is not the goal of this essay to determine the exact predecessor of the Viking Dublin house, or the exact connections of the North Atlantic tradition, the Type 1 house in Dublin cannot be accurately understood without an assessment of its broader typology across the wider Northern Atlantic tradition. As determined above, Dublin was planned with working knowledge of the site from over sixty years of previous inhabitance as a *longphort*. When examined in this light, the planning of Dublin is understood as an expression of urbanity that was international in the Viking diaspora. Viking Dublin was being readied as not only a port for the Viking trade sea networks, which very clearly would have recognized the universal house typology, but also made adaptations and accommodations for the land it was settling in.[94]

Hinterland & Holstein

"To survive, the Viking camps and towns needed supplies of grain and meat," wrote Poul Holm.[95] He was echoing the sentiments of a tenth-century poem, which note the high quality of Dublin's wheat, cheese, bacon, and beef.[96] "Migration and Viking Dublin: Paleomobility and Paleodiet Through Isotopic Analyses" analyzes twenty human remains from Fishamble Street sites between the ninth and eleventh century using biogeochemistry and comparing human enamel and bone isotopic analysis with archaeological faunal data and other datasets from

[94] "Universal," in this case referring to the universe of the North Atlantic as connected by the Viking diaspora, colonies, and trade network.
[95] Holm, "Viking Dublin," 254.
[96] Ibid.

Northern Europe.[97] With the exception of one outlier, the article finds general homogeneity in palemobility and paleodiet for the group, meaning that there are no clear immigrants from other parts of Northern Europe.[98] The faunal dataset as compared with the analysis shows that the Dubliners were eating fauna local to the region, and overall indicate a diet of terrestrial protein sources with only some marine protein sources, despite Dublin's port status.[99] While marine protein was an important part of the Viking diet, including important sources of calcium, strontium, and salt.[100] However, these are much more beneficial if fish bones are consumed, which cause gastric etching; this gastral etching is not found in the Dublin sample.[101] Therefore, it is likely that dairy products considered as the likeliest source of calcium, and either terrestrial sources and/or edible seaweeds made up the sodium in place of a large quantity of fish in diets.[102] This terrestrial protein diet, in conjunction with the large amount of cattle bones, the literary evidence of Dublin's dairy and beef quality, points to cattle as being a major food source in Dublin.

Holm's assertion is supported by the large number of cattle bones found in various Viking sites; not only in Dublin, but in Orkney and York.[103] The archaeological analysis shows that the cows eaten were primarily four years of age or older, in contrast to the cattle found in contemporary Irish royal settlements, which produce numerous finds of calf bones.[104] Holm argues, then, that cows were only led into the town to be slaughtered, and otherwise either were

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[97] Kundson et al, "Paleomobility and Paleodiet," 308.
[98] Ibid.
[99] Ibid.
[100] Ibid, 311.
[101] Ibid.
[102] Ibid.
[103] Ibid.
[104] Holm, "Viking Dublin," 254.

either payment in kind for Viking mercenaries or grazed the hinterland outside the town.[105] Holm uses Mogens Herman Hansen's standard of city-states maximum control of hinterland only reaching one day's march from the urban center.[106] This would be 30 km, or 3,000 km², though Holm also assesses reports of Viking raids as far as 50 km outside of Dublin, and considers Fine Gall as possible territory of Dublin.[107] Icelandic sources call it *Dyflinarskiri,* the "shire of Dublin."[108] Either way, it is sufficient enough to evidence to argue that the Vikings of Dublin controlled enough land outside of the town for cattle grazing.

That cattle grazed outside of the town is supported by the absence of *byres,* or cowsheds. The typical Viking longhouse included a byre within the structure for warmth; however, the Dublin houses notably lack byres.[109] Instead, the Type 1 house is used exclusively for dwelling, and although it could be argued that craftsmanship was also carried out in the Type 1, this human activity very clearly excludes animals from the structure. Instead, the ancillary buildings of Type 2 and 3 as mentioned briefly above, may once again be examined in light of cattle question.

Type 2 buildings are sub-rectangular with exaggeratedly rounded corners, a single entrance, lacked any internal subdivision or *immdaí*, and lacked a hearth.[110] The latter two may be connected, as the lack of hearth implies a lack of focus point for which to arrange sleeping or bedding.[111] Instead, the entire floor was completely covered with wattle or similar insulating materials such as brushwood and fern.[112] They were significantly smaller than the main dwelling,

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[105] Ibid.
[106] Ibid.
[107] Ibid, 254-255.
[108] Ibid, 255.
[109] Wallace, "Viking Age Buildings," 66.
[110] Ibid, 14-15.
[111] Ibid, 14-15.
[112] Ibid.

but were situated on the same plot; snug, simple, and with floors made for insulation as opposed to the walking-workspace examined in Type 1, it appears that these houses were made for specific use, but not as byres.[113] Instead, they appear to have been entirely dedicated to sleeping, or perhaps for the infirm or children.

Type 3 buildings are a sized-down version of Type 1, but like Type 2, lack any internal subdivision.[114] However, they include two doors on an axis like Type 1, and the floors are not covered, implying internal movement through and about the house.[115] Occasionally these were fitted with fireplaces.

The analysis of these ancillary buildings shows that, despite their small size and removal from the main dwelling, neither Type 2 or Type 3 structures were intended as byres. Therefore, the cattle of Dublin were confined to the hinterland until they were brought in for slaughter. However, despite the fact that cattle were not protected by the town walls, that does not mean that the cattle were not valuable. The cattle, as examined in the dietary evidence, were in fact the main source of protein as well as necessary vitamins and minerals for the population of Viking Dublin. Due to the importance of cattle, but the deliberate lack of byres in houses, this suggests that Dublin's placement between the hinterland and the sea was deliberate. Dublin's urbanity was not a side-effect of the port's importance, but instead premeditated as a center that collected enough terrestrial goods to support the maritime endeavours of the Vikings.

The Sea's Demands

[113] Ibid.
[114] Ibid, 16.
[115] Ibid.

If, then, the plots of Viking Dublin were not intended for cattle and the dwellings had no byrnes, why the organization in such a way? As discussed above, each generation and version of the house kept very strictly to its previous foundation and orientation. This continuous inhabitance of the same property in the same manner is a feature not just of Viking Dublin, but of the larger Northern Atlantic settlement pattern.

Holm suggests that within town walls, urban space was divided between private and royal quarters.[116] He notes that the kings owned parcels of land within the town in addition to the royal palace at what is now Dublin Castle; these parcels include the land that Sigtryg Silkenbeard donated for the building of Christchurch Cathedral in 1036 and a parcel by the western town gate owned by the last king of Dublin, Höskuld. Höskuld's parcel was described with the term *gardha* in Irish, the Norwegian *garð.*[117] This is not a one-off: other place-names in Dublin involve -*gardha,* such as Fissegard, Taxsagard, and Apilgard.

The *garðs* of Dublin*,* however, cannot be associated with the plots of Dublin either archaeologically or philologically, Holm argues.[118] The Norwegian *garð* refers to one or more peasant farmsteads in a fenced settlement, a much larger area than the fenced Dublin plots. Furthermore, in 989 when King Maelsechlainn demands tribute from Dublin: "…and an ounce of gold for every garden *(gardha),* to be paid each Christmas night, for ever," Holm assesses this as an impossibly high tax on the small fenced plots.[119] While the 989 tax might never have been

[116] Holm, "Viking Dublin," 258.
[117] Ibid.
[118] Ibid.
[119] Ibid.

enforced, similar taxes were levelled in 995 and 1000: Holm suggests that the plots and *gardhas* formed the formation of a regular tax system.[120]

> "The Scandinavian system of *"leidang"* (itself a word which gained currency in Irish for "ship") was organised as a tax system perhaps in the eleventh century and was headed by one of the *stýrsmaðr* (steersman) for each ship. Dublin may have organised a tax system related to the *garð* on the basis of 60 parts for the organisation of the fleet. […] As mentioned above Dublin had between 600 and 900 plots, or between 10 and 15 plots per *garð.* Each plot will then have been obliged to provide one or two men for the fleet. […] In the High Middle Ages, Scandinavian towns were obliged to provide the king with ships for his defense. However, the ship taxes of Scandinavian towns were never of the magnitude of Dublin's. What is obvious […] is the immense costs to Dublin's economy in keeping the fleet, and only in so far as the fleet was able to pay its own way." (Holm 258-259)

As Holm himself admits, this is a highly speculative argument. However, the merit of Holm's argument is that not only did organized plot/parcel based tax systems have a basis in previous Scandinavian established societies, but that Dublin somehow had to withstand the rigors of supporting an entire Viking fleet.

"Was Dublin's urban plan organized specifically for the ultimate objective of supporting a fleet, with a built-in tax structure?" is a question that plants too many inherently biased replies to be answered satisfactorily. But it is clear that Dublin was planned, it was planned by Vikings who intended Dublin as a facility to support not only ships, but also to support a population of both roaming warriors and settled townspeople. The demands of these two factors (a) supporting a terrestrial-based population and (b) supporting the exploits of a maritime-based population makes Dublin's urbanity unique. Dublin's urban place is directly between sea and shore, the Deep Pool and the hinterland, taking supreme advantage of the wealth of earth-based resources to propel forward domination over the sea.

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[120] Ibid, 258-259.

Conclusion

Dublin's reestablishment in 917 and its flourishing for the next several centuries under Viking rule invites many questions about how its urbanity mixed with its maritime endeavors. Until 902 AD, with the expulsion of the Vikings from Dublin, the town was little more than a fortified base-camp. However, with the return of the Vikings to Dublin 917 AD, it is clear that the urban plan of the city was based upon the Vikings' previous understanding of the Irish hinterland surrounding Dublin as well as the specific needs that harboring ships brought to a town.

Viking Dublin is organized as a metropolitan center in Northern Europe, familiar in its house-building tradition to its neighbors, but equally uniquely adapted to the circumstances. The Type 1 houses are made for dwelling alone, with supporting house of Type 2 and Type 3, on plots. Whether or not this was purposely erected as part of a tax system, these plots clearly demarcate property ownership through generations. The lack of byres indicate the Viking control over the hinterland for cattle grazing. Instead, cattle—the main part of Viking Dublin diet—were brought into the walled town for slaughter, many times as payment for use of Viking mercenaries and their ships.

The orientation of Dublin towards its maritime pursuits can only be viewed with its domination of the terrestrial territory around it. Dublin organized itself as the perfect mesh between gathering the resources of the land to support the great cost of exploring the sea.

Figures

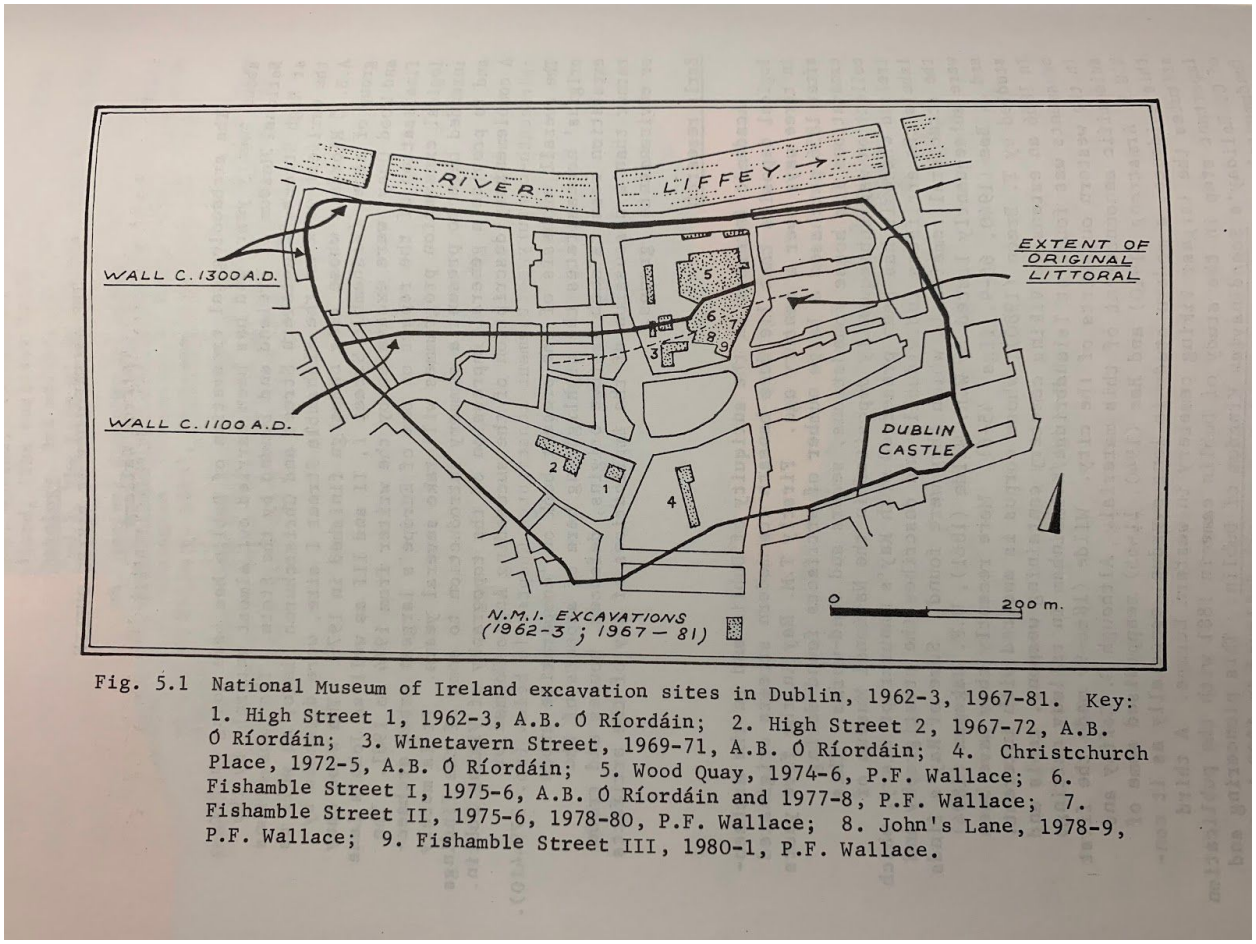

Fig. 5.1 National Museum of Ireland excavation sites in Dublin, 1962-3, 1967-81. Key: 1. High Street 1, 1962-3, A.B. Ó Ríordáin; 2. High Street 2, 1967-72, A.B. Ó Ríordáin; 3. Winetavern Street, 1969-71, A.B. Ó Ríordáin; 4. Christchurch Place, 1972-5, A.B. Ó Ríordáin; 5. Wood Quay, 1974-6, P.F. Wallace; 6. Fishamble Street I, 1975-6, A.B. Ó Ríordáin and 1977-8, P.F. Wallace; 7. Fishamble Street II, 1975-6, 1978-80, P.F. Wallace; 8. John's Lane, 1978-9, P.F. Wallace; 9. Fishamble Street III, 1980-1, P.F. Wallace.

Figure 1, National Museum of Ireland excavation sites in Dublin, featuring the 1300 AD and 1100 AD walls.

Figure 2, typical Type 1 Viking Dublin house.

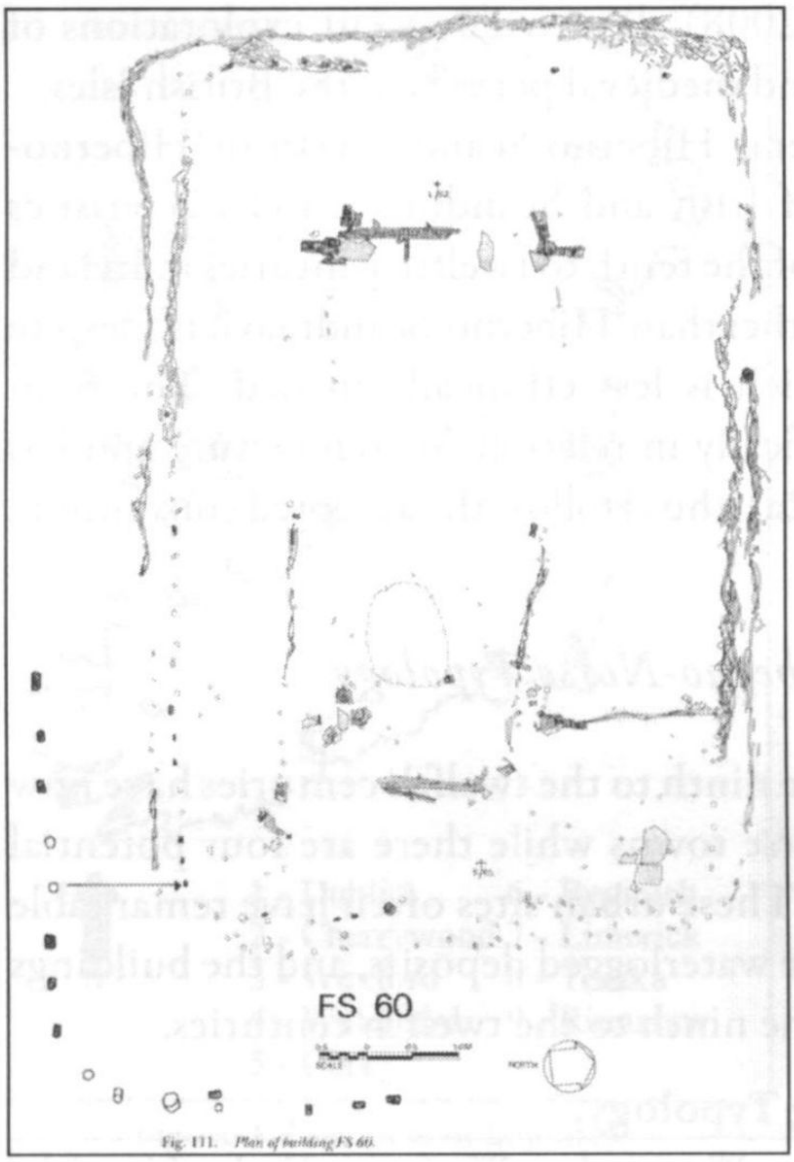

Figure 2. A Hiberno-Norse Type 1 house. (Illustration: Wallace 1992b, II, 137, reproduced with permission)

Figure 3, table describing Patrick Wallace's Typology of Hiberno-Norse houses.

Table 1. The Hiberno-Norse Building Typology.

Type	Description	Dublin	Waterford	Wexford	Cork	Limerick
1	Main dwelling house	187	35	1	14	
2	Small domestic house	20	19		4	
3	Mini Type 1 house	15				
4	Sunken floored structure	8	6			3
5	Non-habitational structure	36		1	3	
6	Sill beam building		7			
7	Stone building		1			
-	Unclassifiable	117	1		7	1

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