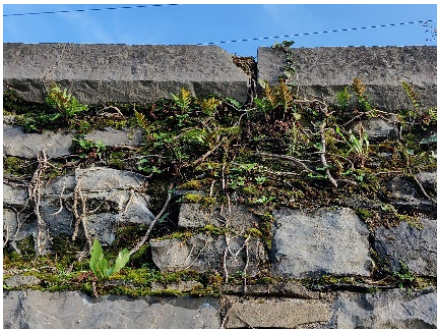
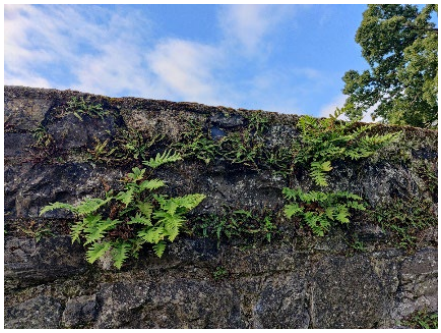
# A short survey of flora

on

# TU Dublin campus, Grangegorman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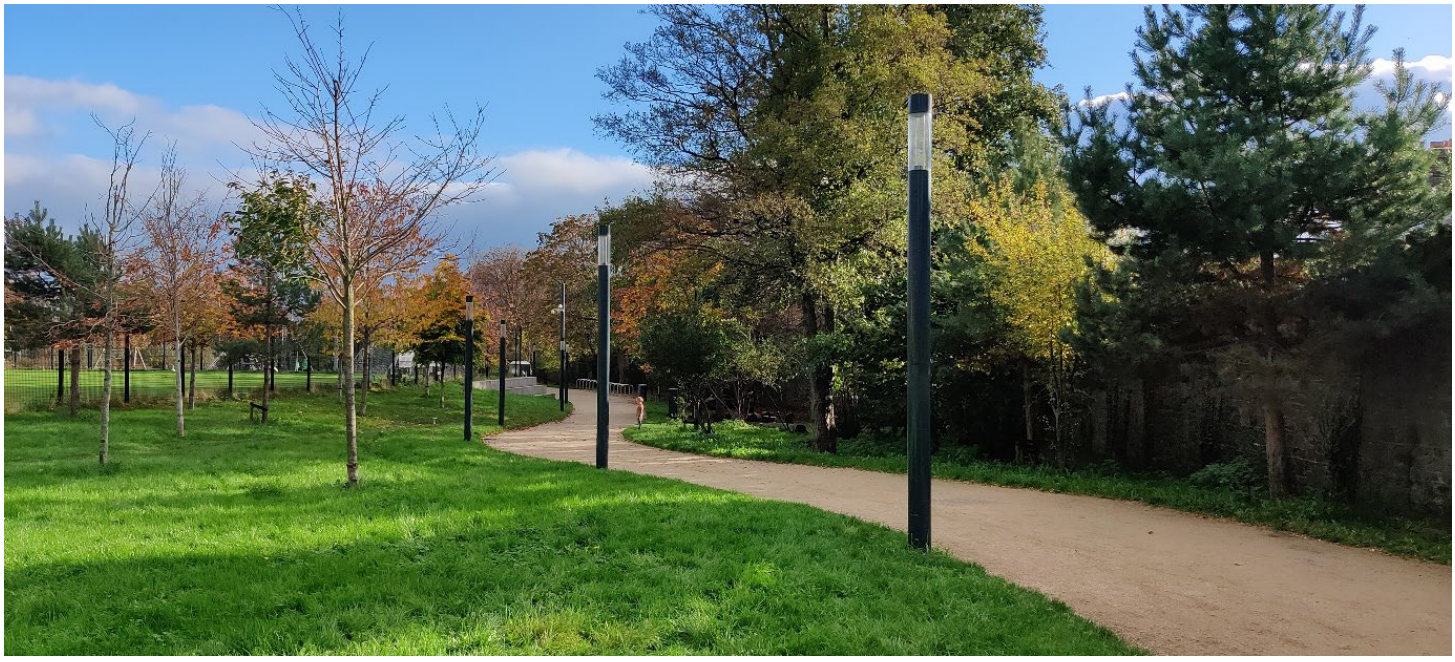
And second year students of TU835 Environmental Management


AS PART OF SSPL2029 FIELD ECOLOGY

December 2022



# Executive Summary

We carried out a short survey of the flora and habitats of some locations within the Grangegorman Campus as part of the Field Ecology module on the TU835 Environmental Management programme at TU Dublin. We examined old walls including the boundary wall, some grassland areas and parts of the campus containing trees. We reviewed former botanical records for the site, and ecological documentation prepared as part of the Grangegorman redevelopment project. We also consulted Dr David Nash, Botanical Society of Britain and Ireland (BSBI) Vice-County recorder for Dublin (H21).

Our survey showed that the flora of old stone walls is of particular interest. In spite of extensive cleaning and repair work in recent years, some fragments of native flora have survived and are becoming re-established on the boundary wall. Most conspicuous are the ferns: Wall-rue *Asplenium ruta-muraria,* Hart's-tongue *A. scolopendrium,* Maidenhair Spleenwort *A. trichomanes* and Intermediate Polypody *Polypodium interjectum*. These are characteristic species of lime-rich rocks and stonework. Common moss species, typical of this habitat type, are also present: *Grimmia pulvinata, Tortula muralis, Bryum capillare, Didymodon fallax* and *Homalothecium sericeum*.

We found one especially important species on the boundary wall: Black Spleenwort *Asplenium adiantum-nigrum*. This is a very rare plant in the city. It is ecologically relevant and indicative of the historical significance of this structure and the habitat it provides.

The grasslands we examined contained very common species such as Perennial Rye-grass *Lolium perenne*, Cock's-foot *Dactylis glomerata*, Yorkshire Fog *Holcus lanatus,* Yarrow *Achillea millefolium*, Creeping Buttercup *Ranunculus repens* and White Clover *Trifolium repens*. The areas we examined beneath trees contain common species indicative of parkland and disturbed ground (as opposed to woodland), such as Wood Avens *Geum urbanum*, Herb-Robert *Geranium robertianum*, Nettles *Urtica dioica* and Ivy *Hedera hibernica.* None of these species are of particular ecological significance.

However, historical botanical evidence indicates that the grounds at Grangegorman were ecologically interesting and contained fragments of habitats of biogeographical significance prior to the recent redevelopment works. The *Flora of Inner Dublin* contains records for woodland plants on the campus in the 1980s and assesses the grounds as one of the most botanically significant sites in the city, containing relics of woodland habitats which had probably never been cleared in the past.

To the best of our knowledge, these habitats were not surveyed or documented prior to their destruction post 2000. We consider the 2007 Ecological Appraisal inadequate for a site of this level of significance. It raises important questions as to why, *inter alia*, areas of semi-natural woodland, a hedgerow and calcareous grassland shown on the 2007 Habitat Map and/or referred to in the text of the Appraisal were not fully surveyed. The basis for many recommendations in the later Biodiversity Action Plan (2017) is unclear and we do not believe that they are relevant to or in the best interests of biodiversity on the campus.

Our own short field survey agrees with the assessment of the *Flora of Inner Dublin* that these grounds were — and to a lesser extent still are — of ecological significance. A full survey of indigenous flora, fauna and habitats within the campus should be carried out in a competent and comprehensive manner, as a matter of priority, to identify any fragments of ecologically significant habitats (and plant and invertebrate species) that may have survived. Any authentic fragments thus identified should be the main priority in devising appropriate management protocols for the campus. We consider the boundary wall to be especially important in this context. Superficial measures, such as introducing so-called 'wild' species, should be discontinued.

# Introduction

A short survey of flora and habitats at the TU Dublin campus, Grangegorman, was carried out by second year TU835 Environmental Management students and their lecturer, Dr Melinda Lyons, as part of the Field Ecology module. We present in this report the findings of our survey, an assessment of the ecological significance of the Grangegorman campus, and some observations and questions regarding earlier reports on the biodiversity of the campus. We also make recommendations on managing the grounds in the best interests of biodiversity.

## Background

The TU Dublin Grangegorman campus is located on the grounds of the former St. Brendan's Hospital (Fig. 1). The main hospital and institutional buildings date from the early- to mid-nineteenth century (Henchy, 1949; GGDA; NIAH). Several of the buildings became derelict and the grounds were managed by low-intensity methods (and some parts were left unmanaged) as the hospital was gradually decommissioned from the 1980s onwards. Many surviving historic buildings on the campus, including the boundary wall, are protected structures (Dublin City Council, 2016). The Grangegorman Development Agency was established in 2006 with a remit to redevelop the site for education and health care (GGDA website). The first TU Dublin students moved onto the campus c. 2020.

**Fig. 1.** Grangegorman c. 2005 prior to redevelopment. North Circular Road runs along the northern boundary, Stoneybatter lies to the west and south-west and Broadstone bus depot is to the east. Source: OSI MapGenie images online.

## Review of biodiversity documentation and species records

The *Flora of Inner Dublin* (Wyse Jackson and Sheehy Skeffington, 1984) contains important references to the grounds of St Brendan's Hospital. It describes them as a site of botanical interest (p. 29), 'an example of a locality in the inner city where the presence of certain species is thought to date back to times when woodland or hedgerows still existed nearby'. Old maps suggest 'that no building or major clearing has occurred on much of the Hospital site'. Two woodland plants, Enchanter's-nightshade *Circaea lutetiana* and Ground-ivy *Glechoma hederacea*, both of which are very rare in the city, were recorded in the grounds during fieldwork in 1981. A note accompanies the record for Ground-ivy (p. 113): 'This species, growing with other woodland species are probably relics of this habitat on a site which has never been cleared or built on'.

Following the closure of the hospital, and in preparation for the redevelopment of the site as the TU Dublin campus, a study was commissioned on opportunities and constraints as part of the Grangegorman Masterplan. This included is an 'Ecological Appraisal' by Natura Environmental Consultants (2007), based on a site visit in March 2007. The appraisal consists of a short report noting some of the habitat types present (including 'semi-natural woodland' around the Church of Ireland church, Fig. 2). A comprehensive list of species was not provided. The report was accompanied by a habitat map which lacks a legend and is at odds in several respects with the text of the report. The Appraisal is discussed in more detail below.

A Biodiversity Action Plan document was produced by Scott Cawley in 2017. By this stage, much of the campus had been altered as building works progressed. It is not clear whether the campus was visited by the ecological consultants at any stage in preparing the plan; there is no record within the document of a site visit having taken place. The document contains generic recommendations discussed further below.

## Other records

Common Broomrape *Orobanche minor* was noted and photographed on the grounds by ML in 2007, growing close to the Lower House (Fig. 3). This is a rare species in Dublin. It is somewhat erratic in its distribution and can be found in disturbed habitats.

Common centaury *Centaurium erythraea* was noted in flower on thinly vegetated, recently disturbed soil behind the Clock Tower building (observed by ML, 2019). This species is common near the coast but also occurs inland, typically as a component of calcareous grassland flora.

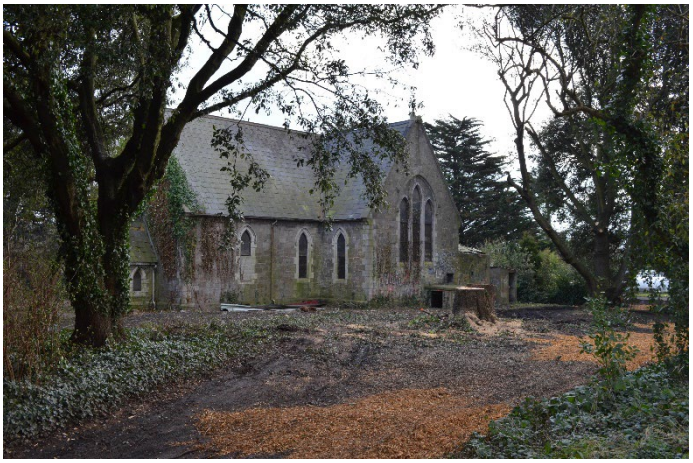


**Fig. 2.** Grangegorman Church of Ireland church in 2013 during the clearance of vegetation. The 2007 Ecological Appraisal mentioned semi-natural woodland at this location. Photograph: Chris Reid.

**Fig. 3.** Common Broomrape *Orobanche minor*, a brown-coloured parasitic plant which lacks chlorophyll; near the Lower House, 2007. Photograph: Melinda Lyons

# Methods

We carried out a survey of flora on the Grangegorman TU Dublin campus on 28 October 2022. The class spent a half day examining parts of the grounds. We studied the old walls of buildings and especially the boundary wall and we recorded the plant species (both vascular plants and bryophytes) growing there. Similarly, we recorded species growing in grassland areas in central and southern parts of the campus, amongst trees at the south end and also in areas around the Lower House. We collected some species, such as small mosses growing on walls, for later examination and determination in the classroom.

We consulted Dr David Nash, Botanical Society of Britain and Ireland (BSBI) Vice-county Recorder for Dublin (H21), regarding historical records for the grounds and the ecological and biogeographical significance of our findings. His response is appended in full. One of the authors of this report (ML) is the Vice-county Recorder for the British Bryological Society (BBS) for H21 Dublin.

Nomenclature follows Stace (2019) for vascular plants and Blockeel *et al.* (2014) for bryophytes. Common names are as per Doogue *et al.* (1998). All photographs were taken on the Grangegorman campus. Unless otherwise stated, they were taken by ML and students on or around the day of the survey.

# Results

## Old Walls

The old walls, which are constructed from calp (muddy limestone, the local bedrock) have been cleaned and repaired in recent years, leaving only small traces of former vegetation. Some species are beginning to regrow from fragments which survived in crevices. There are several ferns (Figs 4–7): Black Spleenwort *Asplenium adiantum-nigrum,* Wall-rue *A. ruta-muraria,* Hart's-tongue *A. scolopendrium,* Maidenhair Spleenwort *A. trichomanes* and Intermediate Polypody *Polypodium interjectum*. With the exception of Black Spleenwort, these are common species of old limestone walls and rocky outcrops. Black Spleenwort (Fig. 4) is a very unusual and interesting species to find in the city. It is more typical of acid rather than lime-rich rock.

**Fig. 4.** Black Spleenwort *Asplenium adiantum-nigrum* in situ on the boundary wall (left) and pressed specimen of frond collected 28 October 2022 (right). The pressed specimen shows the spores (brown masses) on the underside of the frond. The indusia within which the spores are produced are linear (visible at arrows), a taxonomic character of this genus.

**Fig. 5.** Wall-rue *Asplenium ruta-muraria*

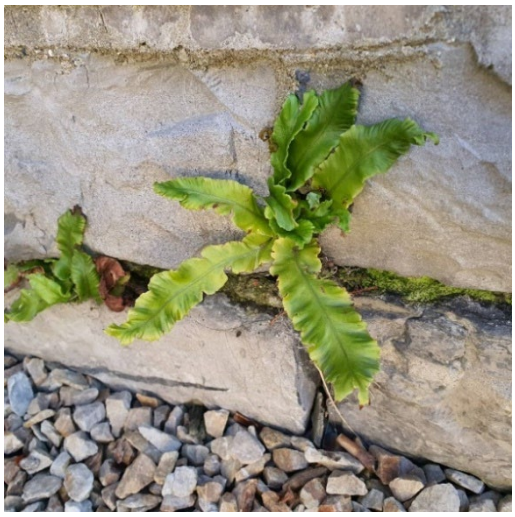


**Fig. 6.** Hart's-tongue *Asplenium scolopendrium*

**Fig. 7.** Intermediate Polypody *Polypodium interjectum* and Maidenhair Spleenwort *Asplenium trichomanes* on the boundary wall.

**Fig. 8.** the small acrocarpous moss *Tortula muralis* with sporophytes (reproductive structures).

We found four species of small acrocarpous mosses growing in crevices in the wall: *Grimmia pulvinata, Tortula muralis* (Fig. 8)*, Bryum capillare* and *Didymodon fallax*. There was one pleurocarp: *Homalothecium sericeum*. These are all very common moss species of base-rich stonework.

Ivy (*Hedera hibernica*) is present at a few locations on the wall. There are also several non-native, weedy species colonising the bare stonework in places. We noted the shrub Butterfly-bush *Buddleja davidii*, and herbs Ivy-leaved Toadflax *Cymbalaria muralis* and Fleabane *Conyza* sp.

**Table 1: Species on boundary wall and other old walls.** (B'leaved = Broadleaved)

| Species | Common Name | Significance / typical habitat | Plant type |
|---|---|---|---|
| *Asplenium adiantum-nigrum* | Black Spleenwort | Historically / biogeographically significant | Fern |
| *Asplenium ruta-muraria* | Wall-rue | Common native species | Fern |
| *Asplenium scolopendrium* | Hart's-tongue | Common native species | Fern |
| *Asplenium trichomanes* | Maidenhair Spleenwort | Common native species | Fern |
| *Polypodium interjectum* | Intermediate Polypody | Common native species | Fern |
| *Bryum capillare* | A moss | Very common species of walls | Acrocarp |
| *Didymodon fallax* | A moss | Very common; disturbed places | Acrocarp |
| *Grimmia pulvinata* | A moss | Very common species of walls | Acrocarp |
| *Tortula muralis* | A moss | Very common species of walls | Acrocarp |
| *Homalothecium sericeum* | A moss | Very common species of walls | Pleurocarp |
| *Hedera hibernica* | Ivy | Very common species of walls | Climber |
| *Buddleja davidii* | Butterfly-bush | Non-native species | Shrub |
| *Conyza* sp. | Fleabane | Non-native species | B'leaved herb |
| *Cymbalaria muralis* | Ivy-leaved Toadflax | Non-native species | B'leaved herb |

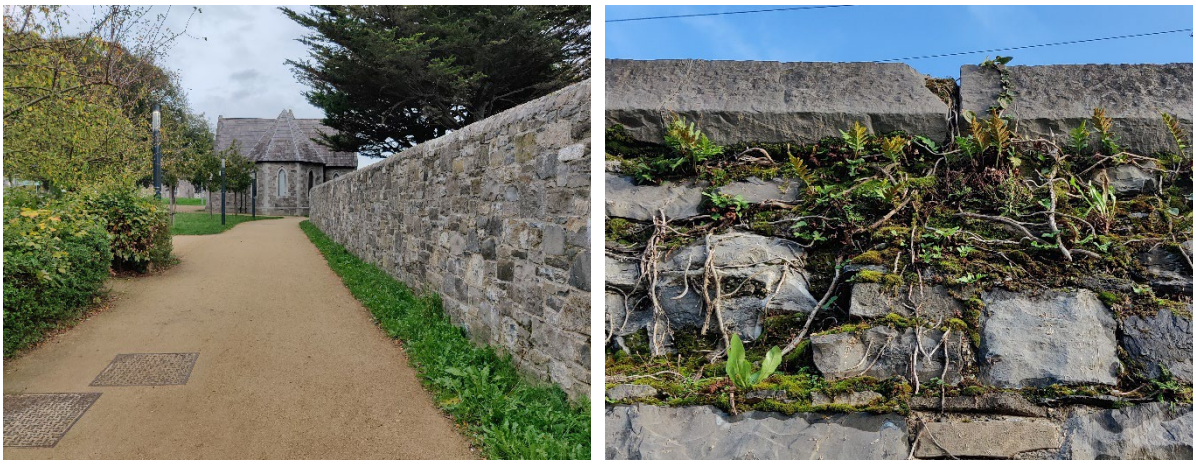


**Fig. 9.** Whilst most of the boundary wall is entirely devoid of plants (left), some sections are beginning to be recolonised. The capstone on the wall along Grangegorman Lower (right) seems to have protected some flora (and perhaps fauna) from being wiped out and several species are now beginning to spread outwards from here. It may also be that less intensive cleaning took place at a few locations, as indicated by the dead ivy branches which remain in situ (above right) and thus more propagules remained ready to regrow.

## Grassland areas

Grasslands in Grangegorman contain common species, typical of the type of amenity grassland found in parks and in marginal, nutrient-enriched areas such as roadside verges (Figs 10 and 11). We found the grasses Perennial Rye-grass *Lolium perenne*, Cock's-foot *Dactylis glomerata*, Yorkshire Fog *Holcus lanatus* and Red Fescue *Festuca rubra*, and the broadleaved herbs Ribwort Plantain *Plantago lanceolata*, Greater Plantain *P. major*, Yarrow *Achillea millefolium*, Creeping Buttercup *Ranunculus repens,* Dandelion *Taraxacum officinale* agg., White Clover *Trifolium repens* and Common Ragwort *Jacobaea vulgaris*.

**Table 2: Species growing in grasslands at Grangegorman**

| Species | Common Name | Significance / typical habitat | Plant type |
|---|---|---|---|
| *Dactylis glomerata* | Cock's-foot | Roadside verges / waste places | Grass |
| *Festuca rubra* | Red fescue | Semi-natural and amenity grassland | Grass |
| *Holcus lanatus* | Yorkshire Fog | Semi-natural and amenity grassland | Grass |
| *Lolium perenne* | Perennial Rye-grass | Amenity / seeded grassland | Grass |
| *Achillea millefolium* | Yarrow | Roadside verges / parkland | Broadleaved herb |
| *Jacobaea vulgaris* | Common Ragwort | Roadside verges / waste places | Broadleaved herb |
| *Plantago lanceolata* | Ribwort Plantain | Roadside verges / waste places | Broadleaved herb |
| *Plantago major* | Greater Plantain | Roadside verges / waste places | Broadleaved herb |
| *Ranunculus repens* | Creeping Buttercup | Roadside verges / amenity grassland | Broadleaved herb |
| *Taraxacum officinale* agg. | Dandelion | Roadside verges / amenity grassland | Broadleaved herb |
| *Trifolium repens* | White Clover | Roadside verges / amenity grassland | Broadleaved herb |

**Fig. 10.** Dandelion *Taraxacum officinale* agg. in flower in late October.

**Fig. 11.** Grangegorman grassland (summer 2021) with Creeping Buttercup, White Clover and Yorkshire Fog.

## Trees

We encountered three species of mature specimen trees: Holm Oak, Horse Chestnut and Sycamore. They are non-native species but are common parkland trees in Dublin. We came across planted trees, some of which were recently planted, for amenity purposes. These include Hazel, Beech and Cherry. These trees are indicative of landscaped areas rather than woodland (Fig. 12). The species growing beneath them are common species of disturbed urban areas rather than woodland specialists. We saw Dandelion *Taraxacum officinale* agg., Wood Avens *Geum urbanum*, Herb-Robert *Geranium robertianum*, Nettles *Urtica dioica* and Ivy *Hedera hibernica* growing beneath the trees.

**Table 3: species growing in shade of trees**

| Species | Common Name | Significance / typical habitat | Plant type |
|---|---|---|---|
| *Geranium robertianum* | Herb-Robert | Woodland / shaded places | Broadleaved herb |
| *Geum urbanum* | Wood Avens | Woodland / shaded places | Broadleaved herb |
| *Taraxacum officinale* agg. | Dandelion | Very broad range of habitats | Broadleaved herb |
| *Urtica dioica* | Nettle | Waste ground | Broadleaved herb |
| *Arrhenatherum elatius* | False Oat-grass | Grassy verges | Grass |
| *Hedera hibernica* | Ivy | Woodland / shaded places | Climber |

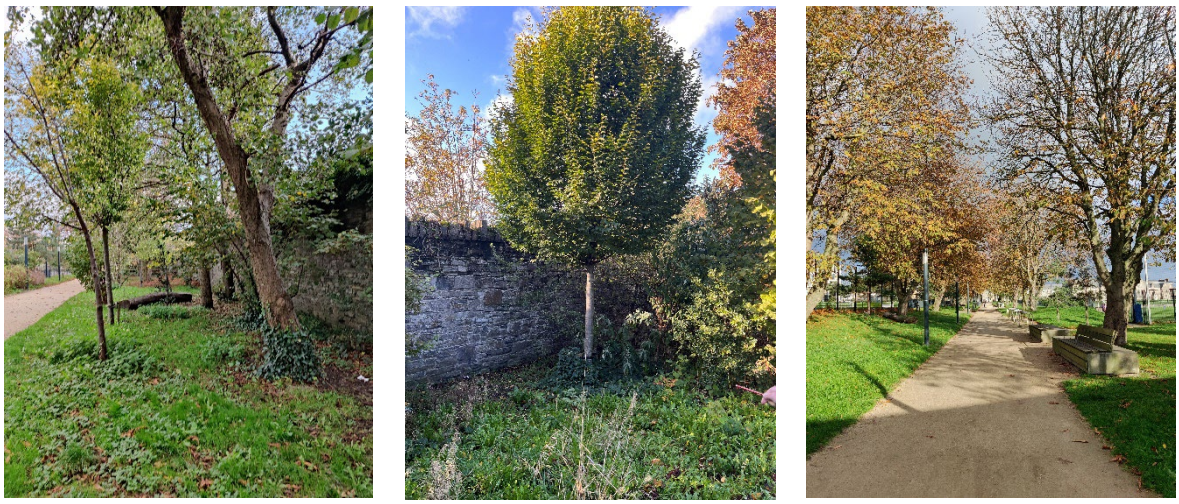


**Fig. 12.** Trees on the campus give rise to parkland rather than woodland habitat types. There are many mature trees such as Horse Chestnut (above right). Others are more recently planted for amenity purposes, especially along the southern boundary wall (left and centre).

## Discussion

Grangegorman was one of the most significant botanical sites in the city at the end of the twentieth century. The 1980s records and assessment for the grounds in the *Flora of Inner Dublin*, supported by current expert opinion (Nash, pers. comm., see Appendix), indicate the probability that there was continuity with native woodlands, with some relic woodland species still remaining in situ, probably until the redevelopment process began. This level of ecological, historical and biogeographical significance warranted a full botanical survey of the grounds in advance of any works being carried out. However, to the best of our knowledge, no such survey took place prior to the destruction of the habitats.

Our own short field survey supports this assessment, albeit on the basis of the very limited, fragmented evidence which has survived following the clearance of most former habitats in the past decade or so. The discovery of a single plant of Black Spleenwort *Asplenium adiantum-nigrum* on the boundary wall is a very significant find. This is a rare plant in the city, and it is of ecological importance — the nearest known other station is on a wall on high ground on Howth Head (Nash, *ibid*.). The other species of ferns, as well as the mosses, which we found on the wall are much more common in the city. They are characteristic species of lime-rich stonework, an analogous habitat to rocky outcrops on which they might have occurred in the past. They are indicative of the kind of native plant communities likely to be present more extensively if allowed to recolonise the bare stonework.

The grassland areas we examined are probably of relatively recent origin, and likely to have been seeded for amenity purposes. We found only a small number of common species. However, many species are inconspicuous or dormant in the autumn (and we focused on just a small area within the campus) so much more work is needed to ascertain which indigenous grassland species (such as Common Centaury *Centaurium erythraea*) might still be present.

The locations we studied which contain trees appear to have been greatly disturbed in the recent past and are now becoming recolonised with common, weedy species. However, given the historical significance of the site, further survey work is required to assess these areas — and the site in its entirety — and to establish whether any of the former woodland species still remain on the grounds. Our survey did not include the northern part of the campus and, as with grassland species, the range of woodland plant species visible at this time of year is limited.

We consider the ecological survey work that has taken place to date, as part of the redevelopment programme, inadequate for a site of this level of importance within the context of the city. We make the following observations in relation to the Ecological Appraisal (Natura, 2007) and pose these questions:

- What assessment was made of the records in *Flora of Inner Dublin (FID)* during the Ecological Appraisal? It was reported in the Methodology (Section 7.1.2) that *FID* was consulted, yet no results are presented, and no mention is made of the important ecological accounts of St Brendan's contained in *FID*.
- In view of the ecological significance of the site, we disagree that the data provided in the Ecological Appraisal is 'sufficient to describe the character of the vegetation and evaluate the ecological significance of the habitats and flora' (p. 54, 'Field Survey').
- We are concerned at the lack of detail in the survey. It provides a short list of some very common species occurring on the site (e.g. Daisy and Creeping Buttercup, ubiquitous species

of amenity grassland, one of the least important habitat types present) and fails to report any species for the most important habitats. At a minimum, a full survey should have been carried out for the following ecologically significant features:

  - Any areas approximating semi-natural woodland (referred to in Section 7.2.4 Habitats, p. 55, for which no details are provided)
  - 'WL1' (Hedgerow) indicated on the habitat map in the north-west of the campus
  - 'GS1' (Dry calcareous / neutral grassland) shown on the habitat map in the northern part of campus.

- The survey seems to have taken place on a single date in spring (29 March 2007) when many species would have been dormant. This is insufficient for a site of this scale and complexity. To evaluate the ecological significance of the habitats adequately would have required repeated visits, especially during the main field season (April to September).
- There are discrepancies between the habitat map and the written report: semi-natural woodland referred to in the text is not shown on the map; neither the hedgerow (labelled WL1 on the map), or the grassland (GS1), are described in the text.
- The habitat map has no key (Fig. 13); the labels are small, obscure and difficult to read; and the shading is almost impossible to follow, especially for anyone not very familiar with the colour coding scheme.


**Fig. 13.** Habitat Map produced in 2007 as part of Ecological Appraisal, with black dotted line added to show the location of 'WL1' (hedgerow) in north-west of the site.

- The boundary wall is not mentioned in the Habitats section (7.2.4), yet the Site Evaluation (Section 7.2.7) deems the buildings (including the wall?) to be of low ecological importance. On what was this assessment based?
- The Site Evaluation (Section 7.2.7) states: 'Given the close proximity of the site to the centre of Dublin City, the local value of remaining semi-natural habitats is greater than would otherwise be the case.' It is extraordinary that these 'semi-natural habitats' were not documented in full as part of this study.
- We do not agree that lost habitat can be 'compensated for' by planting alternative areas with trees and shrubs (Section 7.3.3 Impact Remediation). Was any scientific evidence provided in support of this proposal?

With respect to the 2017 Biodiversity Action Plan (BAP), we note and ask:

- Was the site visited as part of the formulation of this plan? There is no record of a site visit in the document. If there was no site visit, on what was it based? See, for example, '2 Overview of biodiversity on the Grangegorman campus'. Where is the 'double row of established poplar trees' (Action 8)?
- Action 25 states that 'If a biodiversity resource will be damaged or lost through future development it is intended that this loss will be compensated or "offset" by replacing the lost biodiversity resource within another area of the Campus. For example trees, shrubs, wildflower planting will be replanted in another area of the campus if lost or damaged to development.' Was any data collected on site and/or can any scientific basis be provided in support of this proposed action?
- The sowing of 'wildflower' seed mixtures is proposed in multiple actions (*e.g.* Actions 6, 7, 8, 18, 19, 20). Was any scientific rationale provided in support of this proposed intervention?
- Action 10 refers to the vegetation on walls, including the boundary wall. On what was this proposed action based — was there a survey of the wall?
- There is a reference to 'semi-natural, broadleaved woodland' on page 4. What is the basis for this?
- The BAP refers to a bat survey having been carried out in 2009. Were there other surveys and, if so, where are the findings stored?

Can an explanation be provided as to why the hedgerow ('WL1' on the 2007 habitat map) was removed? No buildings have been placed at this location, but all traces of semi-natural vegetation are gone, and the area has been seeded with amenity grassland (Fig. 14).

We do not believe that loss of habitats can be compensated for by 'creating' new habitat elsewhere, as suggested in both the Ecological Appraisal and the BAP. Authentic fragments of natural (or semi-natural) habitat, which are structurally complex and still contain the indigenous flora and fauna that has persisted for hundreds or thousands of years on that site, cannot be replaced by horticultural works.

The sowing of commercial 'wildflower' seed mixtures is of little if any value to biodiversity (Fig. 15). Rather, it is potentially damaging to what remains of indigenous populations of certain wild plant species and it destroys biogeographical evidence. The practice was promoted (wrongly, in our opinion) in the original version of the All-Ireland Pollinator Plan (2015–2020) but the revised Pollinator Plan (2021–2025) advises against such cosmetic and artificial measures. For further

information, see 'The case against 'wildflower' seed mixtures' on the Dublin Naturalists' Field Club website.

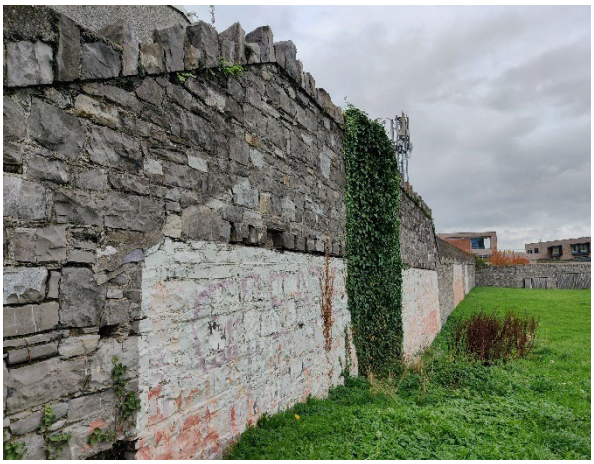


**Fig. 14.** Location of hedgerow shown on 2007 Habitat Map, now occupied by an almost bare wall and amenity grassland.

**Fig. 15.** Flower bed containing so-called 'wild' species. Use of these mixtures should be discontinued.

## Recommendations

Full surveys of the habitats, flora and fauna of Grangegorman should be carried out and there should be ongoing monitoring at appropriate intervals. It is a great pity that the habitats and their species present prior to redevelopment have been lost, and that there is no record of what was there in the recent past. However, it is still necessary to record that which remains, and it is especially important to determine over time what native species may have survived the redevelopment works, especially with regard to native woodland species. It is possible that seed banks remain in the soil and some species may become re-established if conditions permit. Maintenance of the grounds must take this into account and there must be no further loss of naturally occurring indigenous species through inappropriate management methods.

There should be no further cleaning of or repair work to the boundary wall without a full survey of flora and fauna, and only essential works should take place thereafter (*i.e*. those necessary on the grounds of health and safety). There are signs of limited recolonisation by native, ecologically relevant species, fragments of which may have persisted within the structure of the wall. This is a slow, tenuous process and it should be allowed to continue uninterrupted. To facilitate the spread of native species, non-native / invasive species such as Butterfly-bush *Buddleja davidii* and Fleabane *Conyza* spp should be carefully removed. The removal of non-native woody species will also allow the architectural integrity of the wall to be conserved. Ivy (a native woody climber) should either be removed or limited to certain small sections — it is of some ecological merit (providing food and shelter for birds and insects) but if it spreads over large areas, it will displace other smaller, less competitive plant species (and, most likely, necessitate large-scale clearance of the wall at some time in the future). Due regard **must** be given to flora and fauna in planning any future works and expert advice and oversight of works will be essential.

We strongly discourage the practice of sowing commercial 'wildflower' seeds or introducing any plants into a site under the guise of being 'wild' or naturally occurring. Rather we recommend low-intensity management of the grounds. Grasslands areas should be mowed periodically, and the

clippings removed to prevent a build-up of nutrients and make space for smaller less competitive species. Fertilisers and biocides should not be applied. It is possible that native grassland species such as Common centaury *Centaurium erythraea* (noted behind the Clock Tower in 2019) are present in the seed banks or growing in small amounts and, with appropriate low-intensity management, may become re-established if the right conditions exist.

We will deposit a voucher specimen of Black Spleenwort *Asplenium adiantum-nigrum* in the herbarium of the National Botanic Gardens, Glasnevin to provide a long-term record of this important find.

## Conclusion

The Grangegorman campus was of considerable botanical significance in the context of the city in the recent past. However, indigenous vegetation and fragments of semi-natural woodland habitats which survived until around 2000 or perhaps later in the grounds of the former St Brendan's Hospital have since been destroyed, apparently without having been recognised or surveyed.

The loss and damage to semi-natural habitats caused through land use change and intensive redevelopment projects has been a major contributing factor to the biodiversity crisis —nationally and internationally — of which most people are now aware. The primary way to address this crisis is not by trying to 'create' habitats or meet the needs of a select few conspicuous or charismatic creatures, but to bring to a halt the destruction of all remaining fragments of natural habitat and to reduce pressures on those damaged fragments which have potential for at least partial restoration. These authentic habitats, with their distinctive ecological characteristics, are the life-support systems of our native flora and fauna.

We are not aware of any habitats which remain intact on the Grangegorman campus since pre-2007 but we would be happy to examine any areas brought to our attention. We assess the boundary wall as having potential for some degree of habitat restoration, provided recolonisation by native species is allowed to progress without further damage. We believe there is a small possibility that some long-established native woodland species (and some species of calcareous grasslands) may reappear and that this should be taken into account in managing the grounds. We urge the University to enter into serious dialogue about what is of value regarding biodiversity, and to cease unhelpful practices of introducing so-called 'wild' plants or otherwise trying to artificially recreate habitats.

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# Appendix: Appraisal by David Nash, BSBI VC Recorder H21 Dublin

**Some plants found at TU Dublin Grangegorman Campus**

The ferns reported from the boundary wall include four members of the *Asplenium* genus, namely *Asplenium scolopendrium, A. ruta-muraria, A. trichomanes, A. adiantum-nigrum* and additionally *Polypodium interjectum*. This assemblage of ferns, with the exception of *A. adiantum-nigrum* (and very occasionally with *A. officinarum*) was at one time relatively plentiful on old mortared walls and crevices on buildings within Dublin City (References *FID* and *FCD*). However, in recent decades the biodiversity unfriendly architectural practice of cleaning, tidying and repointing stone and brick structures, together with the application of herbicides, has reduced their frequency and undesirable shrubby garden escapes such as *Buddleja davidii* and other alien species such as *Erigeron karvinskianus* and *Cymbalaria muralis* now often occupy some of the remaining suitable niches.

*Asplenium adiantum-nigrum* is a native species of "rocky woods, hedgebanks, shady walls and rocks" (*CTW*). In County Dublin (*FCD*) it is described as "occasional on old walls, not usually limestone …" and as being mainly a plant of higher more acidic ground and rarer in the lowlands. Indeed it is very rare within Dublin City and I am only aware of one other city record which is from a single location on the wall of the American Ambassador's residence in the Phoenix Park (*FCD* and *WPPP*). The nearest currently known other station to Grangegorman for this species is a wall on higher ground on Howth Head (DN Personal Observation). So this is a very significant find and raises question as to why this (former) "veritable hub of biodiversity" (Grangegorman Development Agency website) has not been subject to appropriate conservation consideration during the development of the TU Dublin Grangegorman Campus.

*Circaea lutetiana* and *Glechoma hederacea* are both species of woods and shady places such as hedgerows (*CTW*) and are relatively plentiful in wooded areas along the River Liffey Valley (*FCD*). *C. lutetiana* is viewed as "a weed of old and shady gardens" and St Brendan's Hospital is mentioned as one of a very few city sites in *FID*. The term "weed" is a reflection of the fact that it has persisted in gardens from when its original habitat was most probably hedgerow, in an era before herbicides had become a gardener's aide to its extermination. *G. hederacea* has only one known inner city site (*FID*) with the comment "This species, growing with other woodland species are probably relics of this habitat on a site which has never been cleared or built on. Grounds of St Brendan's Hospital, [19]'81, DD, JRA." The presence of these two species and the ferns *A. scolopendrium* and *P. interjectum* are indicative of relics from the removal of fragments of woodland habitat which perhaps existed as recently as the earlier years of this century. A hedgerow is shown on the 2007 habitat map of the campus.

*Orobanche minor* is generally a rare species within County Dublin which does occur on sand dunes. Within the city canal boundaries *FID* contains a record from one site only near the Royal Canal at Cross Guns Bridge. But it is known as a plant of flower-beds and has more recently been seen in flower beds in the National Botanic Gardens and city centre Trinity

College. It is parasitic on Clover species (especially *Trifolium pratense*) and other legumes. (It has also been seen elsewhere on *Hedera helix* in close proximity to its relative *O. hederae*. DN personal observation). It sometimes is found on disturbed ground suggesting that its seed may be wind dispersed but it is also parasitic on Ragworts of the *Brachyglottis* genus, *e.g*. *Senecio greyi* auct., together with a range of (garden) plants such as *Olearia*, endorsing its occurrence in flower beds.

**General Comment**

There appears to be an opportunity for TU Dublin to preserve remnants of our true Dublin City urban biodiversity and to enhance its commitment to native biodiversity conservation.

**References**

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*WPPP: Wild Plants of the Phoenix Park* (1993) P.A. Reilly. National Botanic Gardens, Glasnevin.

David Nash
(BSBI Recorder for County Dublin H21)
15 November 2022

**TEXT EXTRACT FROM FLORA OF INNER DUBLIN, p.29**

"'*Woodland' Localities*: Some habitats in Dublin city seem to have been disturbed little since before the days of urbanisation. The grounds of large institutions often provide a habitat of plants more characteristic of the rural landscape. St Brendan's Hospital (zone 13) is an example of a locality in the inner city where the presence of certain species is thought to date back to times when woodland or hedgerows still existed nearby. Study of old maps would suggest that no buildings or major clearing occurred on much of the Hospital site, and it is unlikely that many of the woodland and hedgerows plants found there would have been introduced subsequent to the buildings of the hospital. In the more shaded areas one may find *Glechoma hederacea* (ground ivy), *Hypericum androsaemum* (tutsan), *Hedera helix* (ivy), *Geranium robertianum* (herb Robert) and *Stellaria holostea* (the greater stichwort)"