



Rathcoole Woodland, Co. Dublin.

Report of a visit by Woodlands of Ireland, August 2020

1.Rathcoole woodland observations and suggestions by Joe Gowran, Woodlands of Ireland 24/8/20

I visited the c.11hectare site at Rathcoole townland, Co. Dublin on 8/8/20 at the invitation of a local community group concerned about the future of the evolving woodland there. Rathcoole woodland is one of the last remaining green spaces that contribute to maintaining a sense of separate identity between the urban villages of Rathcoole and Saggart. It is currently an informal community amenity area, enjoyed by a broad range of local people, combining a matrix of expanding mature hedges, emergent wet woodland and diverse species grassland on former agricultural land, as described in detail in the report by Ronan MacDiarmada and Associates, provided to me by the group. Please see copy attached. This report should be read in conjunction with the MacDiarmada report.

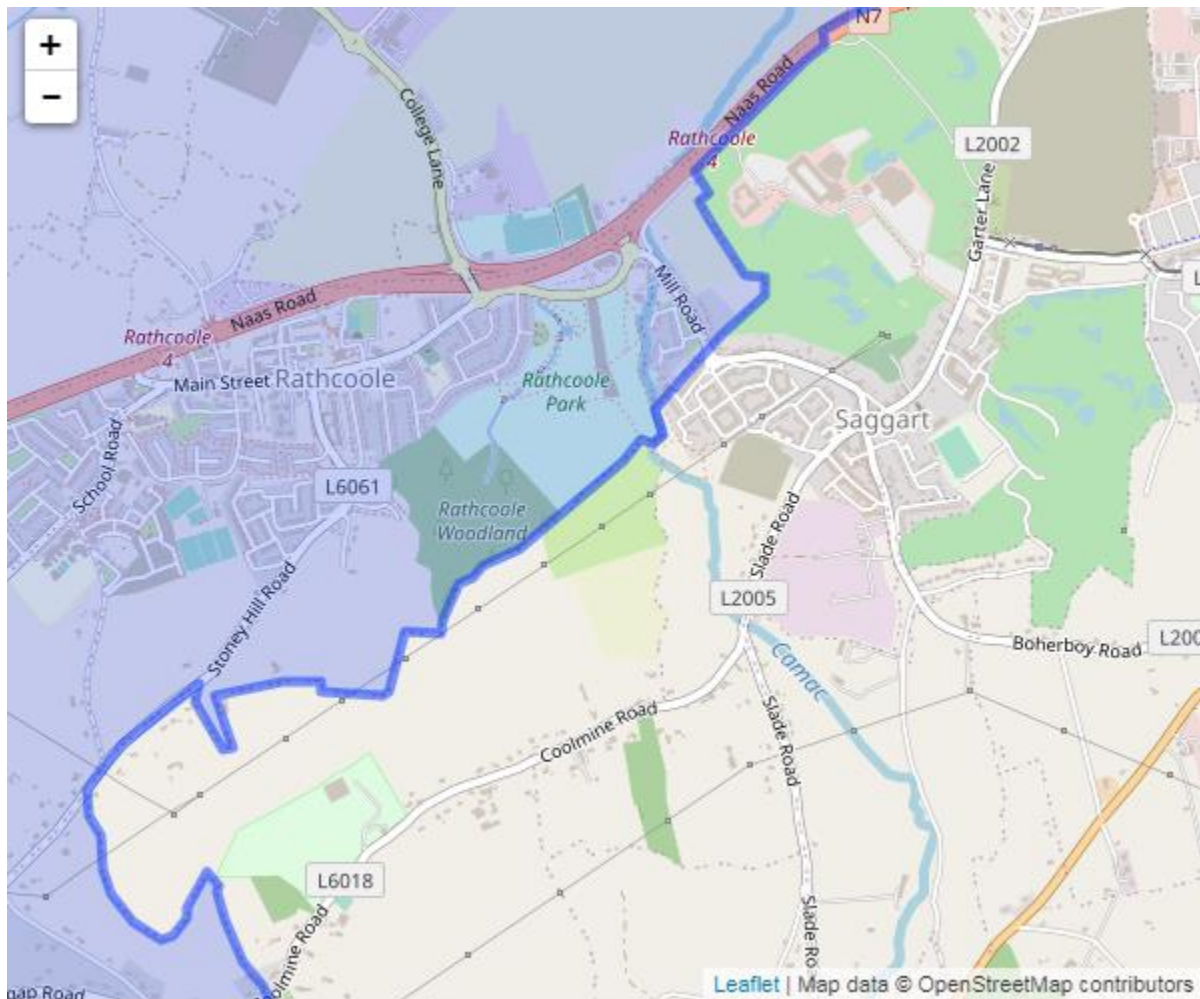


Image2: Location of Rathcoole woodland. (source:townlands.ie)

The MacDiarmada report maps the following features using the Fossitt (2000) Habitat Classification:

‘Scrub Land - WS1 Scrub

Immature Woodland - WS2 Immature woodland

Maturing Woodland - WN6 Wet willow alder-ash woodland

Hedgerow – WL1 Linear Woodland Scrub’

Study of these habitats would be ideal for research and education projects, provided health and safety risk assessments are carried out and the results acted on.

I observed the above listed habitats on site and noted the following:

- Mature coppiced hazel stools on the townland/parish boundary
- New natural regeneration of Birch, Hazel, Guelder rose, Wild cherry (possibly hybrid), Ash and Oak (probably planted by Jays/ *Garrulus glandarius* / Scréachóg choille)
- Honeysuckle climbing into tree canopy.
- Garden escape species of Cotoneaster, Norway maple and Sycamore
- Water sitting below the root plates of Willow
- Anecdotal account of deer encroachment through the site.

The site is a very good example of the processes of semi-natural plant succession from agricultural grassland through to mature woodland, which may be unique to the Dublin urban area. It is relatively pristine, appearing to lack major disturbance for a period of 15 years or more. The remains of c.6 abandoned cars pre-date the woodland development and may reflect an aspect of urban culture now a relic locally. Apart from that, no debris was noted except a small neat cache of mid-priced beer and cider cans located beside a well contained fire spot. Hazards on site include: hidden open ditches, thorn, slipping on muddy surfaces, tripping over roots and branches, ticks associated with deer (Lyme's disease), rusting cars, and remnant fence wire.

The site would be suitable for Native Woodland Scheme Conservation measures (DAFM 2020)*.

2. Ecosystem services (ES) *'The Millennium Ecosystem Assessment (MEA 2005) defines ES as the benefits that people obtain from natural ecosystems. Forests contribute a range of important ES including habitat for biodiversity, timber and forest products, climate change mitigation, erosion protection, catchment protection, and amenity and recreation.'* (Bullock et al 2016)

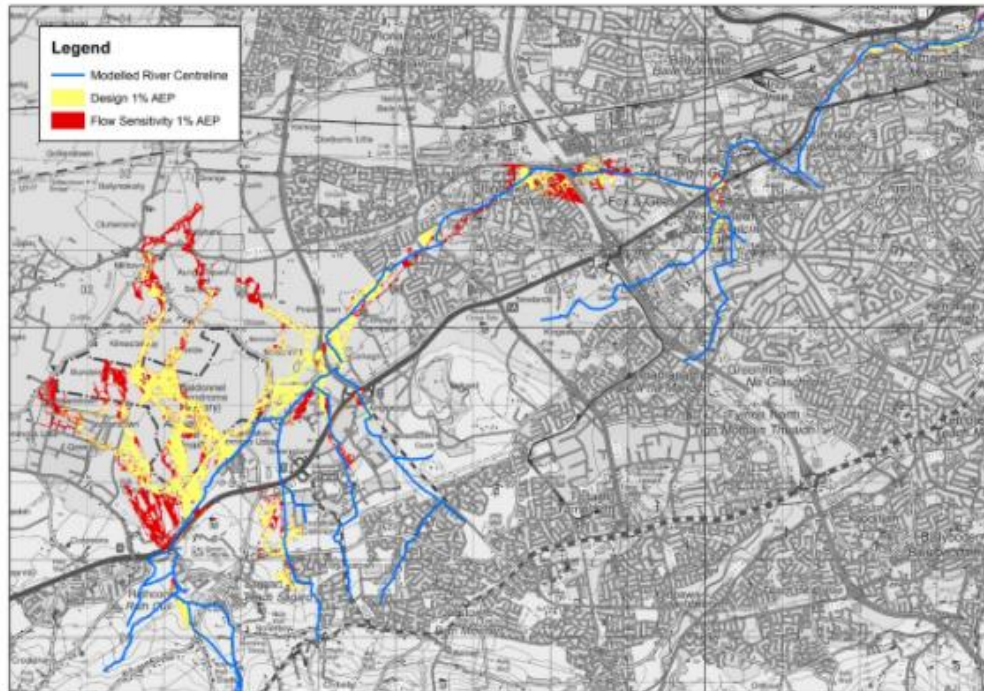
Although Rathcoole Woodland provides many of these services now, the site has been earmarked for housing development by South Dublin Co.Co., which will significantly impair its capacity to deliver these services.

A substantial section of the adjacent Rathcoole Park is also earmarked for conversion to playing pitches. Apart from the destruction of most of the woodland and associated grassland, the proposed developments are likely to impact the hydrology of the area which links to the Camac river. See Figure 2 below.

'Other important regulating ES include water flow moderation and benefits for water quality. The benefits should be viewed objectively. The capacity to moderate run-off may diminish for more severe rainfall events and is less likely to be realised in economic terms in remote rural areas than in the vicinity of urban areas where valuable real estate is at risk.' (Bullock et al 2016)

Because of the woodlands position in the Camac river/ Liffey catchment I advise to contact the **OPW Flood Relief and Risk Management Division** who have responsibility for the area of **Natural Water Retention Measures** and ask them whether they have been required (by the planning process) to evaluate the impact of the proposed housing project on downstream flood risk. This section of the OPW is based at 52 St. Stephen's Green, Dublin, D02 DR67 phone: 01 647 6741.

The 1% AEP MRFS model was used to provide an indication of the sensitivity of the Camac catchment to an increase in flows. The MRFS model results were used as the factors applied to take account of climate change were comparable to the value calculated using the methodology described in GN22. The diagram below provides an overview of the increase in flood extents due to the applied increase in flow values. The diagram indicates a significant increase in flooding throughout the catchment with additional properties being at risk in numerous locations.



The sensitivity analysis indicated that the model is relatively sensitive to changes in the various parameters. An increase in rainfall and the subsequent increase in flows presented the most variation in flood extents, with even a 20% increase causing a significant increase in potential flood risk throughout the catchment.

Although the sensitivity tests indicate that changes in model parameters could significantly influence the model output, calibration results provided a good correlation with available recorded flood levels and extents. The model provided a good representation of the flooding experienced during a recent extreme flood event, with an estimated magnitude of 2% -1% annual exceedance probability. This provides confidence that the model is generating reliable results for events of this magnitude and therefore the model parameters utilised to simulate design events are a good representation of the hydraulic behaviour of the watercourse and catchment.

Image3: Flood Risk map for the Camac catchment, which includes Rathcoole in South West. (RPS report for Eastern CFRAM Study for OPW.(p.42)

3. Archaeology and Heritage: The point highlighted with the information box in Figure 3 below (enlarge to get full detail), indicates a potential archaeological feature on site, described in 1943 as 'the Rath of Cumhal'. This requires further investigation- perhaps a Geophysics survey by the Heritage Officer of the Council.

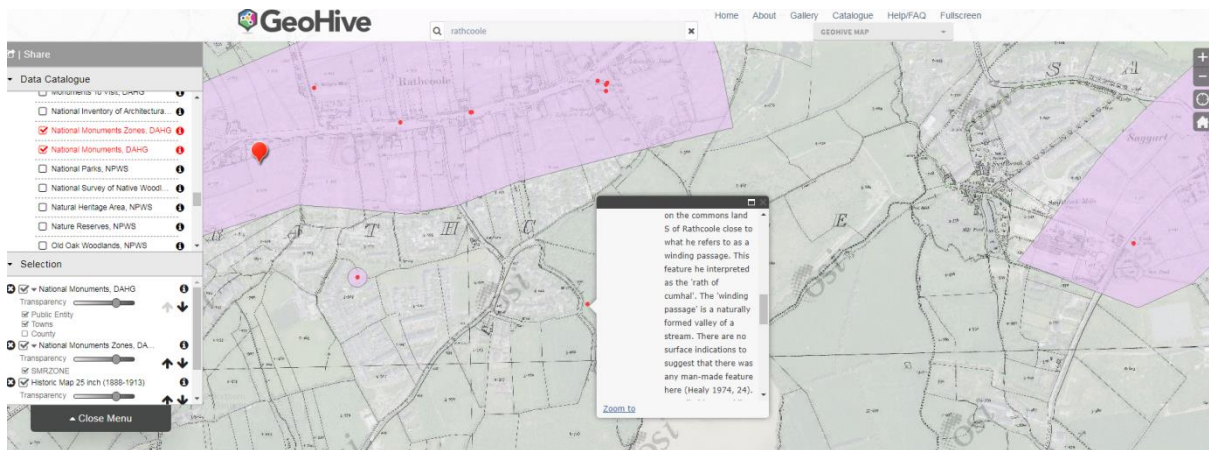


Image 4: National Monument Zones near the woodland site. (geohive.ie 2020)

Further information on the potential archaeological feature should be in: JOURNAL ARTICLE Rathcoole, Co. Dublin, and Its Neighbourhood. Notes on Place-Names, Topography and Traditions Liam Ua Broin: The Journal of the Royal Society of Antiquaries of Ireland Seventh Series, Vol. 13, No. 3 (Sep. 30, 1943), pp. 79-97, which may require a subscription payment to access.

The double hedge on the south west boundary is shown on the 1st edition OS map of c.1830, as is the central hedge and drain. In Figure 3 above, the double hedge feature can be seen on the 2nd edition OS map, adjacent to 'the Rath of Cumhal'.

The south eastern boundary is a townland/parish boundary, which may be of medieval origin.



Image 5: Hazel coppice stool on Rathcoole Saggart townland parish boundary

Also check the Longfield map collection c.1780, in the National Library to see if these boundaries are in the same location now as then.

4. The role of Rathcoole woodland as a Protective Forest: in addition to the ecosystem services provided by the woodland, as described above, it also has protective functions as outlined in this extract from a European Forest Policy document below

'Forests play important roles in the protection of soil or the surface under the forest cover, for instance, for protection against erosion. Forests are also essential for the maintenance of water resources and of water cycles such as the protection of water reservoirs or filtering of water, modification of water cycle and run-off. In addition, protective forests guarantee other important ecosystem functions, like the maintenance of clean air, stabilisation of local climate, securing the timber line in alpine and polar areas, etc. Forests also fulfil important protective functions for infrastructure (e.g. roads, settlements against avalanches), managed natural resources (e.g. vineyards, orchards, meadows) and directly for the protection of humans.' (MCPFE/UNECE/FAO 2003)

Many initiatives by Forest Service, EPA, IFI, OPW Flood Risk Management, NFGW, Uisce Éireann, An Fóram Uisce and INCASE (Natural Capital entity) are beginning to converge in the same general direction of considering the development of protective forest zones in efforts to deliver compliance to the EU Water Framework Directive. Rathcoole woodland, when community wellbeing and cultural heritage are included in the protective functions it provides, should be considered in this broader context as a priority site to conserve in Camac/Liffey catchment of Dublin.

5. Conclusion: Rathcoole Woodland was earmarked for further urban expansion of Dublin city, but it is no longer a green field site, as woodland and species rich grassland has been emerging there over the last two decades. It is a unique example of the processes of succession and natural regeneration in motion, with secondary species now being generated by both bird and mammal activity. As a natural asset owned by South Dublin County Council, its' real values may only be realised by conservation in co-operation with the local communities of Rathcoole and Saggart.

'Don't it always seem to go that you don't know what you've got 'til it's gone' (Mitchell 1970)

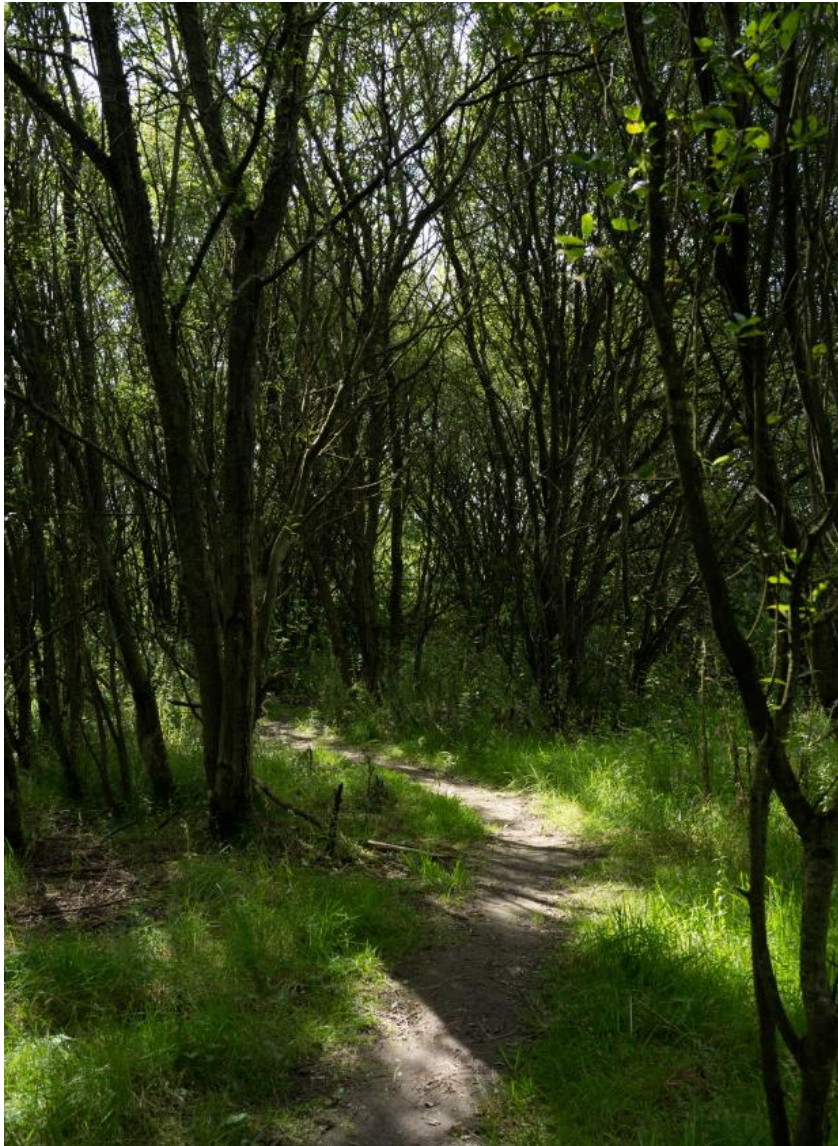


Image 6: Meandering path carved by local use of the woodland amenity.

6. References:

The Cover image and all photographic images used, were taken during the visit by Sally Ryan Graver.

Fossitt, J. 2000. A Guide to Habitats in Ireland

<https://www.npws.ie/sites/default/files/publications/pdf/A%20Guide%20to%20Habitats%20in%20Ireland%20-%20Fossitt.pdf>

Bullock, C.H. O'Callaghan, C., Ní Dhubháin, Á., Iwata, Y., O'Donoghue, C., Ryan, M., Upton, V., Byrne, K.A., Irwin, S., O'Halloran, J., Kelly-Quinn, M. *The range and value of ecosystem services: a review of Irish forests*. Irish Forestry 2016, Vol. 73

Millennium Ecosystem Assessment (MEA 2005)

https://www.researchgate.net/publication/297563785_Millennium_Ecosystem_Assessment_Ecosystems_and_human_well-being_synthesis

Mitchell, J. 1970 *Big Yellow Taxi* from the Album Ladies of the Canyon, Reprise Records

*Native Woodland Scheme information link:

<https://www.teagasc.ie/crops/forestry/grants/management-grants/native-woodland-conservation/>

State of Europe's Forests 2003 The MCPFE Report on Sustainable Forest Management in Europe
Jointly prepared by the MCPFE Liaison Unit Vienna and UNECE/ FAO

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An Chomhairle Oidhreachta
The Heritage Council



An Roinn
Cultúir, Oidhreachta agus Gaeltachta

Department of
Culture, Heritage and the Gaeltacht