Ratoath Pedestrian and Cycle Scheme

Part 8 Report

Meath County Council

February 2020

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Part 8 Report

Ratoath Pedestrian and Cycle Scheme

1. Introduction

1.1. Scheme Overview

1.1.1. Background

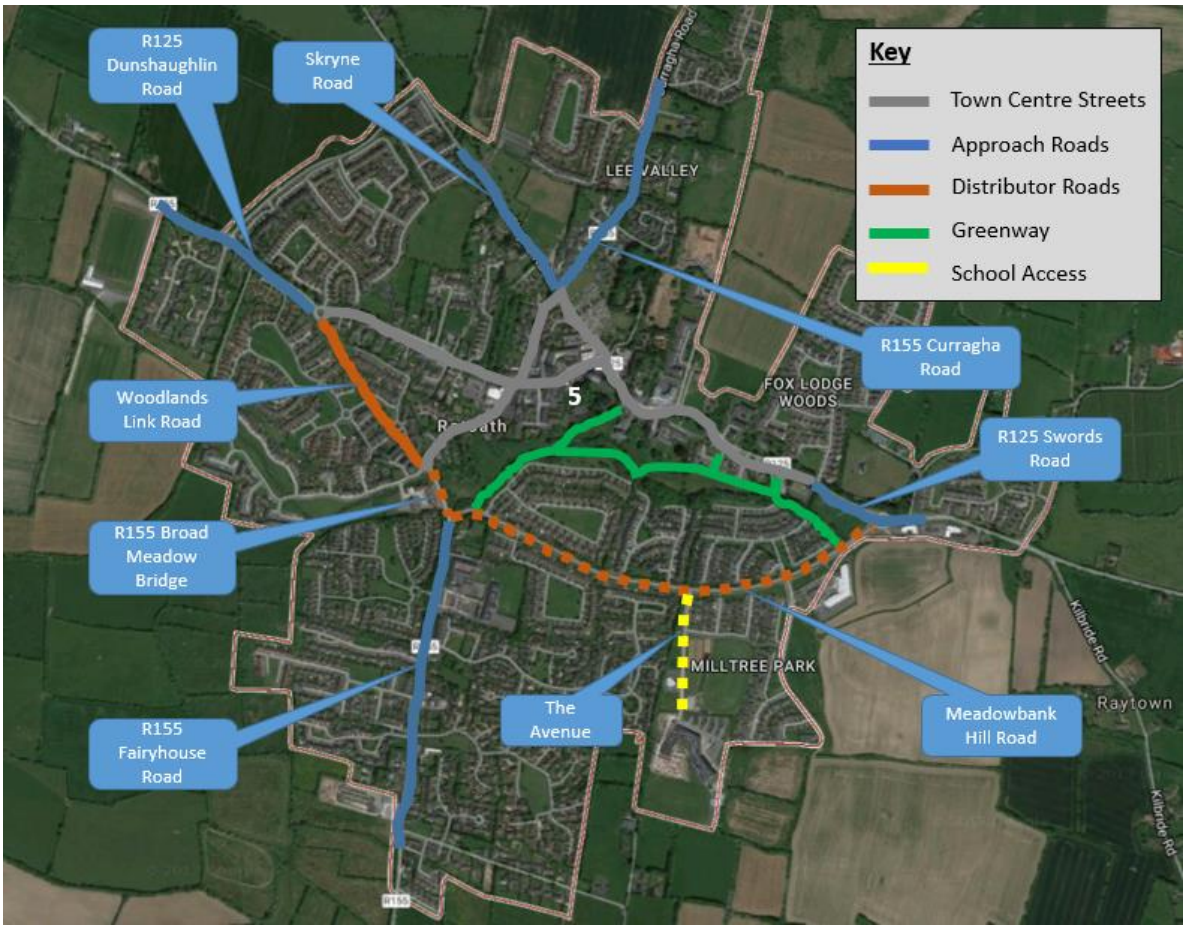
Meath County Council (MCC) in partnership with the National Transport Authority (NTA) propose to deliver a high-quality Pedestrian and Cycle Scheme within Ratoath.

The proposed scheme consists of improvements and upgrades to the follow key routes:

- Town Centre Streets
- Approach Roads
- Distributor Roads
- Greenway
- School Access Roads

These routes are illustrated in Figure 1.1 below

Figure 1-1: Ratoath Pedestrian and Cycle Network

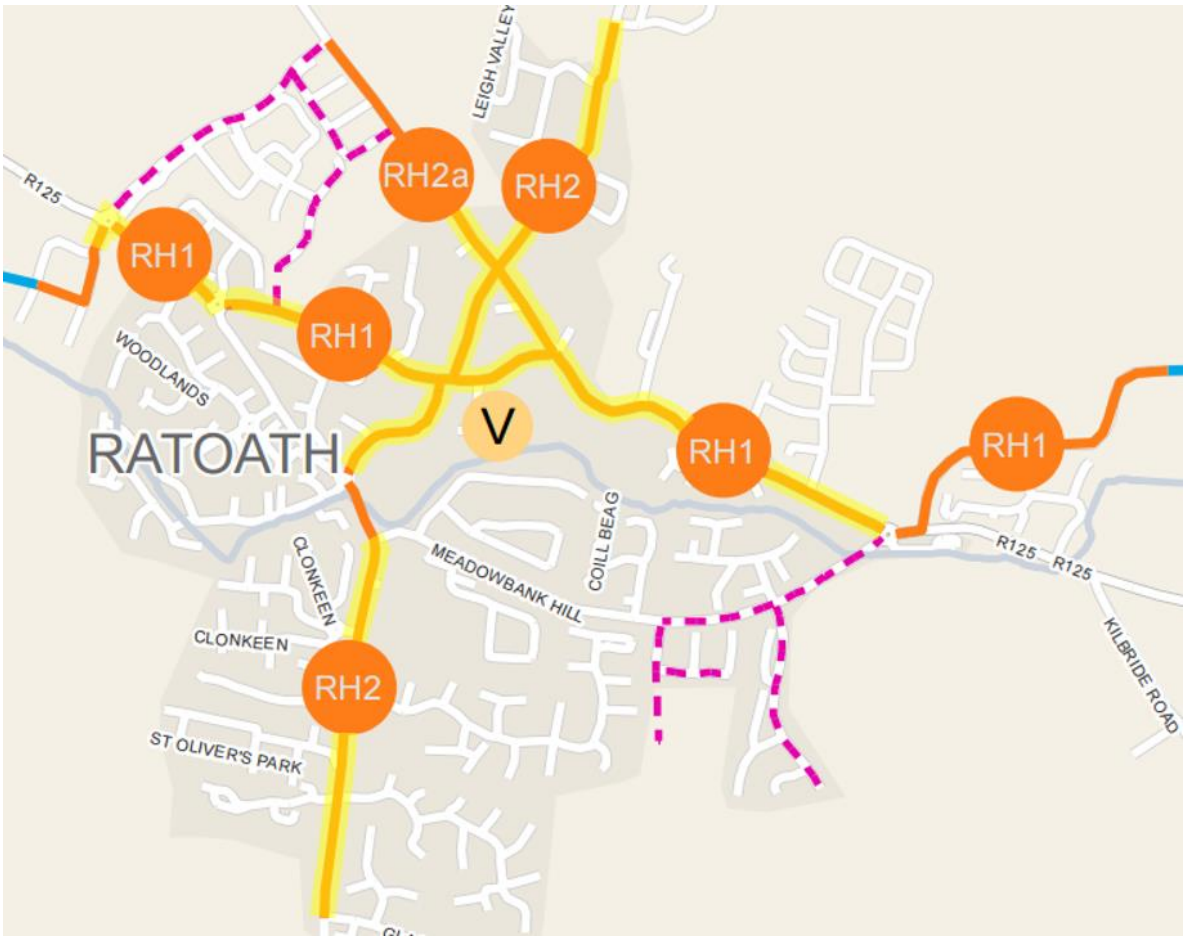


Of the above routes, it should be noted that the Broadmeadow Bridge, Meadowbank Hill and The Avenue cycle routes which are indicated with a dashed line are subject to separate planning processes and are not subject to this Part 8 Planning Report. The remainder of the routes as indicated with a solid line therefore form the proposed Ratoath Pedestrian and Cycle Scheme which are subject of this Planning Report and associated Part 8 planning application.

It should also be noted that the proposed Ratoath Pedestrian and Cycle Scheme incorporates the Ratoath Cycle Network as developed by the NTA within the Cycle Network Plan (CNP) for the Greater Dublin Area (GDA). The CNP implements policies as set out within the National Cycle Policy Framework (NCPF).

The Ratoath Pedestrian and Cycle Scheme encompasses Route RH1, RH2 and RH2a as illustrated in Figure 1.2 below.

Figure 1-2: Ratoath Cycle Network (Extract from CNP)



The CNP recognises Ratoath Town as an important population centre within the GDA with potential to become an exemplar cycling town that will facilitate a significant increase in cycling for all trip purposes

1.2. Scheme Benefits

The Ratoath Pedestrian and Cycle Scheme will result in a high-quality pedestrian and cyclist network within the town of Ratoath that will create safe and comfortable routes between a number of large residential areas and key attractors such as the he GAA Club, BMX Club, Soccer Club, Primary Schools, Secondary School and the town centre itself. There are a number of benefits which will be realised by all road users, including pedestrians, cyclists, public transport users and motorists through the implementation of the proposed scheme. These benefits include.

- Provision of a connected, safe, high quality pedestrian and cycle network;
- Provision of key facilities to encourage an uptake in cycling particularly within the school going age group.
- Improved bus facilities within the town centre including upgrades to shelters and the provision of bicycle parking;
- Improved operational safety for all road users at the R155 / R125 junction at Supervalu;

- Implementation of traffic management measures to encourage reduced vehicular speeds thereby improving road safety for all road users;
- Provision of pedestrian crossing points at key desire points and facilitating safe crossing locations particularly across side road junction;

The scheme is aligned with National Policy and is in keeping with the objectives of the Meath County Development Plan and Ratoath local Area Plan

1.3. Stakeholder Consultation

Stakeholder Consultation has been undertaken with the following key stakeholders;

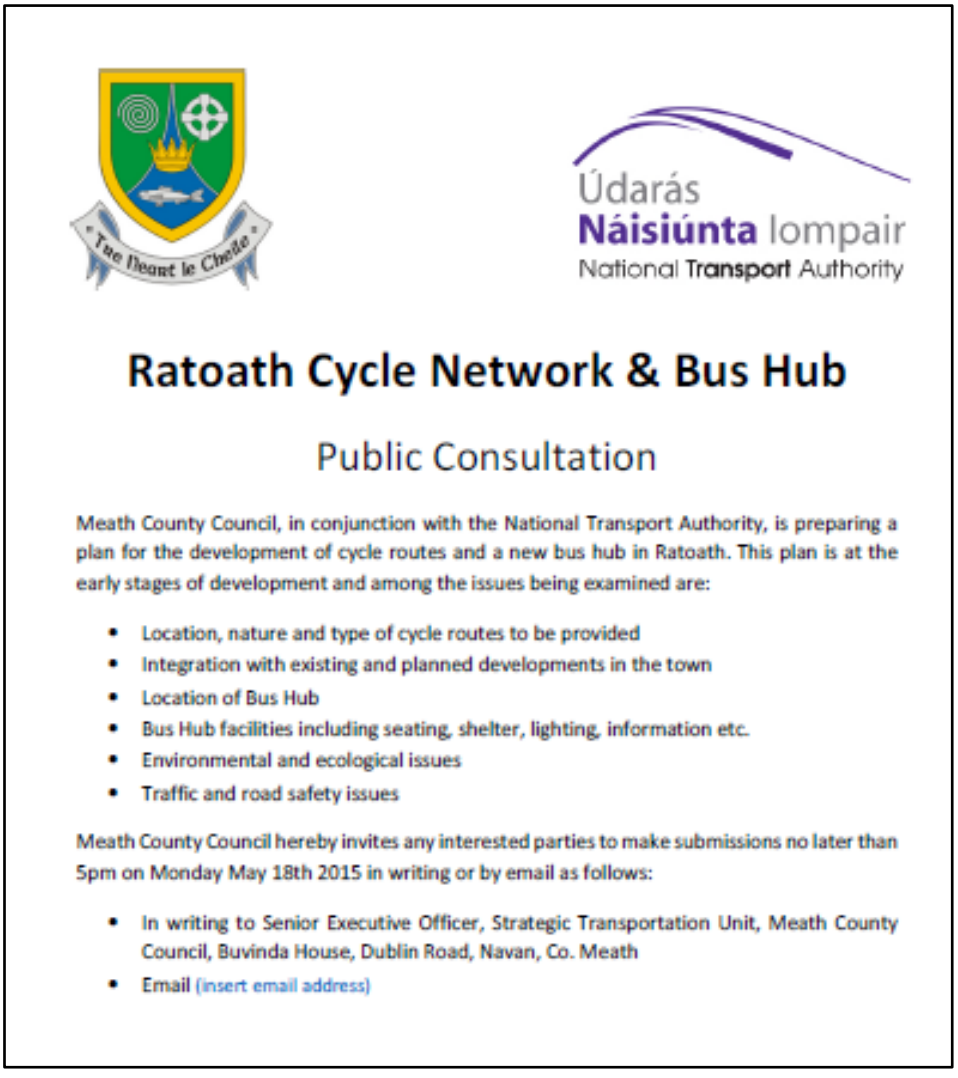
- National Transport Authority
- Meath County Council – Relevant Departments
- Elected Members

Relevant bodies will be notified under Section 82 of the Planning and Development Regulations, 2001 (as amended)

1.4. Public Consultation

Non-statutory public consultation has been undertaken with the public regarding the development of the pedestrian and cycle scheme. An advertisement requesting was placed in the Meath Chronicle on the 29th April 2015, as per the below Figure.

Figure 1-3: Public Consultation Advertisement



In total 9 No. responses were received as part of this initial consultation exercise. The comments received have been considered and incorporated where feasible.

A summary of the public consultation submissions is contained in 9.Appendix A.

1.5. Part 8 Planning Documentation

This Part 8 Planning Report has been prepared in accordance with Part 8 of the Planning and Development Regulations, 2001 as amended. This report should be read in conjunction with the following complementary documentation contained under separate report heading:

- Book of Drawings
- Drawing 5139451/HW/0000: Cover Sheet
- Drawing 5139451/HW/0001: Site Location Plan
- Drawing 5139451/HW/0002: Site Extents Key Plan
- Drawing 5139451/HW/0003: Site Extents (Sheet 1 of 3)
- Drawing 5139451/HW/0004: Site Extents (Sheet 2 of 3)
- Drawing 5139451/HW/0005: Site Extents (Sheet 3 of 3)
- Drawing 5139451/HW/800: General Layout Key Plan
- Drawing 5139451/HW/801: Site Layout Plan (Sheet 1 of 15)
- Drawing 5139451/HW/802: Site Layout Plan (Sheet 2 of 15)
- Drawing 5139451/HW/803: Site Layout Plan (Sheet 3 of 15)
- Drawing 5139451/HW/804: Site Layout Plan (Sheet 4 of 15)
- Drawing 5139451/HW/805: Site Layout Plan (Sheet 5 of 15)
- Drawing 5139451/HW/806: Site Layout Plan (Sheet 6 of 15)
- Drawing 5139451/HW/807: Site Layout Plan (Sheet 7 of 15)
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- Drawing 5139451/HW/809: Site Layout Plan (Sheet 9 of 15)
- Drawing 5139451/HW/810: Site Layout Plan (Sheet 10 of 15)
- Drawing 5139451/HW/811: Site Layout Plan (Sheet 11 of 15)
- Drawing 5139451/HW/812: Site Layout Plan (Sheet 12 of 15)
- Drawing 5139451/HW/813: Site Layout Plan (Sheet 13 of 15)
- Drawing 5139451/HW/814: Site Layout Plan (Sheet 14 of 15)
- Drawing 5139451/HW/815: Site Layout Plan (Sheet 15 of 15)
- Appropriate Assessment Screening Report;
- Ecological Constraints Assessment Report:
- Construction and Environmental Management Plan.

As part of this Part 8 Report an Arborist Report, Bat Report and Archaeological Report has been provided in Appendices B, C and D respectively.

1.6. Works Extents

In summary the proposed works facilitate the implementation of improvements to pedestrian and cycle facilities and general traffic management within the town centre itself, along the Broadmeadow River and along the following major approach roads;

- Skryne Road
- Curragha Road
- Swords Road
- Fairyhouse Road
- Woodlands Link Road
- Dunshaughlin Road

This will comprise the retrofitting of the existing road and street layout, to incorporate realignment of kerbs, widening of the pedestrian footpaths, provision of new uncontrolled and controlled pedestrian crossings, retrofitting existing priority, roundabout and traffic signal junction layouts, upgrade of existing bus stops, relocation, upgrade and installation of public lighting, and implementation of speed management measures to create a self-regulating street environment conducive to pedestrian and cyclist safety and comfort.

Certain sections of the works will also include the provision of appropriate street furniture and landscaping, removal of unnecessary street signage and furniture, installation of cycle parking and the resurfacing of road and footway pavements with appropriate materials.

2. Purpose of the Scheme

2.1. Scheme Purpose

Ratoath is situated on the intersection of the R125 and R155 regional roads in the south east of County Meath. The town has developed significantly over the last 20 years and acts as a commuter town with more than three quarters of the population travelling to work in Dublin. In this time the town's population has also grown significantly with a stated population of just over 1,000 inhabitants in 1996, compared to over 9,000 inhabitants per the 2011 census records.

The expansion of both residential and educational developments within Ratoath over this period has coincided with national policy to promote and encourage sustainable travel among all age groups with a particular emphasis on creating a walking and cycling cultural among younger generations for the undertaking of short local short trip purposes. As such the need has arisen to provide improved pedestrian and cycle provision to form better connections between residential areas, schools, amenities and the town centre.

The proposed scheme will therefore aim to secure the development of pedestrian and cycle routes that will provide a high quality of service, whilst also ensuring that there remains an optimal balance of provision between the various competing transport modes within the town and its environs.

2.2. Scheme Objectives

The objectives of the proposed Pedestrian and Cycle Scheme are;

- Provide appropriate pedestrian and cycle facilities within the town centre, along the Broadmeadow river and on all key approach roads
- To provide safe route link and crossing facilities for pedestrian and cyclists;
- To provide appropriate speed and traffic management within the town centre and on approach roads;
- To facilitate national/county policies/objectives in relation to sustainable transportation;
- To facilitate the development of the Greater Dublin Area Cycle Network Plan;
- To comply with the design standards and principles advocated within the Design Manual for Urban Roads and Streets and National Cycle Manual.

3. Planning and Policy Context

3.1. Planning Policy

National, regional and local planning policy has been considered to ascertain compliance and is summarised below.

3.2. National Transport Policy

3.2.1. Smarter Travel Policy

In February 2009, the Smarter Travel Policy document for achieving a sustainable transport system for Ireland was published. This document outlines a number of key policies to encourage a modal shift away from private car use and promote public transport, walking and cycling.

3.2.2. National Cycle Policy Framework

In April 2009, Ireland's first National Cycle Policy Framework (NCPF) was issued. The vision of the policy is "all cities, towns, villages and rural areas will be bicycle friendly. Cycling will be a normal way to get about, especially for short trips". The aim of this framework is to encourage a culture of cycling to the extent that by 2020, some 10% of all trips will be completed by bicycle.

3.3. Regional Transport Policy

3.3.1. Transport Strategy for the Greater Dublin Area 2016 – 2035

This strategy has been developed by the National Transport Authority for the Greater Dublin Area (GDA). The strategy provides a framework for the planning and delivery of transport infrastructure and services in the GDA over the next two decades. It also provides a transport planning policy around which other agencies involved in land use planning, environmental protection, and delivery of other infrastructure such as housing, water and power, can align their investment priorities.

In terms of cycling it is stated in the Strategy to implement the Greater Dublin Area Cycle Network Plan in full, delivering safe, high quality cycle facilities, which will be designed and constructed in accordance with the principles set out in the National Cycle Manual.

3.3.2. Greater Dublin Area Cycle Network Plan

The National Transport Authority has also published the GDA Cycle Network Plan which identifies the following cycle networks within the GDA:

- The Urban Cycle Network at the Primary, Secondary and Feeder level;
- The Inter-Urban Cycle Network linking the relevant sections of the Urban Network and including the elements of the National Cycle Network within the GDA. It shall also include linkages to key transport locations outside of urban areas such as airports and ports; and
- The Green Route Network being cycle routes developed predominately for tourist, recreational and leisure purposes.

The Ratoath Cycle Network includes the following routes:

- RH1 R125 Dunshaughlin Road, Main Street and Swords Road
- RH2 R155 Fairyhouse Road & Curraha Road
- RH2a L1006 Skryne Road.

3.4. Development Plans & Local Area Plans

In terms of provision for pedestrians and cyclists, the routes have been planned in line with the policies and objectives set out within the Meath County Development Plan.

3.4.1. Meath County Development Plan 2013 - 2019

The aim of the Meath County Development Plan 2013-2019 is to drive the evolution of the county and to establish a framework for the coordinated and sustainable economic, social, cultural and environmental development of County Meath.

Meath County Council outline their goal for transportation as follows:

'To promote and facilitate the provision of the necessary transport infrastructure to fully accommodate existing and future population needs as well as the demand for economic development in an environmentally sustainable manner.'

With this in mind, a selection of relevant policies are as follows:

Table 3-1 MCC Development Plan 2013 - 2019 Relevant Policy

Policy Name	Policy Description
Transport Strategic Policy 2	To promote the sustainable development of walking, cycling, public transport and other more sustainable forms of transport as an alternative to the private car, together with the development of the necessary infrastructure and promotion of the initiatives contained within 'Smarter Travel, A Sustainable Transport Future 2009 – 2020'.
Transport Policy 10	To co-operate with the NTA and other relevant agencies on reviewing the network of bus services in Meath, and work with public transport operators to provide improved bus services in, and through, the county.
Transport Policy 14	To co-operate with the NTA on the development of a cycle network for the Greater Dublin Area and to promote, enhance and provide the development of cycling and walking facilities in the County in accordance with relevant national policy and guidelines.

3.5. Ratoath Local Area Plan 2009 – 2015 (Incorporating Amendments)

The Local Area Plan (LAP) is made in accordance with the requirements of the Planning and Development Acts 2000-2006 and with the objectives of the Meath County Development Plan 2007-2013.

In terms of transport, the following are the policies and objectives of Meath County Council:

Table 3-2 Ratoath LAP 2009 - 2013 Relevant Policy

Policy Name	Policy Description
Infrastructure Policy 2	To regulate, control and improve signage throughout the town.
Infrastructure Policy 3	To provide for the future transportation needs of Ratoath and environs in a sustainable manner.
Infrastructure Objective 3	To provide traffic calming measures along the R125/Main Street to control traffic speeds particularly along curved sections of the road network.
Infrastructure Policy 9	To promote and facilitate the development of cycling and walking facilities in Ratoath.
Infrastructure Policy 12	To prioritise the movement of pedestrian and cyclists in proximity to public transport nodes.

Infrastructure Policy 13	To promote an attractive public realm of pedestrian footpaths/cycleways, street furniture and quality public lighting.

The LAP highlights that the River Broadmeadow has the potential to act as an attractive amenity feature in the centre of the town. The objectives of the LAP seek to protect and further enhance the quality of the existing walkway alongside the river. In terms of open space facilities, it is an objective of Meath County Council:

Table 3-3 Ratoath LAP 2009 - 2013 Relevant Policy

Policy Name	Policy Description
SOC OBJ 15	To investigate the provision of riverside and pedestrian walkways in Ratoath.
SOC OBJ 16	To promote the development of a playground in the vicinity of the River Broadmeadow.
SOC OBJ 17	To provide and encourage further improvements along the banks of the River Broadmeadow.
SOC OBJ 18	To develop a system of linear parks and waterfront amenity areas with walkways and cycleways, subject to the availability of resources, along the banks of the River Broadmeadow.

3.6. Design Guidance

Designs were developed in accordance with the Design Manual for Urban Roads and Streets (DMURS) and the National Cycle Manual (NCM).

DMURS is the national design guidance manual to be applied in cities, towns and villages, such as Ratoath, with a speed limit of 60kmh or less. A fundamental aim of these design guidelines is to put well designed streets at the heart of sustainable communities, creating a sense of place, protecting heritage and tourism potential and promoting civic confidence. DMURS recognises the higher priority of pedestrians and cyclists without unduly compromising vehicle movement. Encouraging increased levels of walking and cycling will encourage healthier lifestyles and greater levels of social interaction within Ratoath, thereby increasing quality of life across the entire community.

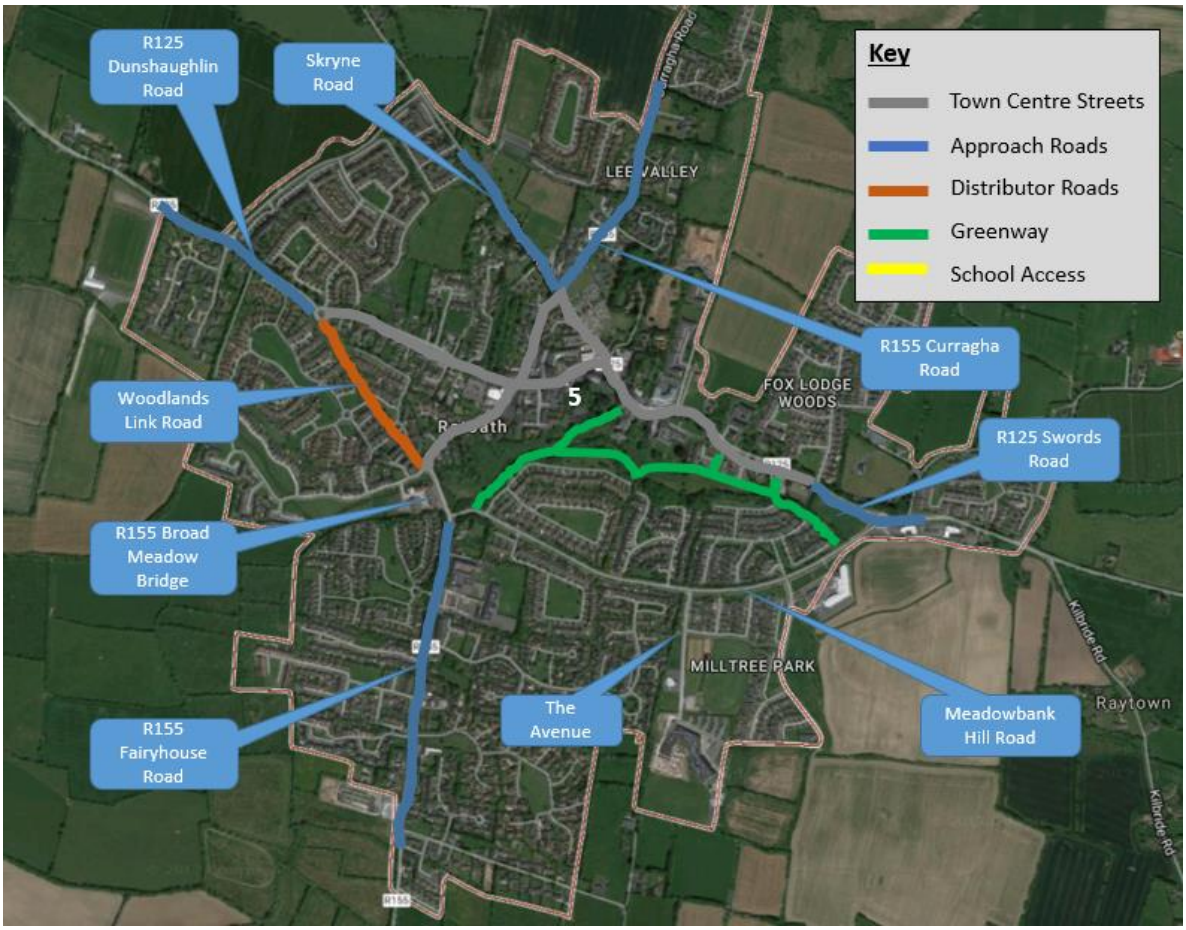
The cycle elements of the scheme are designed in accordance with the guidance set out in the National Cycle Manual (NCM).

4. Description of Proposed Routes

4.1. Route Overview

The below figure outlines the breakdown of routes which together form the Ratoath Pedestrian and Cycle.

Figure 4-1: Ratoath Pedestrian and Cycle Scheme



As can be seen from the above Figure, the scheme has been broken down into general sections to assist in describing the routes as simple as possible. These sections are as follows:

- Approach Roads;
- Town Centre Streets;
- Woodlands Link;
- Greenway.

The sections are presented below and further sub divided to reflect the relative approach road.

4.1.1. Approach Roads

Skryne Road: The Skryne Road approach to Ratoath Town extends for approximately 600m from its boundary adjacent the western side of Steeplechase housing estate towards the Curragha Road / Skryne Road junction. The road is generally 6.0m in width with narrow footpaths to either side and public lighting to its north eastern side.

Traffic volumes are relatively low with an Annual Average Daily Traffic (AADT) volume in the order of 3800 vehicles and speeds comparable to the posted 50kmh speed limit, indicated by an 85th percentile speed of 51kmh. There is an existing segregated two-way cycle track on the western side

of the roadway emanating from the Steeplechase estate, however stops some 275m short of the Curragha Road junction. The road provides access to a number of smaller residential developments, private houses, the pitch and putt club and Ratoath Harps soccer club.

R155 Curragha Road: The Curragha Road approach to Ratoath Town extends for approximately 650m from its boundary adjacent the Foxbrook housing estate to the Curragha Road / Skryne Road junction. The road is generally 6.5m in width with a narrow footpath on the eastern side and public lighting predominantly along its eastern side.

Traffic volumes are moderate with an AADT in the order of 4600 vehicles and speeds moderate as indicated by an 85th percentile speed of 64kmh, somewhat higher than the 50kmh posted speed limit. The road provides access to a number of smaller residential developments, private houses, and in addition to Foxbrook, there are two other major housing estates, these being Leigh Valley and Glebe Park.

R125 Swords Road: The Swords Road approach as outlined within the proposed scheme, extends from the Moulden Bridge housing estate, through the R125 / Meadowbank Hill roundabout junction to just west of the Foxlodge housing estate.

Traffic volumes are relatively high with an AADT in the order of 10500 vehicles and speeds moderate as indicated by an 85th percentile speed of 60kmh, somewhat higher than the 50kmh posted speed limit. This section of roadway is generally wide in the order of 6.5 – to 7.0m and there are existing footpaths and cycle tracks on both sides with public lighting along its southern side. The road has limited frontage or private accesses. The main developments accessing on the road are the Moulden Bridge housing estate and the Foxlodge housing estate. The street facilitates access by bus routes and caters for associated bus stops.

R155 Fairyhouse Road: The section of R155 Fairyhouse Road included in the scheme is approximately 800m in length stretching from the BMX Park to the signalised junction with Meadowbank Hill. The carriageway is generally in the order of 7.0m wide however there are narrow in sections particularly adjacent the BMX Park. Public lighting is provided on one side of the road, alternating between the east and west side. Traffic volumes are relatively high with an AADT in the order of 12250 vehicles.

Speeds on the initial approach just south of the BMX park are moderate in the order of 64kmh, however close on approach to the signalised junction with Meadowbank Hill speeds are low in the order of 33kmh. The posted speed limit is 50kmh. The road provides access to a number of private houses and residential developments such as Seagrave Hall, Fairyhouse lodge, St. Oliver's Park, Seagrave Park, The Old Mill and Clonkeen. In addition the road aslo provides access to the BMX Park, Ratoath National School and a petrol filling station.

R125 Dunshaughlin Road: This short section of the R125 stretches from the clubhouse and playing grounds associated with Ratoath GAA Club, through the western roundabout facilitating access to the Steeplechase housing estate towards the eastern roundabout facilitating access to the same housing estate. From the GAA grounds to the western roundabout there is a narrow footpath along the southern side of the road. Between both roundabouts there are footpaths on both sides of the road with a segregated cycle provision to the north of the roadway. Public lighting is provided along the south western side of the road.

Traffic volumes are moderate with an AADT in the order of 7350 vehicles speeds moderate as indicated by an 85th percentile speed of 59kmh, somewhat higher than the 50kmh posted speed limit. The road provides access to the GAA Club and Brownstown and Steeplechase housing estates. The street facilitates access by bus routes and caters for associated bus stops.

4.1.2. Distributor Road

Woodlands link: The Woodlands link is a distributor road stretching approximately 420m from the Steeplechase Roundabout to the Somerville Roundabout with no direct frontage development. This Woodlands Link is a main school access route carrying moderate traffic volumes at relatively high speeds. The roadway has a prevailing width of carriageway of 7.0m with 2.0m wide verges and 2.0m wide footpaths on both sides of the road. Public lighting is generally provided long the western side of the road.

The link experiences an AADT of approximatley 4,000 and 85th percentile speeds in the order of 60km/h, somewhat higher than the 50kmh posted speed limit. The road providers access to a number of large housing estets such as Woodlands, Woodlands park and Somerville. The street facilitates access by bus routes and caters for associated bus stops.

4.1.3. Town Centre Streets

R125 Dunshaughlin Road: This is the western approach to Main Street. The street is generally 6.5m wide with footpaths on both sides of the road and public lighting generally provided along the southern street side.

Figure 4-2: R125 Dunshaughlin Road

Traffic volumes are in the order of 5600 AADT and traffic speeds are in the order of 60kmh as indicated by the 85th percentile speed. The street provides access to a number of private dwelling directly fronting the street edge and some small housing estates such as the Streamstown and Parkview and the Supervalu car park. The eastern extent of the street is formed by the intersection of the R125 and R155 regional routes. The street facilitates access by bus routes and caters for associated bus stops.

Main Street: The Main Street forms the main commercial centre in Ratoath and extends from the R125 / R155 junction to the R125 / Skryne Road junction. The street is generally 6.5m wide with some narrow and wider locations. Footpaths and parking are generally provided along the extent of the street with public lighting generally provided along the southern street side.

Figure 4-3: Main Street

Traffic volumes are moderate to high in the order of 8150 AADT and traffic speeds are in the order of 42kmh as indicated by the 85th percentile speed. The street provides access to a number of on street commercial and residential developments, a petrol filling station and garage. The street facilitates access by bus routes and caters for associated bus stops.

East of Main Street: This is the eastern approach to Main Street and extends from the R125 / Skryne Road junction to the Foxlodge housing estate. The street is generally 6.5m wide with footpaths on both sides of the road and public lighting generally provided along the southern street side.

Figure 4-4: East of Main Street

Traffic volumes are in the order of 11000 AADT and traffic speeds are in the order of 44kmh as indicated by the 85th percentile speed. The street provides access to a number of on street commercial and residential developments, the local church, Corballis Shopping Centre, Silverstream Nursing Home and the Village Green housing estate. The street facilitates access by bus routes and caters for associated bus stops.

Curragha Road / Skryne Road junction to R125 / Skryne Road Junction: This short section of street is generally 6.0m to 6.5m wide with narrow footpaths on both sides of the street with parking on both sides near the Main Street junction. Public lighting is provided along its eastern side.

Traffic volumes are in the order of 3500 AADT and traffic speeds are in the order of 51kmh as indicated by the 85th percentile speed. The street provides access to the Paddocks housing estate and some private houses with direct frontage.

Curragha Road junction to R125 / R155 junction: This short section of street is generally 6.0m to 6.5m wide with narrow footpaths on both sides of the street. Public lighting is provided along its western side. Traffic volumes are in the order of 4500 AADT and traffic speeds are in the order of 47kmh as indicated by the 85th percentile speed. The street provides access to a number of private houses with direct frontage.

R125 / R155 junction to Somerville junction: This short section of street is generally 7.0m to 7.5m wide with narrow footpaths on both sides of the street. Public lighting is provided along its eastern side.

Traffic volumes are in the order of 6300 AADT and traffic speeds are in the order of 46kmh as indicated by the 85th percentile speed. The street provides access to a number of private houses with direct frontage, the Ratoath Inn car park and the Mruigtuaithe housing estate.

4.1.4. Broadmeadow Greenway

There are a number of existing routes which extend along the Broadmeadow River in a west to east orientation. At the western extent of these paths, an existing path commences at the Meadowbank Hill in vicinity of its junction with the R155 Fairyhouse Road. The path proceeds along the southern river bank adjacent the back of the Meadowbank Hill housing estate, for approximately 150m where intersects with an alternative path choice. This alternative path crosses the river via a small masonry bridge and proceeds northeast uphill for approximately 250m before terminating at footpaths associated with the R125 Main Street. The original path (as per Figure below) proceeds past the bridge for approximately 280m along the river before coming upon another small masonry bridge. At this point the formal path ends.

Figure 4-5: Existing Path adjacent Broadmeadow

These existing paths are of varying surfacing, width and gradients. The Broadmeadow River itself is modest in channel width and the overall topography of the surrounding area slopes noticeably downwards to the river banks from the north and south.

There are two informal paths which proceed east from where the formal path ends. One proceeds south of the river through a wooded area for approximately 200m (as per Figure below) before joining up with the footpath network associated with the Jamestown Park housing estate with a route available through the the estate to gain access back out onto Meadowbank Hill, in vicnity of its roundabout junction with the R125 Swords Road.

Figure 4-6: Route through Woodland Area

The other path crosses onto the northern bank of the river via the masonary bridge and proceeds east towards a laneway which provides access between the Sewage Treatment Works and the R125 Swords Road. At this point the path user can access onto the R125 or cross over the river on to its southern bank via a wooden pedestrian bridge and out onto Meadowbank Hill via the footpaths asscoiated with the Jamestown Park housing estate.

5. Approach to Design

In terms of alternative options, pedestrians are catered for by footpaths which are either existing, upgraded or new to the specific route. As such this section of the report relates only to the potential options available for cycle facilities.

5.1. General

The cycling network in Ratoath consists of a series of links that must form a coherent and safe network that appropriately caters for all types of cyclists, in particular school children and other vulnerable users, whilst taking account of the constraints and opportunities that are evident from an engineering, environmental and land ownership perspective. In this context route options were developed both holistically, considering the entire network, and on a link by link basis.

The cycle network has been designed in accordance with the National Cycle Manual (NCM) and in particular and the Design Manual for Urban Roads and Streets (DMURS). It is also critical that the cycle route requirements are balanced with the needs of pedestrians and that the requirements for vehicular traffic movement and parking is appropriately considered.

There are two key considerations in the development of cycle route options. In the first instance traffic volume and speeds must be fully assessed as these are key characteristics of the road and street network. Traffic volumes and speeds have a direct impact on the second key consideration which is the provision of either an integrated or segregated cycling provision.

Integrated cycling provision requires cyclists interacting directly with vehicular traffic, either sharing the lane with traffic or in a cycle lane. In integrated provision it is critical for vulnerable cyclists that prevailing traffic speeds are low, preferably a maximum of 30kph but integrated provision can be considered up to 50kph. In this context roads and streets should operate as self-regulating environments wherein the layout of the street and the driver's visual and psychological interpretation of the street environment instinctively tell the driver the appropriate speed as opposed to a reliance on legislation and regulation such as posted speed limits.

Segregated cycling provision provides for physical separation of cyclists from motorised traffic and these can be provided in the form of cycle tracks, cycle paths or cycle ways. Depending on the volume of pedestrians and cyclists and available width, these segregated facilities can either be shared use with pedestrian and cycle or seggragted from pedestrians. Shared provision is appropriate where the path width can adequately cater for the cyclist and pedestrian volumes and where movements are generally linear in nature i.e. people are generally not crossing and are not congregating on the path. In general these should be a minimum of 3.0m in width, with allowances for pinch points, and there should be no delineation marking between pedestrian and cyclist space.

Whilst segregated provision is most desirable for vulnerable or inexperienced cyclists, experienced cyclists will often choose to cycle in the traffic lane regardless of the whether there is a segregated cycle provision along a route. Indeed cyclists who may be travelling into Ratoath along longer distance rural cycle routes would be expected to remain on road and street within the town. Within Ratoath the provision for cyclists to cycle on street throughout the town has been appropriately considered in the context of the prevailing existing 50kph speed limit.

5.2. Scheme Options

In order to appropriately assess integrated or segregated route options along the designated cycle routes the network must be considered in its entirety in order that the network is designed as a coherent and legible network of cycle routes. At the same time each section of the cycle routes must be considered in terms of the appropriate and viable route options and preferred cycling provision.

Specific reference has been made to the traffic flow and speed data along the routes and in this context it was determined that the streets within the town centre should be design as a low speed self regulating environment to encourage speeds of 30kph or lower within which integrated shared street provision can be considered.

The introduction of a self regulating low speed environment is appropriate in terms of the traffic volumes and considered achievable in terms of the prevailing traffic speeds on each route, allowing for the introduction of appropriate traffic management measures where necessary and appropriate to ensure that the environment is self-regulating and that the 30kph will be the prevailing maximum traffic speed. The introduction of segregated cycling provision within the town centre would not be viable or appropriate, requiring road widening and associate land purchase in order to facilitate cycle tracks.

The introduction of the a self regulating low speed environment within the town centre will have an anticipated effect of reducing traffic volumes through the town centre. It is expected that a proportion of through traffic travelling from west to east and vice versa between the Dunshaughlin Road and Swords Road would divert onto the route at Woodlands Link and Meadowbank Hill which has been constructed as a distributor route and therefore more appropriate for the carrying of through traffic around the town. It can be reasonably assumed therefore that the maximum traffic volumes within the self regulating low speed town centre environment would be substantially less than the 10,000 AADT threshold for integrated cycling provision.

Outside of the town centre and within the 50kph speed limit area , generally integrated or segregated provision can be considered with due account taken of the prevailing characteristics of each route as set out in Chapter 4. However along the Woodlands Link it is evident that segregated provision would be the preferred option given the distributor road nature of this route and that this route would be a primary route serving the schools in the south of the town. Furthermore the potential to divert through traffic from the town centre along this route would be consistent with a segregated provision.

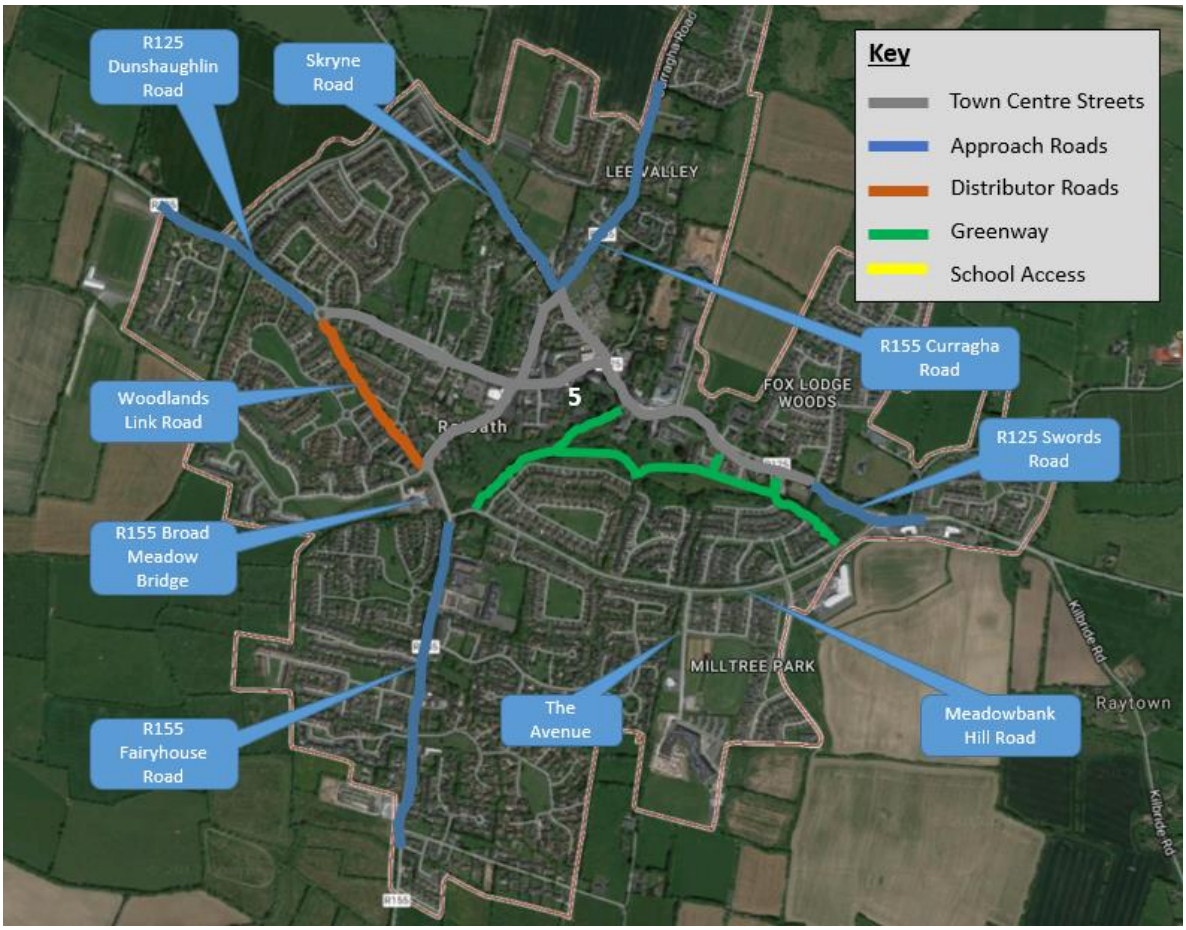
The preferred options which are proposed as part of this Part 8 Panning Report and associated Application.

6. Description of Proposed Scheme

6.1. Scheme Proposals

As presented in Chapter 5: Description of the Proposed Route, the proposed pedestrian and cycle scheme subject to this Part 8 Panning Report and Application is illustrated below.

Figure 6-1: Ratoath Pedestrian and Cycle Scheme



The description of the proposed pedestrian and cycle facilities for each section is as follows.

6.1.1. Approach Roads

Skryne Road: The proposed pedestrian and cycle facilities along this section of the scheme consist of an existing 2.0m wide footpath on the western side of the road which will be redesignated as a shared use pedestrian and cycle path. This path will connect with existing pedestrian and cycle facilities at the Silverstream Housing estate and also connect with the facilities proposed on the Currgaha Road and the town centre streets. Raised uncontrolled crossings are provided at side roads and a raised controlled crossing is provided to connect with the Pitch and Putt course and Ratoath Harps Soccer club.

R155 Curragha Road: The proposed pedestrian and cycle facilities along this section of the scheme consist of a new 2.0m footpath along the western side of the road from the Lee Valley housing estate to the traffic signal junction with the Skryne Road. The road will therefore be narrowed to 6.0m and designated as a shared street with a number of traffic management measures implemented. These measures consist of raised junction tables at the entrances to Lee Valley and Glebe Park and recurrent shared street cycle symbols painted onto the carriageway. In addition, a 50kmh driver feedback sign is to be introduced at the approach to the posted 50kmh speed zone.

Minor improvements in the form of kerb realignment, footpath upgrade and tactile paving will be introduced at the Curragha Road / Skryne Road traffic signal junction.

R125 Swords Road: The proposed pedestrian and cycle facilities along this section of the scheme consist of upgrade and redesignation of the existing footpath / cycle track from the access lane to the sewage works to the controlled crossing due east of the junction with the Foxlodge Woods housing estate. From this crossing to the roundabout, the existing footpaths and one-way cycle tracks on both sides of the road will be reconstructed to suit proposed alignment. The existing unusually bus lane entry to the roundabout will be removed and associated bus stops on both sides of the road realigned and reconstructed as per the proposed plans. Crossings on the roundabout will be widened to a 4.0m whilst a raised zebra crossing will be introduced on the western arm.

The southern arm of the roundabout will tie in with pedestrian and cycle facilities proposed as part of the Meadowbank Hill upgrade subject of separate planning permission. From the roundabout to the Moulden Bridge housing estate a two-way shared pedestrian and cycle path will be introduced and will gain access to the estate which via a permeability access point through the existing boundary wall. Pedestrians will cross the Bourne Road via a raised uncontrolled crossing. Existing footpaths and cycle tracks to the south and southwest of the roundabout will be resurfaced and designated as a shared pedestrian and cycle path. Raised tables will be implemented at the junctions of Foxlodge Woods and the access lane to the sewage works.

R155 Fairyhouse Road: The proposed pedestrian and cycle facilities along this section of the scheme consist of the reconstruction of the footpath on the eastern side of the road which will include widening of the path, thereby reducing the carriageway width to 6.0m. The path will extend from Gláscairn Lane directly opposite Ratoath BMX Club at the south of the town, northwards towards Ratoath National School and the traffic signal junction with Meadowbank Hill where it will tie with facilities as part of the proposed Meadowbank Hill upgrade subject to a separate planning permission. The proposed path between Gláscairn Lane and Fairyhouse Lodge housing estate is a minimum of 2.5m wide while the remainder of the path is a minimum of 3.0m. Raised uncontrolled crossings are provide at all side road accesses on both sides of the road. There will be requirement at Seagrave Hall and Seagrave Park

R125 Dunshaughlin Road: The proposed pedestrian and cycle facilities along this section of the scheme consist of a shared use pedestrian and cycle path from the entrance to Ratoath GAA Club to the south eastern roundabout intersecting with the woodlands link and providing access to Steeplechase Hill. Kerb lines are slightly modified and raised zebra crossings are provided on all arms of this roundabout whilst raised zebra crossings are provided on the southern and eastern arms only of the Brownstown / Steeplechase Wood roundabout. The proposed crossings will connect to existing pedestrian and cycle facilities on the northern side of this road. The eastern extent of this section includes removal of certain number of trees and replacement with new mitigation tree planting. This proposal is contained within Appendix C of this report. The existing bus stop will be retained. The eastern extent of this section will connect with proposals on the Woodlands Link and the Dunshaughlin Road town centre street.

6.1.2. Distributor Road

Woodlands Link: The proposed pedestrian and cycle facilities along this section of the scheme consist one-way cycle tracks on both sides of the road adjacent to the existing footpaths. This will entail removal of the existing trees, replacement with proposed mitigation tree planting and replacement of the existing verge with bound pavement to form the cycle track and relocation of existing public lighting column to back edge of footpath. The carriageway and associated kerbs and drainage features are to be maintained as per existing. Side road junctions will be negotiated via raised uncontrolled crossings. The northern extent of this section will tie with proposed facilities on the R125 Dunshaughlin Road, whilst the southern extent will tie in with proposals at the Somerville Roundabout which are subject of a separate planning permission. The proposed mitigation tree removal is contained within Appendix C of this report.

6.1.3. Town Centre Streets

The proposed pedestrian and cycle facilities along the town centre streets of the scheme generally incorporate traffic management measures predominantly consisting of raised platforms at uncontrolled and controlled crossings, raised junction tables and revised signage and road markings. The streets which are covered under the town centre designation are as follows:

- R125 Dunshaughlin Road
- Main Street
- East of Main Street
- Curragha Road / Skryne Road junction to R125 / Skryne Road Junction
- Curragha Road / Skryne Road junction to R125 / R155 junction
- R125 / R155 junction to Somerville junction

The above measures are proposed to encourage a low speed environment and to deter general eastbound / westbound traffic from the town centre and to encourage such through traffic to utilise the southern distributor route provided by the Meadowbank Hiill and Woodlands Link. The proposed measures and resultant potential reduction in traffic speeds and volumes will assist in promoting a shared street mixed traffic cycling regime within the town centre.

6.1.4. Broadmeadow Greenway

The proposals for the riverside greenway are predominantly straightforward. It is proposed to upgrade the existing path to a consistent standard in terms of width, surfacing and appropriate public lighting.

It is also proposed to provide an additional path north of the river which will provide access further east towards the Meadowbank Hill, increasing permeability and offering additional walking and cycling amenity within the town.

As part of the options assessed for the Greenway, consideration was given for a formal path through the wooded area to the south of the Broadmeadows River, which would allow for an alternative walking and cylcling route to the east. This path would likely consist of either a low boardwalk type facitlity or ‘no dig’ bound path construction. However, based on the findings of the Bat Report undertaken during July 2018, it has been determined appropiate not to procceed with this route for the following reasons:

- Evidence of wooded area being a key location for feeding, roosting and commuting of bats
- Impact on bats due to significant tree removal
- Impact on bats due to Greenway lighting

Development of the route through the wooded area, regardless of construction type would require significant remove of trees. This is considered to have an unreasonable impact on the local bat population and given that an alternative route is already faciliatated within proposed Part 8 scheme on the northern side of the Broadmeadow River, it is considered appropiate that the wooded section of the route is not included in this Part 8 application.

7. Appropriate Assessment

7.1. Screening Report

A Screening Report was produced to fulfil the requirements of EU Habitats Directive (92/34/EEC). The screening document provides the information required in order to establish whether or not the proposed greenway is likely to have a significant impact on Natura 2000 sites in the context of their conservation objectives and specifically on the habitats and species for which the Natura 2000 sites have been designated.

The proposed works located at Ratoath do not lie within or immediately adjoining any Special Areas of Conservation or Special Protection Areas. The nearest site located within 15km of the proposed works is the Rye Water Valley Carton SAC (001398), situated some 14km from the proposed scheme extents. However there exists no hydrological or ecological connection between the proposed development and this SAC.

The Broadmeadow River, which runs through Ratoath, however is hydrologically linked with the Malahide Estuary SAC (000205) and Broadmeadow/Swords (Malahide Estuary) SPA (004025) and are located some 19.5km form the proposed development sites. Notwithstanding this, the Appropriate Assessment Screening Report, contained under separate cover, concludes that there are no material impacts arising from the proposed scheme on any Natura 2000 sites. It is therefore not necessary to progress to Stage 2 Appropriate Assessment.

8. Impact of Proposed Scheme

8.1. Introduction

The following categories have been identified as factors which may impact on the environment and thus require further considerations:

- Traffic and Transport;
- Landscape and Visual;
- Ecology;
- Built and Cultural Heritage;
- Noise and Air Quality:
- Flood Risk.

8.2. Traffic and Transport

8.2.1. Impact on Vehicular Traffic

It is anticipated that the proposed traffic management measures introduced within the town centre will reduce eastbound and westbound traffic volumes along the R125 route through the town. As a consequence, it is also anticipated that traffic volumes will increase on the southern distributor route formed by the Woodlands Link Road, a short section of the R155 over the Broadmeadow River and the Meadowbank Hill road. Current volumes along this southern distributor route are low and it is considered that this distributor route has the capacity to take addition traffic volumes in line with its function as a relief road to the town.

The reduction in carriageway width and the introduction of traffic management measures where proposed will provide a significant benefit in terms of reduced speed and facilitating the ease of traffic movement from side roads.

8.2.2. Impact on Pedestrians

The proposed scheme will have an overall positive impact on pedestrians with a number of new footpaths and upgrades to existing footpaths including widening and resurfacing works and new crossings which will assist in providing a connected footpath network which links residential estates with key attractors such as the GAA Club, BMX Club, Soccer Club, Primary Schools, Secondary School and the town centre itself.

The implementation of traffic management measures will reduce traffic speeds and give pedestrians further encouragement to cross the road and street network in a safe and secure manner at key crossing points and desire lines. The scheme environment will also be more convenient and easier to use for disabled users, children and the elderly.

8.2.3. Impact on Cyclists

The scheme will significantly improve facilities for cyclists within the town of Ratoath. The scheme will provide for high quality continuous and attractive cycle facilities particularly along all key routes to schools such as the Dunsaughlin Road, Swords Road, Woodlands Link and Fairyhouse Road and these facilities will connect with proposed cycle facilities on the Meadowbank Hill Road which subject to separate planning permission. The cycle facilities will encourage schoolchildren to take up cycling in a safe and comfortable environment and assist to build confidence and competence within this age group. Thus helping to build a healthy future cycling culture and encouraging a long term modal shift to sustainable forms of transport.

Facilities on other routes such as the town centre and the Skryne Road and Curragha Road incorporate traffic management measures that will reduce traffic speeds and give cyclists more priority to cycling along the road and street network in a safer and more comfortable environment.

8.2.4. Road Safety

The proposed works will reduce speeds and increase driver awareness of both their surroundings and other road user, in particular vulnerable road users such as pedestrians and cyclists. The proposed works will also allow safer access and egress to and from side roads and particularly at the key intersection of the R155 / R125 junction at Supervalu.

The implementation of traffic management measures along the scheme resulting in reduced vehicular speeds thereby improved safety for all road users;

The scheme design will be subject to an independent Road Safety Audit and Road User Audit.

8.2.5. Construction Traffic

In general, during the construction phase, vehicular movement will increase in the immediate area, and temporary vertical elements such as hoarding or protective fencing, will be put in place. All construction impacts will be temporary, and will include the following:

- Site preparation works and operations;
- Site infrastructure works and vehicular access;
- Construction traffic;
- Dust and other emissions;
- Temporary hoardings or fencing;
- Temporary site lighting;
- Temporary site accommodation cabins and huts.

Further, management details in relation to the construction stage are contained in the Construction and Environmental Management Plan accompanying this Part 8 Report under separate cover.

Prior to commencement of the works, the Contractor should update the Construction Environmental Management Plan to confirm site specific measures to avoid and minimise potential impacts on sensitive environmental receptors that could potentially occur during the construction phase.

8.3. Landscape and Visual

All works will take place within the existing roadway cross section. There will be a reduction in vehicular road carriageway space along some sections of the proposed scheme which will be complemented by a significant increase in pedestrian and cycle provision. These measures will significantly reduce the vehicular dominant feel to the existing roadway.

The significant increase in the public footpath space provision particularly at the R155 / R125 junction at Supervalu, will create the opportunity to introduce additional street features such as cycle parking stands, seating, landscaping and other elements which will be determined at the detail design stage of the project. At the same time, redundant street furniture can also be identified and removed to reduce street clutter.

8.4. Ecology

8.4.1. Ecology Constraints Report

The proposed works located within Ratoath Town and its immediate approach roads do not lie within or immediately adjoining any ecologically sensitive areas. The works are proposed to take place within the existing road corridor.

An Ecology Constraints Report has been undertaken. The main findings of the report are summarised hereunder, and the full report is contained under separate cover and accompanies this Part 8 Report.

- In terms of construction impacts along the Broadmeadow River, where paths are being widened will result in an imperceptible impact, newly constructed paths would result in slight ecological impacts.
- It is a requirement that the appointed contractor will prepare a Construction and Environmental Management Plan, which will update the Plan accompanying this Part 8 Report. This Plan will focus in particular on how to prevent pollutants entering the Broadmeadow River during construction, how to minimise the loss of trees and impact of lighting through the wooded area and to identify areas of biodiversity gain within the final design. The Construction and Environmental Management Plan shall be prepared and updated with the input of a suitably qualified Ecologist.

8.4.2. Bat Report

A Bat Report was undertaken during July 2018 on the route of the proposed Part 8 scheme along the Broadmeadow River. Development of the route through the wooded area, regardless of construction type would require significant remove of trees.

This is considered to have an unreasonable impact on the local bat population for the following reasons.

- Evidence of wooded area being a key location for feeding, roosting and commuting
- Impact on bats due to significant tree removal
- Impact on bats due to Greenway lighting

Given that an alternative route is already included in the proposed Part 8 scheme it is considered appropriate that the wooded section of the route is not included in this Part 8 application. The full Bat Report is contained within Appendix B of this report.

8.4.3. Arborist Report

An Arborist Survey was undertaken during November 2019. This was focused on the impact of the proposed scheme along the Woodland Link Road and the R125 Dunshaughlin Road (Drawing No. 5139451 / HW / 801 and Drawing No. 5139451 / HW 802). A total of 69 No. individual trees were recorded as part of the survey.

Where assessment takes the form of a Tree Group – trees of greatest arboricultural significance or relevance to proposed scheme within these groups may also be identified. Every effort has been made to access all trees for inspection, however in some instances where site conditions prevent full access, some measurements may be visually estimated.

It is noted that the site contains a number of trees of significant maturity and size, every effort should be made to safely retain these as part of any development proposal. Where this is not possible replacement tree planting nearby is recommended to ensure a future canopy cover in the locality.

The proposed development will present an opportunity to implement additional new tree planting, both as part of a general landscape design scheme and also as part of a tree management program aimed at maintaining high quality diverse long-term amenity tree cover, in keeping with the setting and proposed site use.

In summary, of the 69 no. trees included in the survey, 59no. trees are being removed and 10no. trees are being retained. In total 52no. new trees are being planted along Woodlands Link Road and the R125 Dunshaughlin Road, resulting in a net loss of only 7no. trees. As such it is considered that this is an acceptable landscape reinstatement plan given the urban context of the proposed route along Woodlands Link Road.

The report concludes with recommendations for protection measures to ensure the conservation of retention trees during any development. A copy of the Arborist Report with recommendation is contained within Appendix C. In addition, the following drawings are also included:

- Drawing No. 19277_T_100 Proposed Tree Planting
- Drawing No. 19277_T_101 Tree Clarification
- Drawing No. 19277_T_102 Arboricultural Impact Assessment
- Drawing No. 19277_T_103 Tree Protection

8.5. Built and Cultural Heritage

A desktop study was undertaken to identify the architecture, archaeology and cultural heritage within the study area. Information was obtained from the Department of Arts, Heritage and the Gaeltacht's, Historic Environment Viewer.

The interactive map based database provides access to the records of the National Monuments Service "Sites and Monuments Record" (SMR) and the National Inventory of Architectural Heritage. The record of Protected Structures as contained in the Ratoath Local Area Plan 2009 – 2015 (Incorporating Draft Amendment Number 1) was also referred to during the search.

The outcome of the desktop exercise is described following, but in overall terms the proposed scheme is not predicted to have any significant negative heritage or archaeological impacts:

8.5.1. National Monuments Service

The desktop research indicated that there are 13 SMRs located near the extents of the proposed scheme. These records consist of the following:

- ME044-034008 Cross (MH044-005): Market cross damaged in 1922; in 1932 cross commemorating Eucharistic congress was erected on site, which was removed c. 1972.
- ME044-034007 Architectural Fragment: No Description.
- ME044-034002 Font (MH044-034): Octagonal font (diam. 0.44m, H 0.2m) with biconical stem outside RC church and close to motte (ME044-007001-).
- ME044-034011 Cistern: No Description.
- ME044-006 Church (MH044-006): 19th century church remains on site with 13th century effigy and 17th century graveyard.
- ME044-00701 Motte and Bailey (MH044-00701): Flat topped earthen mound with remains of fosse and rectangular bailey. Fragments of font (1572) outside nearby RC church.
- ME 044-034005 Tomb: To the south of the church tower within the old graveyard is the effigy of a knight with his head upon a tasselled cushion, with remains of foliate decoration in relief upon the edge of the slab at this position.
- ME044-034015 Cultivation Ridges: No details available.
- ME 044-034016 Excavation: No description available.
- ME044-034014 Excavation: No description available.
- ME044-034013 Excavation: No description available.
- ME044-034012 Excavation: No description available.
- ME044-034009 Excavation: No description available.

8.5.2. National Inventory of Architectural Heritage

Desktop research identified a number of NIAH records along the extents of the proposed scheme. These records consist of the following:

- Reg. No. 14336012 House (MH044-302): Detached three-bay two-storey Tudor style house, built c.1890, with gabled breakfront bay to north-west. Pitched slate roof with rendered chimneystacks.
- Reg. No. 14336014 House (MH044-309): Detached five-bay single-storey house, built c.1800, with gabled central porch.
- Reg. No. 14336009 Shrine/oratory/grotto (MH044-306): Freestanding Marian grotto, built c.1955. Comprising of niche with a statue of the Blessed Virgin Mary with canopy above, set against mosaic screen wall, set on mosaic platform and steps, bounded by wrought-iron railings.
- Reg. No. 14336006 Church/chapel (MH044-305): Detached church, commenced c.1820, remodelled and rebuilt c.1868 and c.1874. Comprising five-bay side elevations to the nave, with gabled entrance front c.1868 to the east, single-bay chancel to the west and vestry to the south, c.1874.

- Reg. No. 14336007 Parochial House (MH044-303): Detached three-bay two-storey parochial house, built c.1869.. Square-headed and segmental-arched window openings with timber sash windows and decorative rendered surrounds.
- Reg. No. 14336008 Parochial House (MH044-304): Detached six-bay two-storey outbuilding, built c.1870. Hipped slate roof. Squared stone walls. Timber sash windows with yellow brick dressings and granite sills. Two-bay single-storey outbuilding to south.
- Reg. No. 14336003 Water Pump (MH044-308): Cast-iron water pump, c.1870, withfoundry mark, banded shaft, fluted neck, cap and spout, and curved pumping handle.
- Reg. No. 14336002 House (MH044-310): Detached seven-bay two-storey former house, built c.1780. Now in use as a nursing home.
- Reg. No. 14336001 House: Detached three-bay two-storey house, built c.1800. Pair of cast-iron gates to site.
- Reg. No. 14336013 House (MH044-301): Detached three-bay two-storey house, built c.1900, with flat-roofed central porch. Segmental-arched window openings with granite sills.
- Reg. No. 14336011 Church/Chapel (MH044-307): Detached square-profile three-stage castellated and pinnacled Church of Ireland church tower, built c.1817, with the ruins of the church walls to the east. Graveyard to site. Dressed stone gate piers with pair of wrought-iron gates set in rubble stone wall.

8.5.3. Ratoath Record of Protected Structures

Chapter 5 Built and Natural Heritage of the Ratoath LAP has been reviewed in order to identify any Records of Protected Structures (RPS) and any recorded Monuments (RM) which may be impacted by the proposed scheme. This review has highlighted a total of ten RPS's and four RM's proximate to the proposed scheme. However, it is noted that all of these are already identified from the review of the online Historic Environment Viewer.

8.5.4. Archaeological Report

An Archaeological Assessment Report was undertaken in November 2018 of the proposed scheme. The report notes the following general impacts. Many locations in the project are within the Ratoath Historic Town ME044-034 archaeological Zone of Notification and as such will require Notification to the National Monuments Service at least two months in advance of any works so that they can give an opinion on any required or proposed archaeological response. In general, the proposed works will be limited to the present street / footpath surfaces and landscaping so there is only a small potential for uncovering archaeological deposits, features or stray finds. However, if there is associated drainage, cable ducting and digging out of soft spots, the works may descend into archaeological levels more connected with medieval Ratoath. Should such works occur, the results are likely to be more connected with old street surfaces, market areas and their previous drainage arrangements than buildings / settlements or graveyards. The two Bridges, Bridge 2 and Bridge 3 should be treated sympathetically regarding any upgrading for use as a cycleway/formal footpath and the Corbellis plaque on Bridge 2 should be retained and cleaned.

In terms of mitigation, the report notes that the construction works should be subject to a programme of archaeological monitoring and metal detecting of spoil. These works should be followed by a full archaeological report submitted to the National Monuments Service.

For further details please refer to Archaeological Assessment Report accompanying this application contained in Appendix D.

8.6. Noise and Air Quality

There are no negative impacts predicted in terms of noise levels and air quality. Improving pedestrian and cyclist provision creates the potential to reduce noise levels and improve air quality due to an increased level of uptake in these more sustainable modes of transport and a potential reduction in car travel

8.7. Flood Risk

The proposed Part 8 scheme includes for the construction of a Pedestrian and Cycle scheme in Ratoath, part of which uses existing public / private roads and footpaths and part of which will be constructed through the riverside walk area of the town adjacent the Broadmeadow River.

With reference to the DOEHLG / OPW publication 'The Planning System and Flood Risk Management, Guidelines for Planning Authorities' sections of the scheme proposed along existing public / private road is deemed to be local transport infrastructure and is thus classified as less vulnerable development. Sections of the scheme which are proposed adjacent to the Broadmedaow River are deemed amenity open space / recreation and thus classified as water compatible development).

With reference to the OPW CFRAM flood mapping and Meath County Council map info mapping for the relevant area, parts of the development close to the Riverside walk are situated in Flood Zone A, where the probability of flooding is greater than 1% from fluvial flooding. As such these sections are at high risk of flooding. Areas on existing roads / footpaths are within Flood Zones B, where the probability of flooding is between .01% and 1% from fluvial flooding.

The 'Planning System and Flood Risk Management, Guidelines for Planning Authorities' state that proposed development such as the proposed Part 8 scheme are appropriate within these locations.

Whilst, the proposed Part 8 scheme is compatible at these locations, given that it is expected that there will be flooding on some parts of the proposed scheme particularly adjacent to the Broadmeadow River, the following measures should be implemented.

- Path to be constructed with a sealed finish to protect from erosion and scouring caused by flood waters and to allow for efficient cleaning of silt post flood event;
- Path to be constructed on a low causeway of 100mm above surrounding surface with appropriate crossfall and longitudinal fall to ensure paths emerges dry post flood event;
- Warning signs to be installed at all entry points to greenway to ensure public awareness to the potential of a flooded path. Repeat signs to also be installed along the route.
- Edge of path directly adjacent river bank to be delineated with appropriately spaced marker posts to reinforce spatial awareness of potential deep waters of adjacent river in event of path being significantly flooded.

9. Submissions

Submissions with respect to the proposed development may be made in writing to:

Senior Executive Officer,
Strategic Transport Unit,
Meath County Council,
Buvinda House,
Dublin Road,
Navan,
Co. Meath

On or before 12.00 noon on XX the XX of XX 2020

Submissions should be headed: **Ratoath Pedestrian and Cycle Scheme**

All comments, including names and addresses of those making submissions in regard to this scheme will form part of the statutorily required report to be presented to the monthly meeting of Ratoath Municipal District. Accordingly, these details will be included in the minutes of that meeting and may appear in the public domain

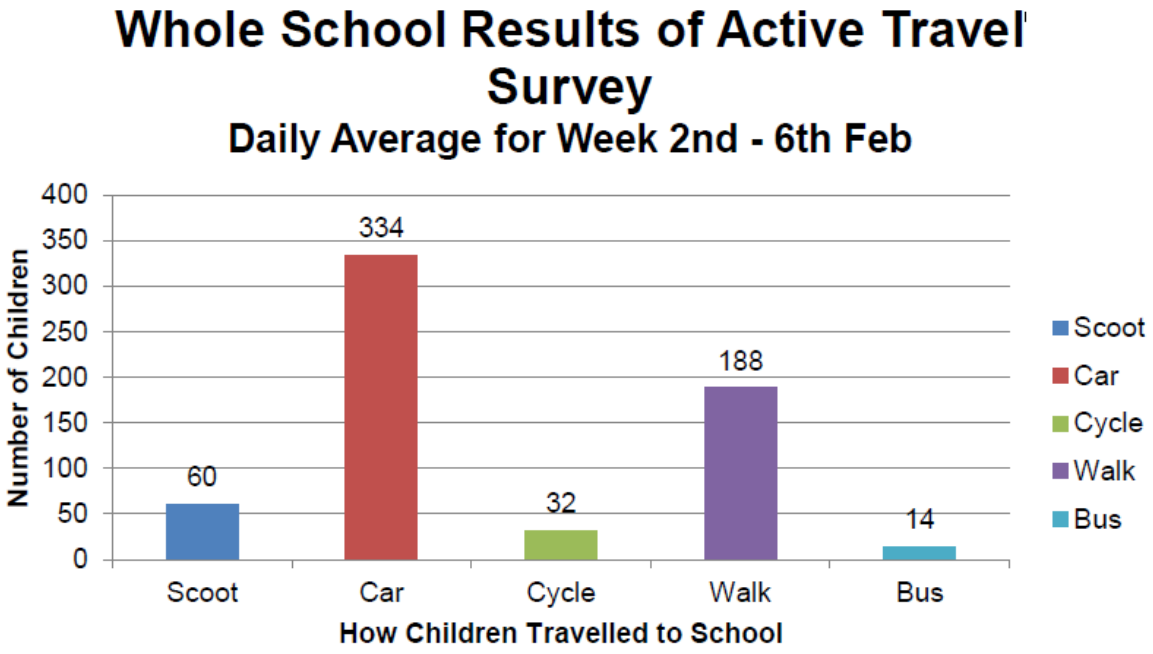
Appendices

Appendix A. Non-Statutory Public Submissions Summary

ID	Name	Comments
001	Maria Lucia Macari (Owner of Macari's Take Away) marialuciamacari@hotmail.com	• There are 5 parking spaces outside of the take away which are in the ownership of Macari's Take Away which is also a family home. These parking spaces previously formed the front garden of a cottage which stood where the take away is today. • During construction of the take away in 2000 a provision was made in the planning process for these spaces. • Bus Eireann buses have been stopping outside the take away for some time preventing the owners, customers and deliveries from easily gaining access to the premises. • Any bus lane (stop/hub) should be a full length of a bus away from the premises to prevent the frontal aspect of the business being blocked and not to discourage any patron from entering the business. • Cycle lanes outside the premises would also cause access problems.
002	Chris and Monica Maher (Fairyhouse Rd)	• The high volume of traffic on the Fairyhouse Road make it very dangerous for cyclists. • Children who cycle to the Primary and Secondary Schools are forced to use the footpaths where they are available which itself creates a danger for pedestrians. • It is suggested that the route starts at the junction of Fairyhouse Rd /Glascarn Lane and continue towards the village, turning right onto the Inner Ring Rd, roght again at the junction of Kilbride Rd/Glascarn and continue along Glascarn Lane to Fairyhouse Rd. • Wide ditches on Glascarn Lane present the opportunity to create cycle provisions. • A roundabout at the junction of Fairyhouse Rd and Glascarn Lane should be considered to reduce the speed of traffic on the approach to the school and the village.
003	Kevin Tonks (Mill Tree Park)	• There should be no impact to the existing green area that faces the houses of the residents of The Avenue • An impact assessment to the natural environment and trees should be undertaken • There should be no impact to the existing allocated parking opposite the houses of The Avenue • A traffic assessment of The Avenue and Meadow Bank hill road should be undertaken. The village is already impacted with the volumes of traffic queued to get up The Avenue.

ID	Name	Comments
		• An assessment of the impact of placing a cycle lane directly outside the houses of the residents on The Avenue should be undertaken • The long term plan for phase 2 of Mill Tree Park should be taken in account. • A cycle and pedestrian access to the school should be created from The Old Mill Estate, the Fairyhouse Rd and Glascairn Lane.
004	Sue Murray	• There are no official bus stops on the R125 from Ratoath to Ashbourne, buses currently stop on request along the road. The road would benefit from a bus stop/shelter in the vicinity of Baltrasna opposite Harlockstown Lane as several people get on at the same place between 7:20 – 7:40. There is a safety concern with the current arrangement, especially in winter.
005	Triona Keating Meath Co. Co. (On behalf of Ratoath MD meetings)	• Provide an update on the Part VIII for the X junction in Ratoath.
006	Cllr. Damien O'Reilly	• Where is the proposed bus hub for Ratoath?
007	Bram and Anne Jansen Anne.jansen-willems@outlook.com bramjansen@gmx.net	• People are scared to cycle on the road and thus cycle on the footpath instead. The suggested solution is to encourage more cyclists to use the road, making motorists more aware of cyclists. • Make it clear that cyclists are welcome on the road. Motorists in Ireland (outside of the cities) are not familiar with sharing the road with cyclists. The suggested solution is to introduce advisory cycle lanes with centre lines removed (similar to arrangement on page 58 of the National Cycle Manual). • Where roundabouts are present within the scheme cycle lanes should be provided on approach and circulating around the roundabout ensuring cyclists have priority to cars entering and exiting. • Cycle provisions should be provided heading west from the secondary school along The Avenue road and Meadowbank Hill. • Cycle provision should also be provided along the road in front of Woodlands. • The entire Sli na Slainte route for the town should be included in the design so people from all major estates can cycle to school on a continuous cycle path.

ID	Name	Comments
		• Adding an extra stretch to and from the entrance of Glascairn Lane should also be included. • Remove the cycle paths that are unusable. The paths end without warning and are dangerous. There is no access provided to junctions in the form of a ramp, this gives the motorist priority and does not give drivers any warning that cyclists are crossing the junction. All of these issues prevent cyclists from travelling at a normal speed. ○ The submission includes photos of the cycle provisions near the roundabout on the R125 where the issues listed in the above point can be seen. • Encourage motorists to leave their cars at home and use their bicycle for short distance by providing incentive: • Remove some of the car parking in front of the Corballis Shopping Centre and provide cycle parking. • Provide a cycle lane to the sports campus and provide bicycle parking also. • Prioritise cycling, providing continuous and safe cycle lanes to and from schools and main estates. • Encourage children to cycle in the hope the habit continues through their later years.
008	Sean Ryan (Son of owner of Homeworld, Main Street Ratoath)	• Request more information regarding the route, in particular the plans for the main street. Wish to be kept up to date with planned development.
009	Gillian Toole (Elected Member Meath Co. Co.)	• Note the local desire to Join up existing cycle lanes and create new lanes, narrow funnel effect approaching roundabouts, especially on the Fairyhouse road/ Tesco/ Sommerville area- pedestrians to and from school. • Attached is the St. Paul's Active Travel Survey results, it gives an indication of current travel trends for the primary school.


Whole School Results of Active Travel Survey
Daily Average for Week 2nd - 6th Feb
Number of Children
400
350
300
250
200
150
100
50
0
334
188
60
32
14
Scoot
Car
Cycle
Walk
Bus
How Children Travelled to School
Scoot
Car
Cycle
Walk
Bus

Appendix B. Bat Report

A bat assessment of the proposed cycleway in Ratoath, Co Meath

To provide ecological data for Part 8 Planning to develop a greenway adjacent the Broadmeadow River, Ratoath, Co. Meath

By Donna Mullen M.P.P.M and Brian Keeley BSc Hons in Zool

Maio, Tierworker, Kells Co Meath

July 12th, 2018

www.wildlifesurveys.net

Summary

Bats were not found roosting in the trees on this site. However, bats were found feeding and commuting along the river. Natterers bats were found feeding in the woodland section along the river. As Natterer's bats are rarely recorded in Meath and are light intolerant, it is important to keep light pollution to a minimum.

Young bats were seen taking their first flights along the river, feeding off the insects in the grasses. The river and surrounding vegetation provide a good feeding area for bats. It is important to retain long grasses and vegetation, particularly between the new cycleway and the river.

Bat species found feeding and commuting on the site and along the river

Common pipistrelle	*Pipistrellus pipistrellus*
Soprano pipistrelle –	*Pipistrellus pygmaeus*
Natterer's bat –	*Myotis nattereri*
Leisler's bat –	*Nyctalus leisleri*

Recommendations

(1) Avoiding light pollution- Light spillage must not occur on the river, and light pollution must be avoided. This can be achieved by using low level bollard lights, with hoods and cowls fitted to prevent light entering the river area and sky. It is particularly important that light pollution is kept to a minimum in the wooded section of the cycleway.

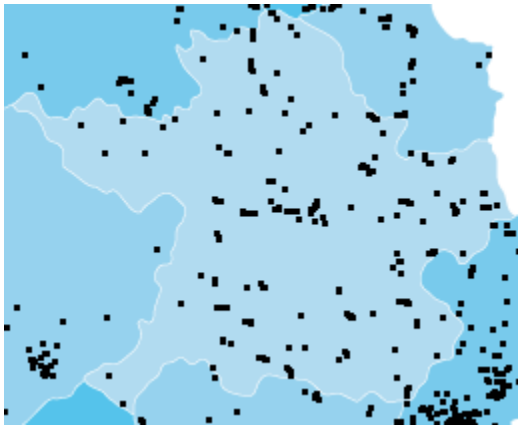
(2) Retain trees where possible. Common and soprano pipistrelles were found feeding along the canopy of the trees on the site. These trees provide shelter and cracks and crevices to roost in.

(3) Bat boxes- Four bat boxes should be erected along the route of the cycleway – Two 2FN Schwegler bat boxes and two NHBS Kent boxes. These should be placed on trees, at least 4m high, with a clear drop below (no underlying branches – as bats need to drop to start their flight). These can be purchased from www.nhbs.com.

(4) Management of vegetation- to prevent loss of feeding, grasses and vegetation adjacent to the cycleway should not be mown during the summer months. Long grass and native plants allow insect diversity, which in turn provides food for bats. In particular, where the cycleway runs by the river, the area between the river and the cycleway should not be sprayed or cut. If required, a nature panel can be designed (email info@wildlifesurveys.net) to explain the 'untidy' areas left for insect diversity and young bats.

Desktop Survey

Distribution of common pipistrelle in Meath



Distribution of Leisler's bat in Meath

Distribution of soprano pipistrelle in Meath

Distribution of Natterer's bat in Meath

Thanks to Bat Conservation Ireland for their data. All data from this report will be placed on their database.

Habitat; Improved and unimproved grassland, semi -mature trees and woodland, hedges, river and treelines.

Temperature -16^{o}C dropping to 14^{o}C

Sunset - 21.50 hours

Methodology

Bat Survey - Equipment

LED Lamp, Petzl Tikka Head torch

Echometer 3 bat detector x 2

Two surveyors with EM3 time expansion detectors and kaleidoscope sound analysis software with GPS – hand held

Survey and recommendations;
The survey took place on July 12th, commencing at 21.30 hours. Most trees are immature and unsuitable as roosts, however there are occasional trees with deadwood, cracks and crevices which would be suitable for bat usage.

This tree has crevices suitable for bat usage.

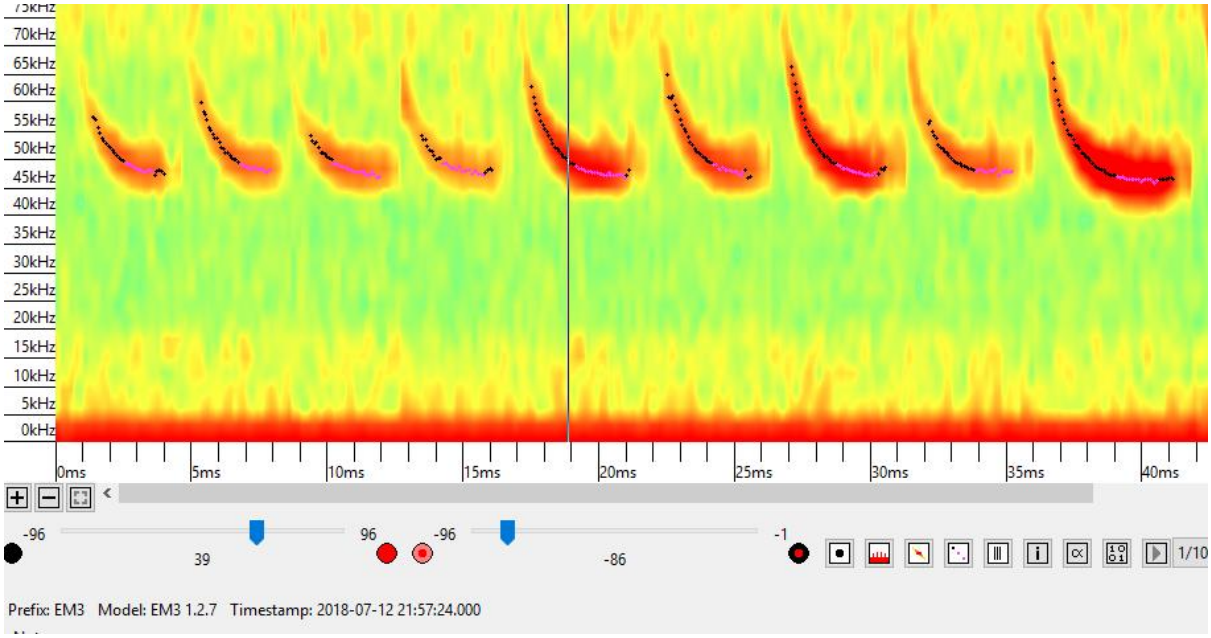
There is considerable light pollution, particularly along the western entrance at Meadowbank.

Light pollution with spillage into the sky at the western entrance

Some areas beside the river are intensively sprayed and cut and planted with laurel – which is toxic to both people and wildlife.

This area near the Jamestown estate is very poor for wildlife.

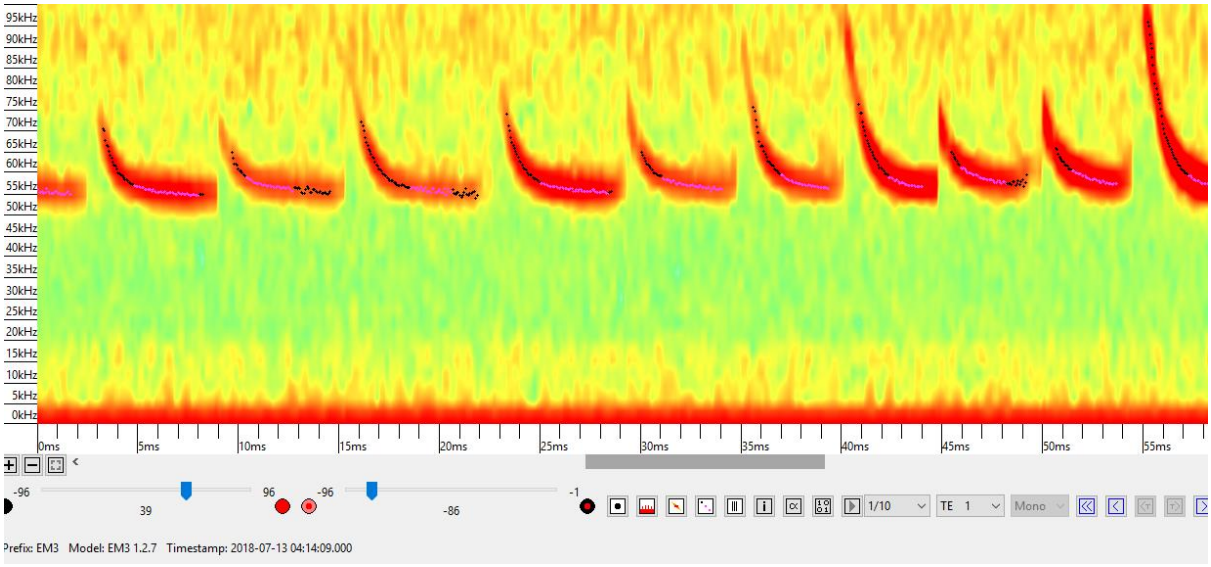
A common pipistrelle was seen in the woodland at 22.06.A second common pipistrelle was recorded at the 1st (eastern) bridge.



Common pipistrelle recorded at the eastern bridge

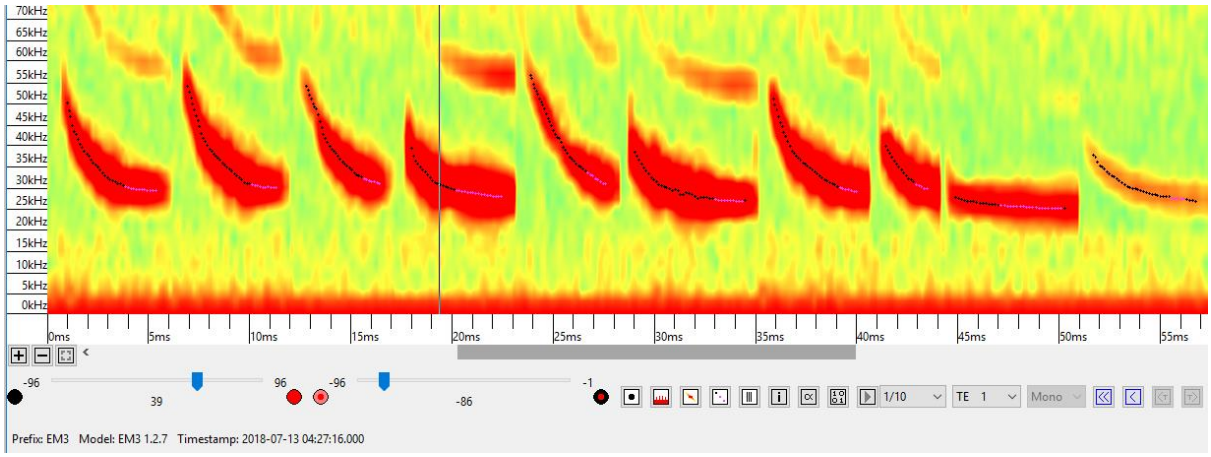
Soprano pipistrelles fed along the river at the forest area at 22.13. At 22.45, a natterer's bat flew along the wood behind Coill Beag. This bat flew in this area for several minutes, keeping to the dark areas. A common pipistrelle was seen on the entrance (west) track at 22.58

At 3.51 a common pipistrelle was seen at the eastern bridge. A Natterer's bat was seen flying north west through the woodland from 4.17 to 4.20. A stream of 5 common pipistrelles were seen passing along the laurel hedge at Jamestown Park and turning into the estate. It is likely that one of the houses in the estate is a maternity roost.

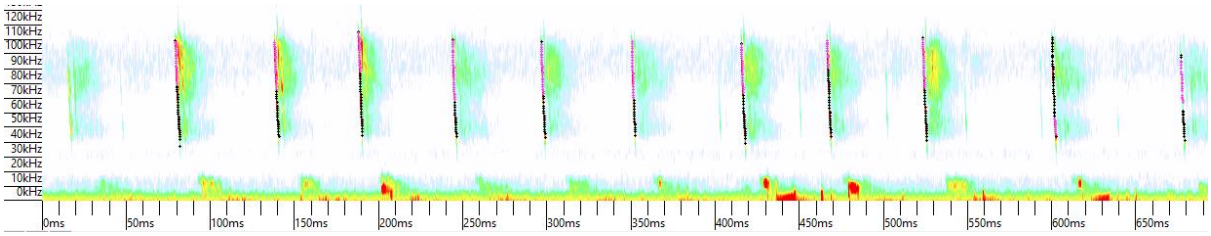


A soprano pipistrelle was recorded at 4.14 by the river

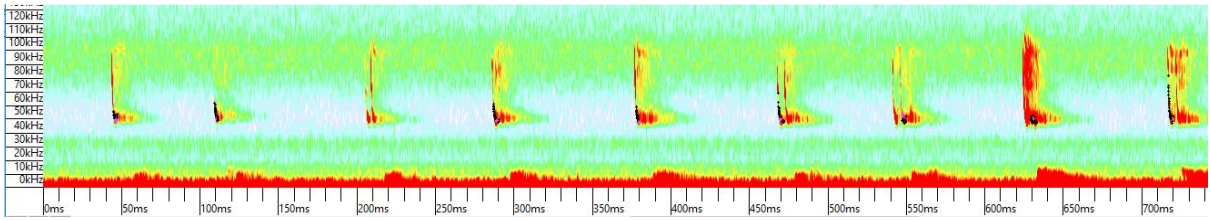
A Leisler's bat was seen feeding around a single tree in the field behind Ratoath Manor at 4.36.



Leisler's bat feeding at tree



Natterer's bat at 0414 hours along the darkest section of the river



A common pipistrelle bat at 0430 hours along the busiest section of the river

Both common and soprano pipistrelles fed under tree cover all along the river at dawn. Young bats were taking their first flights, and groups of two and three bats were seen flying together. This is clearly an important feeding area for bats taking their first flights.

This is the area where young bats were taking their first flights.

Note the tall vegetation.

Recommendations

This area is important for young common and soprano pipistrelles, and the wooded area is frequented by a Natterer's bat, which is uncommon in Meath.

(1) Avoiding light pollution- Light spillage must not occur on the river, and light pollution must be avoided. This can be achieved by using low level bollard lights, with hoods and cowls fitted to prevent light entering the river area. It is particularly important that light pollution is kept to a minimum in the wooded section of the cycleway, as this is where the Natterer's bat (a light intolerant species) was found

(2) Retain trees where possible. Common and soprano pipistrelles were found feeding along the canopy of the trees on the site. These trees provide food, shelter and cracks and crevices to roost in.

(3) Bat boxes- 4 bat boxes should be placed along the cycleway – Two 2FN Schwegler bat boxes and 2 NHBS Kent boxes. These should be placed on trees, at least 4m high, with a clear drop below (no underlying branches – as bats need to drop to start their flight). These can be purchased from online companies principally based in the UK such as www.nhbs.com.

This tree would be suitable to hang a bat box from, as it has no underlying branches

(4) Management of vegetation- to prevent loss of feeding, grasses and vegetation adjacent to the cycleway should not be mown during the summer months. Long grass and native plants allow insect diversity, which in turn provides food for bats. Whenever the cycleway runs by the river, the area between the river and the cycleway should not be sprayed or cut. If required, a nature panel can be designed (info@wildlifesurveys.net) to explain the 'untidy' areas left for insect diversity and young bats.

Bat Biology

Female bats gather in groups known as maternity roosts in summer to have their young. They generally have one baby each year, so are slow to reproduce, and disturbance of a maternity roost can be catastrophic.

In winter bats move to old stonework, trees and caves to hibernate. They are especially vulnerable here as they are slow to awaken, and if tree felling is carried out, they can easily be killed.

Legislation;

Bats are protected under the 1996 Wildlife Act, the 2000 Wildlife (Amendment) Act, Stat Ist 94 of 1997, Stat Ist 378 of 2005, The Habitats Directive, The Bonn and Bern Convention, and the Euro bats agreement.

The European Community (Natural Habitats) Regulations S.I. No 94 of 1997 states:

23(1) The minister shall take the requisite measures to establish a system of strict protection for the fauna consisting of the animal species set out in Part 1 of the First Schedule prohibiting –

a) All forms of deliberate capture or killing of specimens of those species in the wild.

1. The deterioration or destruction of breeding sites or resting places of those species.

The EU Habitats Directive

Article 12(1) of the 'Council Directive 92/43/EEC on the conservation of natural habitats and wild fauna and flora (Habitats Directive) states:

"Member States shall take the requisite measures to establish a system of strict protection for the animal species listed in Annex IV(a) and their natural range, prohibiting:

a) all forms of deliberate capture or killing of specimens of these species in the wild;

b) deliberate disturbance of these species, particularly during the period of breeding, rearing, hibernation and migration;

c) deliberate destruction or taking of eggs from the wild;

d. deterioration or destruction of breeding sites or resting places."

The EU Habitats Directive (92/43/EEC) lists all Irish bat species in Annex IV and one Irish species, the lesser horseshoe bat (Rhinolophus hipposideros), in Annex II. Annex II includes animal and plant species of community interest whose conservation requires the designation of Special Areas of Conservation (SACs) because they are endangered, rare, vulnerable or endemic. Annex IV includes various species that require strict protection. Article 11 of the Habitats Directive requires member states to monitor all species listed in the Habitats Directive and Article 17 requires States to report to the EU on the findings of monitoring schemes.

The Bern and Bonn Conventions

Ireland is also a signatory to a number of conservation agreements pertaining to bats such as the Bern and Bonn Conventions.

The European Bats Agreement (EUROBATS) is an agreement under the Bonn Convention. Ireland and the UK are two of the 31 signatories. The Agreement has an Action Plan with priorities for implementation. Devising strategies for monitoring of populations of selected bat species in Europe is among the resolutions of EUROBATS.

1.3.1 The Bern Convention

Article 6 of the “Convention on the Conservation of European Wildlife and Natural Habitats’ (Bern Convention) reads:

“Each Contracting Party shall take appropriate and necessary legislative and administrative measures to ensure the special protection of the wild fauna species specified in Appendix II. The following will in particular be prohibited for these species:

a) all forms of deliberate capture and keeping and deliberate killing;

b) the deliberate damage to or destruction of breeding or resting sites;

c) the deliberate disturbance of wild fauna, particularly during the period of breeding, rearing and hibernation, insofar as disturbance would be significant in relation to the objectives of this Convention; ...

Appendix II lists strictly protected fauna species and this list includes “Microchiroptera, all species except Pipistrellus pipistrelles”.

The EUROBATS Agreement

The ‘Agreement on the Conservation of Populations of European Bats’ (EUROBATS) was negotiated under the ‘Convention for the Conservation of Migratory Wild Species’ (Bonn Convention) and came into force in January 1994. The legal protection of bats and their habitats are given in Article III as fundamental obligations:

“1. Each Party shall prohibit the deliberate capture, keeping or killing of bats except under permit from its competent authority

2. Each Party shall identify those sites within its own area of jurisdiction which are important for the conservation status, including for the shelter and protection, of bats. It shall, taking into account as necessary economic and social considerations, protect such sites from damage or disturbance. In addition, each Party shall endeavour to identify and protect important feeding areas for bats from damage or disturbance.”

The Agreement covers all European bat species.

Contact Details:

The phone number for Bat Conservation Ireland is 086 4049468. Their website is www.batconservationireland.org. Wildlife Surveys can be contacted at 087 7454233 or 087 6753201. The following email addresses will ensure a response: info@wildlifesurveys.net

donnamullen@wildlifesurveys.net

briankeeley@wildlifesurveys.net and web site is www.wildlifesurveys.net

Appendix I

Bat distribution relative to the proposed cycleway July 2018

Appendix II

EM3 detector sound analysis data – hand held

Bat activity along the Broadmeadow River July 12th and 13th 2018

Legend

Yellow paddle	Leisler's bat	*Green paddle*	Common pipistrelle	*Blue paddle*	Soprano pipistrelle
"N" paddle	Natterer's bat	*"2" paddle*	Common and soprano pipistrelles in same location		
Red rectangle	Area most used by Natterer's bat to feed				

Data from the 1st EM3 of the survey

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4	Data	EM3___20180712_220257.wav	EM3___0_20180712_220257_000	PIPI	34	31	0.481013	PIPI
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9	Data	EM3___20180713_035901.wav	EM3___0_20180713_035901_000	PIPI	34	32	0.527241	PIPI
10	Data	EM3___20180713_035931.wav	EM3___0_20180713_035931_000	PIPI	96	83	0.411550	PIPI
11	Data	EM3___20180713_040102.wav	EM3___0_20180713_040102_000	PIPI	15	14	0.334730	PIPI
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45	Data	EM3___20180713_043652.wav	EM3___0_20180713_043652_000	PIPI	185	181	0.429090	PIPI
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Data from the second EM3 in the survey

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54		_20180712_221042.wav	_0_20180712_221042_000	PIPI	76	54	0.322813	PIPI
55		_20180712_221042.wav	_0_20180712_221112_000	PIPI	4	4	0.690650	PIPI
56		_20180712_221115.wav	_0_20180712_221115_000	PIPI	108	62	0.215874	PIPI
57		_20180712_221115.wav	_0_20180712_221145_000	PIPY	30	23	0.203149	PIPI
58		_20180712_221149.wav	_0_20180712_221149_000	PIPI	50	38	0.412973	PIPI
59		_20180712_221222.wav	_0_20180712_221222_000	PIPI	57	43	0.335739	PIPI
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61		_20180712_221255.wav	_0_20180712_221255_000	PIPI	175	107	0.250225	PIPI
62		_20180712_221255.wav	_0_20180712_221325_000	PIPI	46	18	0.099275	PIPI PIPY
63		_20180712_221329.wav	_0_20180712_221329_000	PIPI	57	52	0.519110	PIPI PIPY
64		_20180712_221329.wav	_0_20180712_221359_000	PIPI	5	5	0.687477	PIPI
65		_20180712_221402.wav	_0_20180712_221402_000	PIPI	16	15	0.540805	PIPI
66		_20180712_221402.wav	_0_20180712_221432_000	PIPI	21	15	0.279218	PIPI
67		_20180712_221435.wav	_0_20180712_221435_000	PIPI	6	6	0.609563	PIPI
68		_20180712_221542.wav	_0_20180712_221542_000	PIPI	3	3	0.466709	PIPI
69		_20180712_221615.wav	_0_20180712_221615_000	PIPI	80	52	0.287318	PIPI
70		_20180712_221615.wav	_0_20180712_221645_000	PIPI	17	17	0.692315	PIPI
71		_20180712_221648.wav	_0_20180712_221648_000	PIPI	161	82	0.194493	PIPI
72		_20180712_221648.wav	_0_20180712_221718_000	PIPI	9	8	0.500689	PIPI
73		_20180712_221721.wav	_0_20180712_221721_000	PIPI	37	31	0.453559	PIPI
74		_20180712_221828.wav	_0_20180712_221828_000	PIPI	17	14	0.433824	PIPI
75		_20180712_221828.wav	_0_20180712_221858_000	PIPI	15	7	0.120365	PIPI
76		_20180712_224356.wav	_0_20180712_224356_000	MYBR	23	21	0.267920	MYNA
77		_20180712_225749.wav	_0_20180712_225749_000	PIPI	18	18	0.398252	PIPI
78		_20180712_225749.wav	_0_20180712_225819_000	PIPI	3	3	0.290811	PIPI

	FOLDER	IN FILE	OUT FILE	AUTO ID	PULSES	MATCHING	MARGIN	MANUAL ID
79		_20180713_040537.wav	_0_20180713_040537_000	PIPI	52	47	0.519349	PIPI
80		_20180713_040610.wav	_0_20180713_040610_000	PIPI	76	42	0.231645	PIPI
81		_20180713_040610.wav	_0_20180713_040640_000	PIPI	6	5	0.448864	PIPI
82		_20180713_040644.wav	_0_20180713_040644_000	PIPI	64	52	0.421020	PIPI
83		_20180713_040644.wav	_0_20180713_040714_000	PIPI	2	2	0.441822	PIPI
84		_20180713_040717.wav	_0_20180713_040717_000	PIPI	117	56	0.169801	PIPI
85		_20180713_040717.wav	_0_20180713_040747_000	PIPI	11	10	0.535107	PIPI
86		_20180713_040751.wav	_0_20180713_040751_000	PIPI	27	18	0.309315	PIPI
87		_20180713_040751.wav	_0_20180713_040821_000	PIPY	5	4	0.218133	PIP
88		_20180713_040857.wav	_0_20180713_040857_000	PIPI	27	27	0.620252	PIPI
89		_20180713_041143.wav	_0_20180713_041143_000	PIPY	26	26	0.281102	PIPY
90		_20180713_041356.wav	_0_20180713_041356_000	MYBR	26	15	0.138854	MYNA
91		_20180713_041504.wav	_0_20180713_041504_000	MYBR	10	8	0.164877	MYNA
92		_20180713_041538.wav	_0_20180713_041538_000	MYBR	6	5	0.298252	MYNA
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103		_20180713_042931.wav	_0_20180713_043001_000	PIPI	11	4	0.055199	
104		_20180713_043004.wav	_0_20180713_043004_000	PIPI	13	6	0.132646	PIP
105		_20180713_043037.wav	_0_20180713_043037_000	MYBR	48	27	0.106977	MYNA
106		_20180713_043111.wav	_0_20180713_043111_000	PIPY	23	19	0.207038	PIPY
107		_20180713_043144.wav	_0_20180713_043144_000	PIPY	18	15	0.233794	PIPY
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110		_20180713_043644.wav	_0_20180713_043644_000	PIPY	70	70	0.298183	PIPY
111		_20180713_043644.wav	_0_20180713_043714_000	PIPY	29	29	0.353111	PIPY
112		_20180713_043718.wav	_0_20180713_043718_000	PIPY	250	238	0.289726	PIPY
113		_20180713_043718.wav	_0_20180713_043748_000	PIPY	21	21	0.307633	PIPY
114		_20180713_043752.wav	_0_20180713_043752_000	PIPY	247	219	0.260744	PIPY
115		_20180713_043752.wav	_0_20180713_043822_000	PIPY	19	18	0.296040	PIPY
116		_20180713_043825.wav	_0_20180713_043825_000	PIPY	242	230	0.288838	PIPY
117		_20180713_043825.wav	_0_20180713_043855_000	PIPI	6	3	0.165296	PIPI
118		_20180713_043859.wav	_0_20180713_043859_000	PIPI	83	49	0.265267	PIPI PIPY
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120		_20180713_043932.wav	_0_20180713_043932_000	PIPY	389	270	0.165711	PIPI PIPY
121		_20180713_043932.wav	_0_20180713_044002_000	PIPY	40	35	0.264108	PIPI PIPY
122		_20180713_044005.wav	_0_20180713_044005_000	PIPY	398	323	0.220443	PIPI PIPY
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124		_20180713_044038.wav	_0_20180713_044038_000	PIPY	392	314	0.216560	PIPI PIPY
125		_20180713_044038.wav	_0_20180713_044108_000	PIPY	42	27	0.153785	PIPI PIPY
126		_20180713_044112.wav	_0_20180713_044112_000	PIPI	85	55	0.307224	PIPI PIPY
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128		_20180713_044252.wav	_0_20180713_044252_000	PIPI	17	11	0.210222	PIPI
129		_20180713_044432.wav	_0_20180713_044502_000	PIPI	11	5	0.167247	PIPI
130		_20180713_044505.wav	_0_20180713_044505_000	PIPI	21	16	0.427074	PIPI
131		_20180713_044539.wav	_0_20180713_044539_000	PIPI	24	19	0.339059	PIPI
132		_20180713_044612.wav	_0_20180713_044612_000	PIPI	81	39	0.210245	PIPI
133		_20180713_044612.wav	_0_20180713_044642_000	PIPI	20	13	0.290197	PIPI
134		_20180713_044646.wav	_0_20180713_044646_000	PIPY	23	20	0.278857	PIPI PIPY
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136		_20180713_044752.wav	_0_20180713_044752_000	PIPI	32	18	0.189096	PIPI
137		_20180713_044825.wav	_0_20180713_044825_000	PIPI	117	93	0.301332	PIPI
138		_20180713_044825.wav	_0_20180713_044855_000	PIPI	21	15	0.225659	PIPI
139		_20180713_044900.wav	_0_20180713_044900_000	PIPY	243	165	0.160254	PIPI PIPY

Appendix C. Arborist Report

LAND PLANNING & DESIGN

CUNNANE STRATTON REYNOLDS

TREE SURVEY

Pedestrian / Cycle Scheme,
Ratoath,
Co Meath.

November 2019

CUNNANE STRATTON REYNOLDS
LAND PLANNING & DESIGN
www.csrlandplan.ie

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2. Description of Existing Trees

3. Arboricultural Impact Assessment

4. Recommendations – AMS

Limitations & References

Appendix 1: Tree Survey Schedule

SUMMARY

This report presents a record of those trees existing within or adjacent to the proposed works areas that may potentially be impacted by a proposed pedestrian cycle scheme development. Trees have been surveyed as individuals or tree groups in accordance with BS 5837 (2012). The site tree survey was undertaken on 6th November 2018 by Cunnane Stratton Reynolds arborist;

Keith Mitchell Diploma Arboriculture (Level 4)
Technician Member Arboricultural Association (UK)
Tree Risk Assessment Qualification (International Society of Arboriculture)
MA(Hons) Landscape Architecture
Member of the Irish Landscape Institute
Chartered Member of the Landscape Institute (UK)
Diploma EIA Management

This survey and report are based on the Topographic Survey information contained in drawing;

- Atkins Part 8 General Layout (Sheets 1 & 2)

A full survey record is presented in Appendix 1, together with accompanying drawings Tree Survey Dwg No 19277_T_101, Arboricultural Impact Assessment Dwg No 19277_T_102 and Tree Protection Plan Dwg No 19277_T_103. After introducing the terms of reference and the methodology of the survey, the report summarises the survey findings in an overview of the existing tree cover within the site.

A total of sixty-nine individual trees were recorded as part of the survey.

Where assessment takes the form of a Tree Group – trees of greatest arboricultural significance or relevance to proposed scheme within these groups may also be identified. Every effort has been made to access all trees for inspection, however in some instances where site conditions prevent full access, some measurements may be visually estimated.

It is noted that the site contains a number of trees of significant maturity and size - every effort should be made to safely retain these as part of any development proposal. Where this is not possible replacement tree planting nearby is recommended to ensure a future canopy cover in the locality. The proposed development will present an opportunity to implement additional new tree planting, both as part of a general landscape design scheme and also as part of a tree management program aimed at maintaining high quality diverse long-term amenity tree cover, in keeping with the setting and proposed site use.

The report concludes with recommendations for protection measures to ensure the conservation of retention trees during any development.

1. INTRODUCTION

Terms of Reference

Cunnane Stratton Reynolds (CSR) were instructed to conduct a tree survey on behalf of Meath County Council, to assess the impacts and inform the design of a proposed pedestrian and cycle route scheme.

CSR considered those tree and tree groups that might potentially be impacted upon by such a proposed development and produced a subsequent tree survey report presenting our findings, (in accordance with BS 5837:2012), together with recommendations for their best practice management in relation to the proposed development.

This involved a survey of the principal trees / tree groups concerned in accordance with BS 5837 (2012).

Documents supplied to CSR for purposes of conducting a tree survey include:

- Atkins Part 8 General Layout (Sheets 1 & 2)

Site Inspection & Methodology

The site was surveyed on 6th November 2018 by a qualified Arborist. A visual inspection from the ground was performed on all existing trees / tree groups on site. Where access allowed, principal individual trees were examined and reference number tags attached before critical measurements were taken and observations made.

A description was recorded of each tagged tree / group of trees, their species, age class, all relevant measured dimensions (height, stem diameter, crown spread radii and crown clearance height) and an assessment of the tree health / vitality, structural form, life expectancy and quality categorisation. Any recommended remedial works required were outlined. Any hedgerows or significant tree groups within/bounding the site are subject to group description and assessment, in accordance with BS 5837 (2012).

The findings of the survey are recorded and presented in this Tree Survey Report and Tree Schedule (Appendix 1). A Tree Classification and Constraints drawing was produced to inform the master planning process in November 2018. An Arboricultural Impact Assessment and Tree Protection Proposals were considered on final completion of the proposed masterplan in November 2019.

This report is subject to the scope and limitations as given at the end of the report.

Accompanying Drawings

The tree survey report should be read in conjunction with;

- Tree Classification (Dwg No 19277/T/101).
- Arboricultural Impact Assessment (Dwg No 19277/T/102).
- Tree Protection Plan (Dwg No 19277/T/103).

A1 size colour coded drawings which accompany this report, (monochrome drawings should not be relied upon). These drawings are based upon the topographical drawings supplied to CSR.

Site Location

The proposed works area is located along the R125 Dunshaughlin Road and the Woodland Link Road in Ratoath, Co Meath.

2. DESCRIPTION OF EXISTING TREES

2.1 The tree survey area (approximate area highlighted red – Fig 1) is an existing public roadway and footpaths located on the western side of Ratoath.

Figure 1: Low resolution satellite image of approximate tree survey area (courtesy of Google Earth).

A total of sixty-nine individual trees were recorded as part of the survey.

Their location, size and quality category may be reviewed with reference to the accompanying Tree Survey Dwg No 19277/T/101 and the tree survey (Appendix 1).

2.2 Photographic Summary of Trees Surveyed


T71


T72


T73


T74


T75


T76


T77


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T80

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T95

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T97

T98

T99

T100

T101

T102

T103

T104

T105

T106

T107

T108

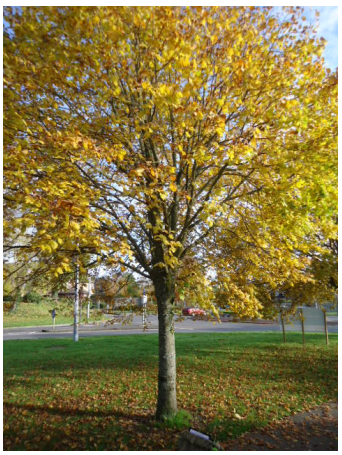
T109

T110

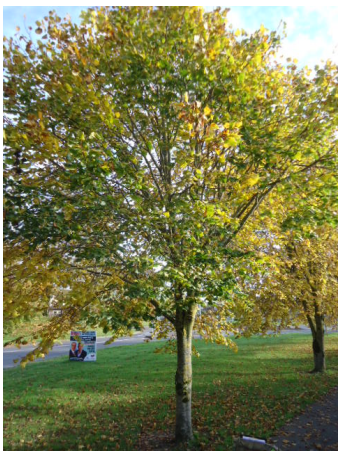
T111

T112

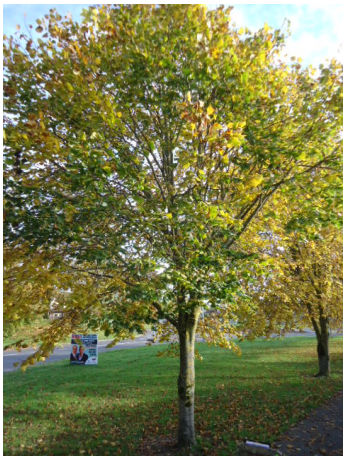
T113



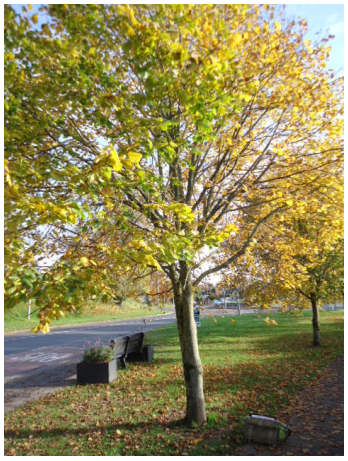
T114



T115



T117

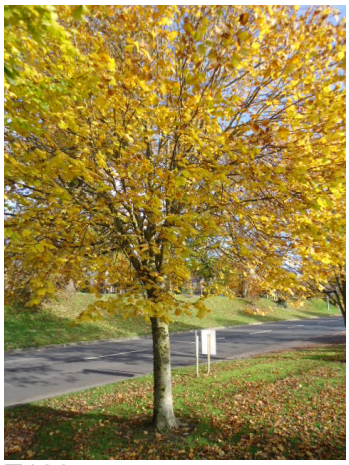


T118

T119

T120

T121

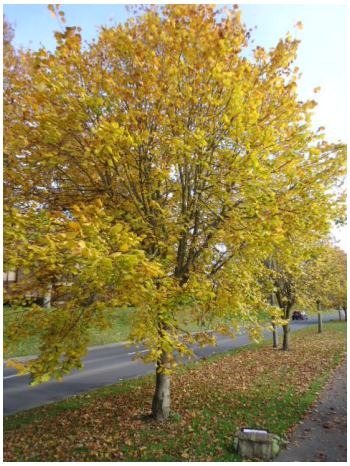


T122

T123

T124

T125



T126

T127

T128

T129

T130

T131

T132

T133

T134

T135

T136

T137

T141/T142

2.3 The majority of trees surveyed constitute an avenue of relatively young street trees, (almost exclusively small leaved Lime trees), situated intermittently along the roadside verge.

These trees are well established, (it is assumed they were planted as semi mature specimens and it appears that they have been in situ for at least 10 years), though still young in terms of their anticipated life cycle.

In addition, there is a small number of trees of considerable maturity and size located at the western end of the survey area.

It is notable that nearly all the street trees appear to have had their leader broken or damaged at an average height of 1.3m from ground level causing them to branch heavily from this area. Consequently, most trees display overcrowding of branches which is causing structural issues such as branch rubbing and significant compression forks to develop. These issues will increasingly compromise the trees structural integrity into the future if not addressed in the short term with selective pruning works. In addition, a large proportion of trees have inclusions around this area, including parts of stakes and tree ties – further compromising their future structural integrity.

However, in the short term most of the trees display good physiological health. (Some of the larger trees at the western end of the site survey area are currently

heavily obscured by ivy growth and it would be beneficial to re-inspect when ivy has been removed).

The existing trees make a positive contribution to the surrounding streetscape setting both through visual impact and ecological habitat value.

Trees often become more valuable as collective groups, than they might be when considered solely as individuals in isolation - a grouping or woodland being generally of significant visual and ecological value. As such it should be noted that the cumulative value of evaluated Tree Groups often reflects an increased catergorised value than might be awarded to the constituent trees if they were assessed in isolation as individuals.

3. ARBORICULTURAL IMPACT ASSESSMENT

3.1 This section discusses the potential impact of the proposed development on the existing tree cover on site and considers the need for mitigation measures, in accordance with BS 5837 (2012), for sustainable development.

The proposed scheme necessitates the use of the existing grass verge area to develop the proposed cycle path. Most trees are proposed for removal in order to facilitate the development, however new tree planting could readily mitigate against the proposed losses, particularly given the relatively young age of the trees.

3.2 Category 'U' trees are recommended for immediate removal, (fell or monolith to safe height), on general management grounds, irrespective of site development – none were identified during this survey.

Direct Loss of Trees

3.3 The following trees are in direct conflict with the proposed development and are therefore proposed for removal;

Tag No	Tree Species	Tree Class	Number of trees
T73 - T127	Tilia cordata (with exception of two Acer psuedoplatanus)	B2	56
T129	Tilia cordata	B1	1
T139	Quercus robur	B1	1
T140	Quercus robur	B1	1

Indirect Impacts

3.4 Cognisance must also be given to indirect impacts - in particular care must be taken to ensure the proposed development and ancillary works do not represent an unacceptable conflict with the calculated 'Root Protection Area' of the existing trees proposed for retention - as illustrated in Dwg No 19277/T/102.

Disturbance of 'Root Protection Area' may just as readily kill or destabilise a tree over time, by means of root damage/severance and or earth compaction/covering preventing essential transfer of water and air to roots.

There are a number of existing trees at the western end of the survey area whose retention has been integrated to the proposed development by means of designing / retaining buffer areas of public open space around them, however careful planning and site management will be required during construction works to ensure these areas are not adversely impacted by construction activities. It is proposed that tree protection fencing be used to achieve this aim - as illustrated in Dwg No 19277/T/103.

Provided proper tree protection measures are adhered to, it is not anticipated that any further trees will require removal due to indirect impacts.

Additional Loss of Trees – Considerations

3.5 It is worth considering, as part of an ongoing management program, the selective thinning of a limited number of young trees within Tree Group 1. Removing those specimens which have bolted, and or are of relatively poor form, will facilitate improved development of other trees within the group which are currently overcrowded and have inadequate space for strong future development.

Most of the lager trees within this group are heavily obscured by ivy, (which should be carefully removed to facilitate full inspection), however they appear to be in good physiological condition as a whole. Given their roadside location it would be prudent to consider a crown cleaning exercise to remove rubbing limbs, future compression forks and also reduce the length of limbs overhanging adjoining carriageway along with any other imbalances in growth.

Summary of Trees to be Removed

3.6 A total of 49 trees are proposed for removal to facilitate the scheme – all of these trees have been classified as B class.

Tag No	Tree Species	Tree Class	Number of trees
T73 - T127	Tilia cordata (with exception of two Acer psuedoplatanus)	B2	56
T129	Tilia cordata	B1	1
T139	Quercus robur	B1	1
T140	Quercus robur	B1	1

Tree Protection

3.7 Adequate protection and so successful retention of those trees to be retained within the land take area, (including those not individually surveyed), will be achieved by rigidly excluding all construction activities from tree root protection areas by fit for purpose barriers/fencing and/or additional ground protection.

3.8 Tree Protection Areas (TPAs) are proposed, as indicated on accompanying Tree Protection Plan (Dwg No 18357_T_103). Protective fence line locations and details for these areas are also indicated on the plan.

Services

3.9 Any services that are planned as part of this project must also avoid designated ‘Root Protection Area’ of tree / tree groups for retention.

4. RECOMMENDATIONS – Arboricultural Method Statement

Recommendations for the specific measures advised regarding management of the trees in relation to this development are detailed within Appendix 1. These recommendations should inform, and be referred to in, the method statements submitted for approval prior to commencement by the responsible building/engineering and landscape contractors whose works (subject to grant of permission) will affect retained trees and the Tree Protection Areas.

1. *Tree Works.*

Subject to the required permissions removal / felling works as specified on Dwg No No19277_T_102, should be performed prior to project commencement, by reputable contractors in accordance with BS 3998:2010 and current best practice. Removal of scrub vegetation and ivy clearance should preferably be performed in winter outside of the bird nesting season. Tree felling should be preceded by a competent assessment as to the presence of any protected wildlife species, where required specialist advice should be sought if necessary.

2. *Protective Fencing.*

Following above permitted, priority tree works, protective fencing (barriers) should be erected in the positions and alignments as indicated on the Tree Protection Plan (Dwg No No19277_T_103). Fencing should be in accordance with BS 5837:2012 unless otherwise agreed with the planning authority. Commencement of development should not be permitted without adequate protective fencing being in place. This fencing, enclosing the minimum tree protection areas indicated, must be installed prior to any plant, vehicle or machinery access on site. Fencing should be signed 'Tree Protection Area – No Construction Access'. Fencing is not to be taken down or re-positioned without written approval of the project Arborist. No excavation, plant or vehicle movement, materials handling or soil storage is to be permitted within the fenced tree protection areas indicated on plan.

3. Boundary Treatments

Landscape works and installation of / work to boundary treatments within the Root Protection Area should be undertaken to a specification and method statement in accordance with BS 5837: 2012 - submitted for approval prior to commencement of works, under the supervision of an Arborist and / or Landscape Architect.

4. Landscape Works

Proposed landscaping works including new planting, shall be performed in accordance with BS 5837:2012. During these works, the ground around retained trees must not compacted by vehicles, nor be mechanically excavated for planting, nor be significantly altered in terms of ground levels.

5. Monitoring & Compliance

A number of potentially critical future works in proximity to retained trees are potentially to be undertaken in association with the development of this greenfield site, these should be done in accordance with approved method statements and under direct supervision by a qualified consultant Arborist. Therefore, during the development, a professionally qualified Arborist is recommended to be retained as required by the principal contractor or developer to monitor and advise on any works

within the RPA of retained trees to ensure successful tree retention and planning compliance.

It is advised that tree protection fencing, any required special engineering and supervision works etc must be included / itemised in the main contractor tender document, including responsibility for the installation, costs and maintenance of tree protection measures throughout all construction phases.

Copies of the Tree Survey and all accompanying drawings, a copy of BS 5837:2012 and NJUG 4 (2007)*'Guidelines for the planning, installation and maintenance of utility apparatus in proximity to trees'* should all be kept available on site by the contractor during development. All works are to be in accordance with these documents.

It is advised that all retained trees be subject to expert re-inspection within 12 months and/or prior to completion of development and public occupancy/access of the site.

Limitations and Scope of this Survey Report

This report covers only those trees individually inspected, (shown on the 'Tree Survey Drawings' and described in the 'Schedule'), reflecting the condition of those trees at the time of inspection. Inspection is limited to visual examination of the subject trees from the ground without; test boring, use of tomographic equipment, dissection, probing, coring, ivy removal or excavation to establish structural integrity.

The trees were not climbed and dimensions are approximate, but considered a reasonable reflection of the trees measurements. A number of trees were visually obscured by heavy ivy growth, which could potentially hide from view existing faults or weaknesses, as such they would benefit from re-inspection upon removal of ivy growth. This survey can only therefore be regarded as a preliminary assessment.

There is no warranty or guarantee, expressed or implied, that problems or deficiencies of the subject trees may not arise in the future. The currency of this survey report and its recommendations is one year.

The accompanying drawings are illustrative and based on the land (topographical) survey supplied; CSR Ltd accept no legal liability or responsibility for any errors in the information contained in the supplied drawings.

CSR Ltd accept no responsibility for the performance of trees subject to pruning or other site works (including construction activities) not performed in strict accordance with recommendations as specified in this report and/or in accordance with BS 3998:2010 and BS 5837:2012

All retained trees mentioned in this report should be subject to expert re-inspection within 12 months and prior to completion of development works and public occupancy of the site.

This report was produced as a part of a planning application for the scheme; the author accepts no responsibility or liability for actions taken by reason of this report by the client or their agents unless subsequent contractual arrangements are agreed. Public disclosure or submission of any part of this report without title, or permission from the author, renders this report invalid and legally inadmissible.

References/Bibliography

BS 5837 (2012). *Trees in Relation to Design, Demolition and Construction - Recommendations*. British Standards Institution. TSO, London.

BS 3998 (2010) *Tree Work - Recommendations*. British Standards Institution. TSO, London.

NJUG 4 (2007) *Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees (Issue 2).* National Joint Utilities Group.

TREE SURVEY KEY

Information in the attached schedule is given under the following headings:

Tree No.

Individual trees have been numbered and tagged on site with corresponding survey tag or treated as a group where appropriate (e.g. Woodlands/hedgerows) and illustrated on accompanying tree survey drawing.

Species

Common & Latin names of species are provided

Height

Overall estimated height given in meters (measured using Truplus 200 Laser Rangefinder).

Stem Diameter

The diameter of the main trunk taken at a height of 1.5m on a single stem tree, or, on each branch of multi-stemmed (MS) trees.

Crown Spread

The largest radius of branch spread is provided in meters for North / East / South and West directions.

Height of lowest branch

The distance between ground level and first significant branch or canopy (and direction of growth) given in meters (m).

Any measurement or dimension that has been estimated (for offsite or otherwise inaccessible trees where accurate data cannot be recovered) is identified by the suffix #.

Life stage

The tree's age is defined as:

Y = Young, in first third of life (tree which has been planted in the last 10 years or is less than 1/3 the expected height of the species in question).

MA = Middle Age, in second third of life (tree, which is between a 1/3 and 2/3's the expected height of the species in question).

M = Mature, in final third of life (tree that has reached the expected height of the species in question, but still increasing in size).

OM = Over mature (tree at the end of its life cycle and the crown is starting to break up and decrease in size).

V = Veteran Tree (exceptionally old tree).

Physiological Condition

The tree's physiological condition is defined as:

Good -Good vitality: normal bud growth, leaf size, crown density and wound closure

Fair - Average to below average vitality: reduced bud growth, smaller leaf size, lower crown density and reduced wound closure

Poor - Low vitality: limited bud growth, small chlorotic leaves, sparse crown, poor wound closure

Dead - No longer living.

Structural Condition

The trees structural condition is defined as:

Good - No major structural defects observed (possibly some minor defects)

Fair - Minor defects present, (such as bark wounds, isolated decay pockets or structure affected due to overcrowding), that could be alleviated by tree surgery/management

Poor - Major structural defects present such as extensive deadwood, decay or defective to the point of being dangerous. (Significant defects are noted e.g. decay, collapsing etc).

Preliminary Management Recommendations & Timescale

Recommendations actions based on limitations of survey – (may include further investigation and or assessment of suspected defects by means and or methods not undertaken / within the remit of this survey).

Estimated Remaining contribution (Years)

Life of the tree is given as;

10 < less than 10 years remaining
10 + in excess of 10 years remaining
20 + in excess of 20 years remaining
40 + in excess of 40 years remaining

Tree Quality Assessment Category

U Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years.

• Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other category U trees (e.g. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning)

• Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline

• Trees infected with pathogens of significance to the health and/or safety of other trees nearby, or very low quality trees suppressing adjacent trees of better quality

(NOTE: Category U trees can have existing or potential conservation value which it might be desirable to preserve).

A High quality

Trees of high quality with an estimated remaining life expectancy of at least 40 years

A1 Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue)

A2 Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features

A3 Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)

B Moderate quality

Those trees of moderate quality with an estimated remaining life expectancy of at least 20 years.

B1 Trees that might be included in category A, but are downgraded because of impaired condition (e.g. presence of significant though remediable defects, including unsympathetic past management and storm damage), such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category A designation.

B2 Trees present in numbers, usually growing as groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality.

B3 Trees with material conservation or other cultural value

C Low quality

Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150 mm.

C1 Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories.

C2 Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value; and/or trees offering low or only temporary/transient landscape benefits.

C3 Trees with no material conservation or other cultural value.

APPENDIX 1

Tag	Species	Height (m)	Crown Spread (m) N/S/E/W	Dia' (mm)@ 1.5m	RPA circle radius (m)	Ht of lowest branch (m) & direction of growth	Life Stage	Estimated remaining contribution (years)	PhysiologIcal Condition	Structural Condition	Preliminary management recommendations	Category of retention + sub-category	Notes
T71-T129	Tilia cordata (+2 Acer pseudoplatanus)	6	2/2/2/2	330	3.96	1m all	Y	40+	Good	Fair	Crown Clean	B2	Compression forks Inclusions Rubbing branches
T128	Acer pseudoplatanus	14	4/4/4/4	540	6.48	2m all	MA	40+	Good	Fair	Remove Ivy Crown Clean	B1	
T130	Quercus robur	13	3/3/3/3	500	6.00	4m all	MA	40+	Good	Fair	Remove Ivy Crown Clean	A1	
T131	Tilia cordata	6	2/2/2/2	290	3.48	2m all	Y	40+	Good	Good		B1	
T132	Acer platanoides	6	2/2/2/2	290	3.48	2m all	Y	40+	Good	Good		B1	
T133	Tilia cordata	6	2/2/2/2	290	3.48	2m all	Y	40+	Good	Good		B1	
T134	Acer platanoides	6	2/2/2/2	290	3.48	2m all	Y	40+	Good	Good		B1	
T135	Tilia cordata	6	2/2/2/2	290	3.48	2m all	Y	40+	Good	Good		B1	
T136	Acer platanoides	6	2/2/2/2	290	3.48	2m all	Y	40+	Good	Good		B1	
T137	Quercus robur	17	5/5/5/5	580	6.96	4m all	MA	40+	Good	Fair	Remove Ivy Crown Clean	A1	
T138	Quercus robur	6	3/3/3/3	310	3.72	2m all	Y	40+	Good	Good		B1	
T139	Quercus robur	5	2/2/2/2	290	3.48	2m all	Y	40+	Good	Good		B1	
T140	Quercus robur	6	3/3/3/3	310	3.72	2m all	Y	40+	Good	Fair		B1	
T141	Acer platanoides	7	2/2/2/2	280	3.36	2m all	Y	40+	Good	Good		B1	
T142	Fagus sylvatica	7	3/3/3/3	220	2.64	2m all	Y	40+	Good	Good		B1	
TG1	Mixed deciduous; Acer psuedoplatanus Fraxinus excelsior Fagus sylvatica Quercus robur	Av' 15		Av' 400	4.80		MA	40+	Good	Fair	Remove Ivy Crown Clean	B2	Consider selective thinning of young bolted specimens and formative pruning of remaining young trees.

PROPOSED MANAGEMENT WORKS TO EXISTING TREE GROUP 1

1. Selective removal of poorly formed younger trees to allow others sufficient space to develop with formative pruning carried out on to those retained.
2. Remove ivy from larger trees (taking care not to damage tree bark) and reinspect to ensure no significant defects have been revealed.
3. Crown clean canopies of most mature trees; reduce limbs overhanging roadway and alleviate rubbing branches.

Tree Pits & Staking

TREE PIT & STAKING (UP TO 10-12CM GIRTH)

1. Biodegradable hessian tie with seperating knot / collar between tree and stake affixed to stake with galvanised nails.
2. 1no. 4" dia x 10ft stake pressure treated driven 1200mm below ground (with biodegradable hessian tie affixed to tree & stake).
3. Pits to be size 1mx1mx1m or 15cm wider than rootball which ever is greater. Remove the full depth of topsoil and set aside for reuse. Scarify sides, break up base of pit to a depth of 200mm and incorporate a soil ameliorant into base. Back fill pit with topsoil mixed with soil ameliorants in 150mm firmed-in layers. All planting to receive a minimum of 25lt water per m2 immediately after planting.
4. 50mm bark mulch in 1m diameter circle to base of trunk.

TREE PIT & STAKING (12-14CM GIRTH)

1. To have a clear stem height of 1800mm.
2. 2no. 75mm diameter stakes pressure treated driven 1300mm below ground 600 above ground with specified biodegradable hessian adjustable tie affixed to tree & stake.
3. Pits to be size 1mx1mx1m or 15cm wider than rootball, which ever is greater. Remove the full depth of topsoil and set aside for reuse. Scarify sides, break up base of pit to a depth of 200mm and incorporate a soil ameliorant into base. All planting to receive a minimum of 18lt water per tree immediately after planting.Backfill pit with top soil mixed with soil ameliorants in 150mm firmed in layers.
4. 50mm bark mulch in 1m diameter circle to base of trunk.

LEGEND

MITIGATION TREE PLANITNG

PLANTING SCHEDULE

Species	Specification	Quantity
Betula pendula	6-8cm girth / 2.5m min height / clearstem / bare-root	26
Quercus petraea	12-14cm girth / 3.5m min' height / clearstem / rootball	26

GENERAL CLEARANCE BEFORE PLANTING AND SPREADING TOPSOIL
1. All rubble, stone over 150mm, general rubbish and builders' debris to be cleared from the proposed planting areas to the depth of the cultivated medium depending if trees, shrubs or grass (see spec for depths) and removed from site to an approved tip prior to any cultivation works.
2. The planting area shall be treated with an approved herbicide 2 weeks before spreading topsoil.

SITE PREPARATION
1. Following herbicide treatment (duration depending on herbicide type) the entire area shall be leveled to a medium grade prior to topsoil being spread.
2. Topsoil to be cultivated so free of grass, pernicious weeds and weed seed, stones larger than 50mm and other debris. Similarly the top 50mm of subsoil for grass areas should be free of grass, pernicious weeds and weed seed, stones larger than 30mm and other debris.
3. Topsoil to be spread in 150mm layers and gently firmed. Subsoil to be spread in 300mm layers and gently firmed.

PLANT MATERIAL
1. All plant material shall be pest and disease free.
2. Topsoil shall be supplied in accordance with BS3882.
3. All plants to be planted at the same depth as previously grown.
4. Sufficient soil must be removed to allow all roots to fully spread. Care must be taken with root systems - with dry, damaged roots being carefully pruned prior to planting.

PLANTING
Time of year for planting: Late November to Mid March.
All planting to be watered thoroughly immediately after planting without damaging or displacing plants or soil.

REV	DATE	AMENDMENT

CUNNANE STRATTON REYNOLDS
LAND PLANNING & DESIGN

GALWAY OFFICE
ARDACONG, BALLYTRASNA, TUAM, CO GALWAY
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EMAIL galwayinfo@csrlandplan.ie
www.csrlandplan.ie

PROJECT: **RATOATH** **CO MEATH.**	DATE:	NOVEMBER 2019
	SCALE:	1:500@A1
DRAWING: **TREE PROTECTION**	DRAWN: CHECKED:	KM KM
	DRAWING NO:	**19277_T_103**

SHEET 801

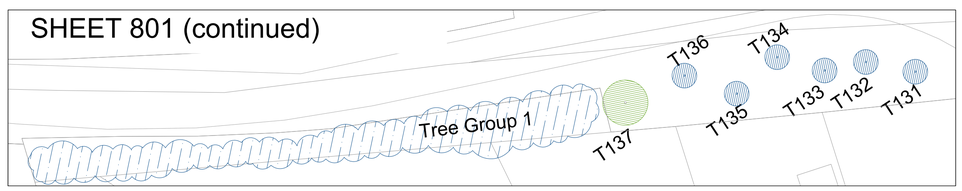
SHEET 802

KEYPLAN

LEGEND

- CLASS A INDIVIDUAL TREE (HIGH QUALITY - RETENTION HIGHLY DESIRABLE)
- CLASS B INDIVIDUAL TREE (MODERATE QUALITY - RETENTION DESIRABLE)
- CLASS C INDIVIDUAL TREE (LOW QUALITY - RETENTION OPTIONAL)
- CLASS U INDIVIDUAL TREE (RECOMMEND REMOVAL)
- TREE GROUPS (COLOUR REPRESENTING GROUP CLASSIFICATION)

SHEET 801 (continued)



NOTE:

THIS DRAWING IS PRODUCED IN COLOUR, MONOCHROME VERSIONS SHALL NOT BE RELIED UPON.

REV	DATE	AMENDMENT

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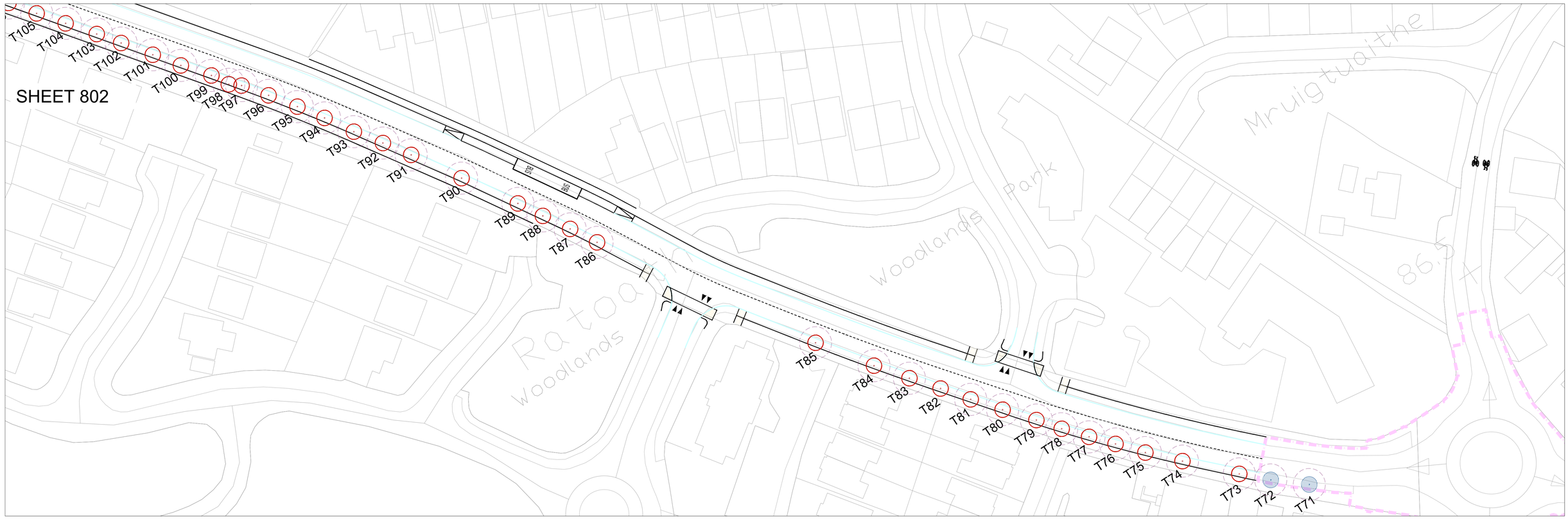
PROJECT: **RATOATH CO MEATH.**	DATE: NOVEMBER 2019
	SCALE: 1:500@A1
DRAWING: **TREE CLASSIFICATION**	DRAWN: KM CHECKED: KM
	DRAWING NO: **19277_T_101**

SHEET 801

SHEET 802



KEYPLAN

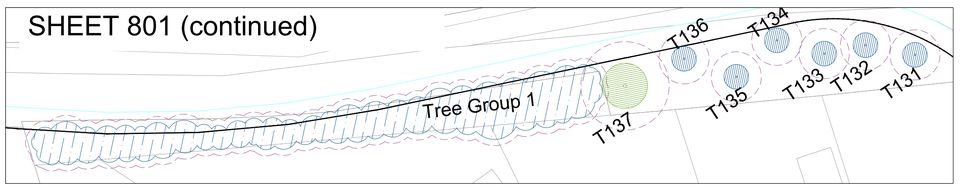
LEGEND

- CLASS A INDIVIDUAL TREE (HIGH QUALITY - RETENTION HIGHLY DESIRABLE)
- CLASS B INDIVIDUAL TREE (MODERATE QUALITY - RETENTION DESIRABLE)
- CLASS C INDIVIDUAL TREE (LOW QUALITY - RETENTION OPTIONAL)
- CLASS U INDIVIDUAL TREE (RECOMMEND REMOVAL)
- TREE GROUPS (COLOUR REPRESENTING GROUP CLASSIFICATION)
- CALCULATED ROOT PROTECTION AREA (RPA)
- TREES PROPOSED FOR REMOVAL

NOTE:

THIS DRAWING IS PRODUCED IN COLOUR, MONOCHROME VERSIONS SHALL NOT BE RELIED UPON.

SHEET 801 (continued)



REV	DATE	AMENDMENT

CUNNANE STRATTON REYNOLDS

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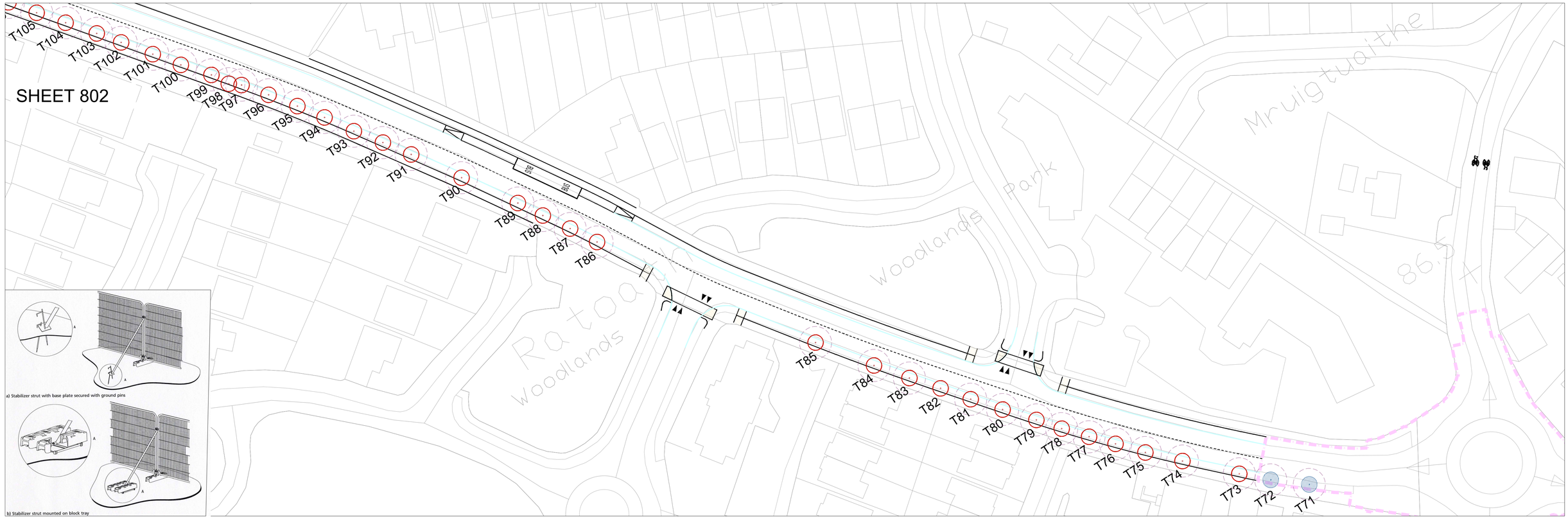
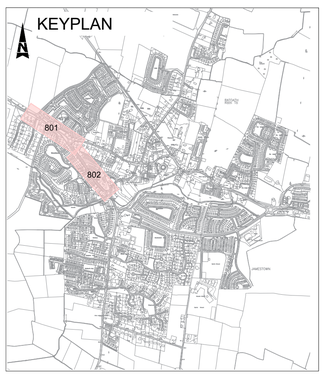
PROJECT: **RATOATH CO MEATH.**	DATE: NOVEMBER 2019
	SCALE: 1:500@A1
DRAWING: **ARBORICULTURAL IMPACT ASSESSMENT**	DRAWN: KM CHECKED: KM
	DRAWING NO: **19277_T_102**

SHEET 801

SHEET 802



KEYPLAN



LEGEND

- CLASS A INDIVIDUAL TREE (HIGH QUALITY - RETENTION HIGHLY DESIRABLE)
- CLASS B INDIVIDUAL TREE (MODERATE QUALITY - RETENTION DESIRABLE)
- CLASS C INDIVIDUAL TREE (LOW QUALITY - RETENTION OPTIONAL)
- CLASS U INDIVIDUAL TREE (RECOMMEND REMOVAL)
- TREE GROUPS (COLOUR REPRESENTING GROUP CLASSIFICATION)
- CALCULATED ROOT PROTECTION AREA (RPA)
- TREES PROPOSED FOR REMOVAL
- POSITION OF TEMPORARY PROTECTIVE BARRIERS TO EXCLUDE ALL CONSTRUCTION ACTIVITIES, (MACHINES & MATERIAL) TO BE INSTALLED PRIOR TO COMMENCEMENT OF WORKS IN ACCORDANCE WITH BS 5837:2012 AS ILLUSTRATED

NOTE:

THIS DRAWING IS PRODUCED IN COLOUR, MONOCHROME VERSIONS SHALL NOT BE RELIED UPON.

SHEET 801 (continued)

REV	DATE	AMENDMENT

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PROJECT: **RATOATH CO MEATH.**	DATE: NOVEMBER 2019
	SCALE: 1:500@A1
DRAWING: **TREE PROTECTION**	DRAWN: KM CHECKED: KM
	DRAWING NO: **19277_T_103**

Appendix D. Archaeological Report

Ratoath pedestrian and cycle scheme
Ratoath,
Co. Meath

Ratoath and Jamestown townlands

ITM: 702108 / 751786 (centre)

Record of Monuments and Places: ME044-034: Historic Town,
ME044-034001: Castle – motte and bailey (vicinity of)
ME044-034008 Market Cross (previous location)

Record of Protected Structures: **None**

Architectural Conservation Area: None

Desk Based Review and Assessment

Niall Roycroft

22nd November 2018

Non-Technical Summary

Meath County Council is proposing to upgrade the existing cycle and walking routes in Ratoath. These routes mostly lie along current roads and footpaths, as well as an already-laid walking route alongside the Broad Meadow River through the middle of the present town. There are some short sections where a walking route and a proposed boardwalk will require start-from-scratch construction but it is not predicted that the impact of any of these works will be significant on any archaeological heritage. However, the excavation of service trenches, either from upgrading or in new locations for public lighting, to the upgrading and widening of the footpath alongside the Broad Meadow River has the fairly low potential to reveal archaeological objects. The area of the river to the south of Motte ME044-034001 has the most archaeological potential.

Also alongside the Broad Meadow River from Meadowbank Hill near to the R155 junction, the present riverside walk has been built in what looks very much like a disused mill race. This mill race may be a tail race to the old mills that were once located under the nearby Tesco Express development on the R155, but this race could also relate to an earlier mill. The 1913 OS shows the River and mill race channel but also notes an adjacent footpath. This mill race ends at a location where there is a modern concrete bridge over the Broad Meadow River, which replaces some 'Stepping Stones' on the 1837 OS and a subsequent bridge (Bridge 1) built by the time of the 1913 OS.

A short distance to the east of this bridge, the Broad Meadow River was realigned in the 19th century into its present channel until the location of the present bridge marked with a plaque 'James Corbellis Esq Bridge, 1814' (Bridge 2). James Corbellis (usually spelled Corballis) was the owner of the Ratoath Manor House (now the Silver Springs Nursing Home).

Eastwards from Bridge 2 the proposed cycleway runs through a grassed area to the north of the Broad Meadow River which was previously the gardens to the Ratoath Manor House. This area seems to have been altered with soil embanking from the construction of the nearby 'Village Green' housing estate. To the south of the Broad Meadow River along this section there is an old beech woodland where there was previously a lime kiln and some quarrying. East of this woodland the cycleway runs along an existing footpath as part of the Jamestown Park housing estate. Previously the road dropped down to the Broad Meadow River at this point and crossed it via a ford. This ford was erased with the construction of the 19th century single arched masonry Bridge 3 that previously connected Jamestown House (demolished) with the R125: with the ford perhaps being moved c. 60m to the west. To the east of Bridge 3 the cycleway runs through the modern Jamestown Park housing estate landscaped areas adjacent to the Broad Meadow River.

Other areas involve works at junctions and the construction of crossing points across Ratoath. These limited works have a low potential for uncovering archaeological remains. Works at the Marian Grotto Protected Structure MH044-306 junction are for uncontrolled crossings, so views of the grotto should be unaffected. The proposed works would require general archaeological monitoring.

1 Introduction

General site description, Figs 1-4

Meath County Council is proposing to upgrade the existing cycle and walking routes in Ratoath. These routes mostly lie along current roads and footpaths, as well as along already-laid walking route alongside the Broad Meadow River through the middle of the town. There are some short sections where a walking route and a proposed boardwalk will require start-from-scratch construction but it is not predicted that the impact of any of these works will be significant on any archaeological heritage. However, the excavation of service trenches, either from upgrading or in new locations for public lighting, to the upgrading and widening of the footpath alongside the Broad Meadow River has the fairly low potential to reveal archaeological objects. The area of the river to the south of Motte ME044-034001 has the most archaeological potential.

The works are on:

- R125 Dunshaughlin Road
- R125 Main Road
- R125 Main Street
- Sean Eiffe Road
- R155 Fairyhouse Road
- R155 Well Road
- R155 Curragha Road
- The Broad Meadow River Footpath
- Existing footpaths through the Jamestown Park housing estate

In general, the works comprise existing roadside footpaths and verges, organising controlled and uncontrolled road crossing points and upgrading several road junctions to allow for the cycleway. Existing public lighting along the Broad Meadow River footpath will also be upgraded and new lighting put in.

Ratoath is a medieval town (including ME044-034000 to ME044-034016) and the Excavations Bulletin has 43 entries for archaeological works at Ratoath until 2010. Of these works 31 revealed nothing of archaeological significance and 12 revealed archaeological results. The results focus on three areas:

1. Evidence of the medieval town in the vicinity of the medieval Motte on Main Street and stretching north along the Skryne Road (laid out c. 1795) past the Church of Ireland
2. Evidence of agriculture in the area of the old Manor House (now the nursing Home) on the R125 to the east of the town
3. Bronze Age settlement and burial and early medieval settlement and burial on the Steeplechase estate to the north-west of the town

There are 16 records on the Sites and Monuments record of Monuments and Places for Ratoath (Fig 4). These include six records connected with the archaeological works results above, but since the RMP files require updating, not the others. The RMP records focus on the medieval town, the medieval motte and items in and around the Church of Ireland church and cemetery on the Skryne Road.

There are 12 buildings or structures recorded on the National inventory of Architectural Heritage for Ratoath (Fig 5). These consist of the two churches, eight buildings, a hand pump and the 1950s Marian grotto. Of these, 10 are listed on the Meath Record of Protected Structures (Fox Lodge and the hand pump are not on the Meath RPS) (Fig 6).

2 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

2.1 Topography, Fig 7

Ratoath is located on the major east to west routeway of the R125 that follows the Broad Meadow River inland from its estuary at Swords, through Ratoath and on to Dunshaughlin. From Dunshaughlin the R125 joins the R154 and continues to major medieval town of Trim.

Ratoath is also at the junction of a north to south routeway, the R150 between Duleek, Rathfeigh and Dublin-Maynooth. Communications junctions are classic locations for medieval motte and bailey castles and a very large medieval motte is located in the centre of Ratoath. The motte is located on the highest point of a local high above the 100m contour and can survey a great area. The motte also overlooks the Broad Meadow River (named *An Gabhair* in Irish and 'Gore Water' on the 17th century Down Survey). At Ratoath, the Broad Meadow River is in a relatively steep sided valley and has some wide meanders in it. To the south-west of Ratoath the Down survey shows a small lake or large mill pond on the R15 Fairyhouse Road. This lake or pond is drained in the 18th century, but is still shown connected to a series of mills on the 1837 OS (now demolished beneath the R155 Tesco Express complex).

2.1 Ratoath: General history and map regression

General

There are several interpretations for the origin of the name 'Ratoath', from Rath Tó to Rath Túath. The former could relate to a 'Danish King' and a túath was essentially the local community or a type of civil Parish, with its hereditary taísigh ('leader') family.

Ratoath became the manorial caput for the medieval Barony of Ratoath, so it could well have been a pre-Anglo-Norman invasion túath capital.

The following is an extract from the Wikipedia page on Ratoath Barony, http://en.wikipedia.org/wiki/Ratoath,_barony,_Meath

'Ratoath is a barony in County Meath. It comprises ten parishes and portion of two others viz Rathbeggan, Dunshaughlin, Kilbrew, Crickstown, Killegland, Cookstown, Donaghmore, Ratoath, and portions of Ballymaglasson and Trevit.

2.2 Record of Monuments and Places (Figs 4, 8)

ME044-034001-
Scope note

Class: Castle - motte and bailey

Townland: RATOATH

Scheduled for inclusion in the next revision of the RMP: Yes

Description: Ratoath was retained as a seigniorial manor by Hugh de Lacy and it was inherited by his son Hugh, later the first Earl of Ulster. The grant, which was as extensive as the barony, was confirmed in AD 1198. The castle (i.e. motte) of Ratour is referenced throughout the thirteenth century. The manor was forfeit in 1210 but returned to Water de Lacy, brother of the Earl, in 1215. The lands and castles in Walter's charge, including Ratoath, were returned to Hugh de Lacy in 1227, when the right to hold a fair lasting thirteen days at Ratoath was also granted. David FitzWilliam, the baron of Naas, had an interest in Ratoath in 1244 through his wife, Matilda, a daughter of Hugh de Lacy. In 1283 Sir Roger de Clifford, a Welsh baron, sold the manor to Queen Eleanor, the wife of Edward I. Ratoath had probably been granted to Roger by King Edward, and Eleanor almost immediately granted the manor to Richard de Burgh, Earl of Ulster, known as the Red Earl.

An inquisition in 1333 found William de Burgh, a grandson of Richard, possessed of the manor of Ratoath at his death, and he had held it in capite from the King. The manor had no buildings, but its site is described as surrounded by a square ditch, and this suggests that the motte and bailey was abandoned at this time. The burgesses of Ratoath paid over £6 in yearly rent, indicating that the settlement had over a hundred heads of households. About 360 acres was held in demesne, as well as 160 acres at Betaghsland, meaning the native Irish settlement, which could be Baytown in Kilbride parish. About thirty five free tenants are named, amongst whom the names Cruys, Tuyt, Cusack, de Bathe, and FitzLeon recur, but the most common name is Bereford. Many of the townlands in the barony can be identified by name. (Orpen 1921)

Situated on top of a broad hill and on the grounds of the Roman Catholic church at the centre of Ratoath village. The motte is a flat-topped, subcircular earthen mound (dims of top 21.5m NNE-SSW' 17m WNW-ESE; diam. of base c. 52m; H 11m) planted with deciduous trees and defined by the remains of a fosse, best preserved N-E. There is a raised rectangular bailey (dims c. 30m E-W; c. 18m N-S), which is also planted in trees and defined by scarps (max. H 3m at S), just to the SE. The site of the medieval parish church (ME034003-) is c. 150m to the NNE.

The above description is derived from the published 'Archaeological Inventory of County Meath' (Dublin: Stationery Office, 1987). In certain instances the entries have been revised and updated in the light of recent research.

Compiled by: Michael Moore

Date of revision: 21 July 2016.

References:

- 1. Orpen, H. G. 1920 The Earldom of Ulster: Part V – Inquisition touching Ratoath, in Co. Meath. Journal of the Royal Society of Antiquaries of Ireland, 51, 68-76.

Zoom to

ME044-034002-
Scope note

Class: Font

Townland: RATOATH

Scheduled for inclusion in the next revision of the RMP: Yes

Description: The following description is derived from the published 'Archaeological Inventory of County Meath' (Dublin: Stationery Office, 1987). In certain instances the entries have been revised and updated in the light of recent research.

Date of upload/revision: 10 July 2007

Octagonal font (diam. 0.44m, H 0.2m) with biconical stem outside RC church and close to motte (ME044-007001-).
Zoom to

ME044-034003-
Scope note

Class: Church

Townland: RATOATH

Scheduled for inclusion in the next revision of the RMP: Yes

Description: Located on top of a broad, low hill, with the motte and bailey (ME044-034001-) c. 150m to the SSW. At the time of the Anglo-Norman settlement Ratoath became a seigniorial manor, and Hugh de Lacy may have built the motte in the 1170s (Graham 1974, 42). A parish church would follow soon afterwards, and the church at Ratoath became the head of a deanery. A church is listed at Rathouth in the ecclesiastical taxation (1302-06) of Pope Nicholas IV (Cal. doc. Ire., 5, 254). There was a chantry attached and the names of some of the clergy from the 15th and 16th centuries are known (Cogan 1862-70, 1, 259-60). The church of Ratoath was amongst the possessions of St Thomas' Augustinian abbey in Dublin (DU018-020051-) at its suppression in 1540 (White 1943, 35). Ussher (1622) describes the church and chancel as indifferently repaired (Erlington 1847-64, 1, lxix). According to the Dopping (1682-5) and Royal (1693) visitations the church of the Holy Trinity was in good repair but only the walls of the chancel were standing. At that time the roof was slated and the windows glazed, but the floor was clay. The church had a bell and a font, but the graveyard was not enclosed (Ellison 1971, 35-6).
A Church of Ireland church was built in 1818 (Lewis 1837, 2, 509), but this is now reduced to a cairn and the base of the walls (H 1-2m), although the church tower at its W end survives complete. No trace of the medieval church structure is extant within a rectangular graveyard (dims c. 70m NNE-SSW; c. 65m WNW-ESE) defined by masonry walls, apart from some dressed pieces from windows, which suggest a 16th century date. The W wall of the old graveyard has been removed and the graveyard now extends off to the NW (dims c. 130m NW-SE; c. 80m NE-SW). Headstones in the old graveyard date mostly from c. 1750 to 1990. A graveslab of a knight (dims 1.68m x 0.37-0.62m) has been set into the church tower on the S side. The mailed figure has no helmet and his head rests on a

pillow. A sword is fastened at the belt, but the legs do not survive below the knee. A worn inscription in Lombardic letters around the edge is now largely obscured, but the slab can be dated to the late 13th or early 14th century (Hunt 1974, 213).

A fragment of an ornate cross (H 0.8m; Wth 0.26-0.33m) decorated with six apostles carved in high relief that is now at St Patrick's church in Trim (ME036-048067-) is thought to have come from Ratoath (Roe 1966, Pl. 23). It may be a surviving fragment of the cross described as 'the Market Cross' (ME044-034008-) on the 1836 and 1909 editions of the OS 6-inch map and which was located c. 300m to the SW. However, this cross was reduced to the base according to John O'Donvan writing in the 1836 (Herity 2001, 112), and even this remnant was destroyed in 1922 (Bradley and King 1985, 126). A late medieval latin cross (H 1.49m; span 0.44m) on a rectangular base (dims 0.65m x 0.62m; H 0.2m) is inside the old graveyard wall at SW. It has a rectangular cross-section (dims 0.22m x 0.19m) at the base, but is octagonal above pyramid stops. The arms are also octagonal in cross-section (H 0.25m; Wth 0.2m) and there is a mortice at the top, but there is no inscription on the cross.

The above description is derived from the published 'Archaeological Inventory of County Meath' (Dublin: Stationery Office, 1987). In certain instances the entries have been revised and updated in the light of recent research.

Compiled by: Michael Moore

Date of revision: 7 April, 2015

References:

- 1. Bradley, J. and King, H.A. 1985 Urban archaeological survey - county Meath. Unpublished report commissioned by the Office of Public Works, Dublin.
- 2. Cal. doc. Ire. - Calendar of documents relating to Ireland 1171-1307, ed. H.S. Sweetman (5 vols., London, 1875-86).
- 3. Ellison, Rev. C. C. 1971-5 Bishop Dopping's Visitation Book 1682-5, Ríocht na Mídhe, 5, 1, 28-39; 5, 2, 3-13; 5, 3, 3-11; 5, 4, 98-103; 6, 1, 3-13.
- 4. Erlington, C. R. (ed.) 1847-64 The whole works of the most Reverend James Ussher. 17 vols. Hodges and Smith, Dublin
- 5. Graham, B. 1974 Medieval settlement in County Meath. Ríocht na Mídhe, 5, No. 4, 40-59.
- 6. Herity, M. (ed.) 2001 Ordnance Survey Letters: Meath. Dublin. Four Masters Press
- 7. Hunt, J. 1974 Irish medieval figure sculpture 1200-1600, 2 vols. Dublin. Irish University Press.
- 8. Lewis, S. 1837 A topographical dictionary of Ireland, 2 vols. London. Lewis and Co.

Zoom to

ME044-034004-
Scope note

Class: Architectural fragment

Townland: RATOATH

Scheduled for inclusion in the next revision of the RMP: Yes

Description: No trace of the medieval church of Ratoath (ME044-034003-) is extant within a rectangular graveyard (ME044-034017-), apart from some dressed pieces from windows, which suggest a 16th century date.

Compiled by: Michael Moore

Date of upload: 7 April, 2015
Zoom to

ME044-034005-
Scope note

Class: Tomb - effigial

Townland: RATOATH

Scheduled for inclusion in the next revision of the RMP: Yes

Description: Recorded by Hunt (1974, i, 213) as follows: 'Just to the south of the church-tower in the old graveyard in Ratoath is the effigy of a knight with his head upon a tasseled cushion, with remains of foliate decoration in relief upon the edge of the slab at this position. He is armed in mail over which can be seen a surcoat to the knee, belted at the waist and having a round neck. The coif was apparently thrown back from the head which has a basin-cut chevelure. The cushion is represented as if it had folds radiating from the head. The hands lie one upon the sword-grip and the other on the sword below. The sword has a large pommel and a short cross. Some object, perhaps part of the strap of the sword-mounting appears below the belt and descends down beside the sword. The legs are missing from below the knee. On the south side of the tapered slab is a badly worked inscription in Lombardic characters of which the following letters can be read [some of which are doubtful]: 'ORATE / PANIUM (?) . . . ALME(?) FILI FABRI . . . ' As far as can be seen despite the worn condition of the stone, the date must be late thirteenth or early fourteenth century.'

See attached image.

Date of upload: 20 December 2011

References:

- 1. Hunt, J. 1974 Irish medieval figure sculpture 1200-1600, 2 vols. Dublin. Irish University Press.

141127_Ratoath_004.jpg

Zoom to

ME044-034006-
Scope note

Class: Cross - Churchyard cross

Townland: RATOATH

Scheduled for inclusion in the next revision of the RMP: Yes

Description: A late medieval latin cross (H 1.49m; span 0.44m) on a rectangular base (dims 0.65m x 0.62m; H 0.2m) is inside the wall of the old graveyard attached to the site of the medieval church of Ratoath (ME044-034003-) at SW. It has a rectangular cross-section (dims 0.22m x 0.19m) at the base, but is octagonal above pyramid stops. The arms are also octagonal in cross-section (H 0.25m; Wth 0.2m) and there is a mortice at the top, but there is no inscription on the cross.

See attached image.

Compiled by: Michael Moore

Date of upload: 7 April, 2015
141127_Ratoath_006.jpg

Zoom to

ME044-034007-
Scope note

Class: Architectural fragment

Townland: RATOATH

Scheduled for inclusion in the next revision of the RMP: Yes

Description: We regret that we are unable to supply descriptive details for this record at present.
Zoom to

ME044-034008-
Scope note

Class: Cross - Market cross

Townland: RATOATH

Scheduled for inclusion in the next revision of the RMP: Yes

Description: The following description is derived from the published 'Archaeological Inventory of County Meath' (Dublin: Stationery Office, 1987). In certain instances the entries have been revised and updated in the light of recent research.

Date of upload/revision: 10 July 2007

Market cross damaged in 1922; in 1932 cross commemorating eucharistic congress was erected on site, which was removed c. 1972.
Zoom to

ME044-034009-
Scope note

Class: Excavation - miscellaneous

Townland: RATOATH

Scheduled for inclusion in the next revision of the RMP: Yes

Description: We regret that we are unable to supply descriptive details for this record at present.
Zoom to

ME044-034010-
Scope note

Class: Excavation - miscellaneous

Townland: RATOATH

Scheduled for inclusion in the next revision of the RMP: Yes

Description: We regret that we are unable to supply descriptive details for this record at present.
Zoom to

ME044-034011-
Scope note

Class: Cistern

Townland: RATOATH

Scheduled for inclusion in the next revision of the RMP: Yes

Description: We regret that we are unable to supply descriptive details for this record at present.
Zoom to

ME044-034012-
Scope note

Class: Excavation - miscellaneous

Townland: RATOATH

Scheduled for inclusion in the next revision of the RMP: Yes

Description: We regret that we are unable to supply descriptive details for this record at present.
Zoom to

ME044-034013-
Scope note

Class: Excavation - miscellaneous

Townland: RATOATH

Scheduled for inclusion in the next revision of the RMP: Yes

Description: We regret that we are unable to supply descriptive details for this record at present.
Zoom to

ME044-034014-
Scope note

Class: Excavation - miscellaneous

Townland: RATOATH

Scheduled for inclusion in the next revision of the RMP: Yes

Description: We regret that we are unable to supply descriptive details for this record at present.
Zoom to

ME044-034015-
Scope note

Class: Cultivation ridges

Townland: RATOATH

Scheduled for inclusion in the next revision of the RMP: Yes

Description: We regret that we are unable to supply descriptive details for this record at present.
Zoom to

ME044-034016-
Scope note

Class: Excavation - miscellaneous

Townland: RATOATH

Scheduled for inclusion in the next revision of the RMP: Yes

Description: We regret that we are unable to supply descriptive details for this record at present.
Zoom to

ME044-034017-
Scope note

Class: Graveyard

Townland: RATOATH

Scheduled for inclusion in the next revision of the RMP: Yes

Description: Located on top of a broad, low hill, with the motte and bailey (ME044-034001-) c. 150m to the SSW. No trace of the medieval church structure (ME044-034003-) is extant within a rectangular graveyard (dims c. 70m NNE-SSW; c. 65m WNW-ESE) defined by masonry walls, apart from some dressed pieces from windows. The W wall of the old graveyard has been removed and the graveyard now extends off to the NW (dims c. 130m NW-SE; c. 80m NE-SW). Headstones in the old graveyard date mostly from c. 1750 to 1990. A graveslab of a knight (ME044-034005-) has been set into the church tower of the 19th century church on the S side. The graveyard cross (ME044-034006-) is in the graveyard.

Compiled by: Michael Moore

Date of upload: 8 April, 2015
Zoom to

2.3 Details of the Excavations.ie entries, See Figs 9, 10

The Ratoath archaeological excavations fall into three general categories / areas (see Figs 9-10):

1. The medieval town
2. Medieval agriculture to the south-east
3. Bronze Age settlement and burial and early medieval settlement and burial on the Steeplechase estate to the north-west of the town

The medieval town has had very many archaeological works in recent years and those that can be located easily are grouped and summarised on Fig 9. However, it is notable that several large estates did not have any archaeological works done on them, in particular Woodside which was built over several large buildings or structures marked on the Down Survey. For other excavations, the summaries do not always supply addresses or accurate NGR references. As such the 'No Archaeological Significance' sites have not always been mapped.

The summaries are numbered in numerical order and full texts are given in the Appendix. However, to analyse the remains they have been ordered and abridged below. For Licence numbers on maps see Fig 10**.**

AREA 1: THE MEDIEVAL TOWN (Fig 9)

Ratoath was an unwalled medieval town. Nevertheless the boundary to the town would have been marked – probably with a bank and ditch boundary. Current thinking places the town boundaries in a broad west-to east band flanking the Dunshaughlin

Road and Main Street. The medieval town probably consisted of wooden houses along the street frontages, each one often set with the gable end facing the street and the long side aligned with a long garden. Any building remains would be disturbed by subsequent rebuilds along the road frontage, although rubbish pits, soakaways and cesspits often survive. The garden was generally used for growing vegetables, keeping animals and sheds could be used for small-scale industries. The garden area forms a 'dark earth' or 'garden soil' that is usually extremely mixed through re-digging and homogenous. The boundaries to these properties and gardens tend to remain roughly fixed over many centuries. Occasionally property boundaries and buildings are made of stone or have stone foundations and yard surfaces tend to be a thin skim of gravel. Well-used roads, stable yard or slaughterhouse areas tend to have proper laid surfaces and drains.

The focus for the medieval town was the motte and this was set within its outer bailey. From assessing the Ratoath street pattern, the bailey appears to be roughly square. The motte mound would have a large, defensive ditch encircling its base and the bailey would also have a surrounding ditch. It is possible that the bailey formed a nodal point to the local Ratoath road network.

The typical layout for a medieval town at a motte would be to have a church site at some distance from the Motte (see also Carlanstown–Kilbeg, Co Meath or Moatquarter Co Offaly). The distance was required because the church was connected to a graveyard and burial grounds were typically outside medieval urban areas. It was also to ensure no defendable buildings were within close proximity to the military motte. A medieval church was located in the area of the present Church of Ireland church (as seen by a medieval stone effigy) and such a church site would typically be surrounded by a precinct wall. It could also have associated buildings such as a gatehouse. The Church of Ireland site could also be the location of the Abbey to St Mary Magdalene referred to by Lewis.

8 2001:1042

Service trenches on the Kentstown Road from Curragha Road junction to Main Street

01E1173

Drift geology consisted of a dark, wet, grey natural clay. This was overlain by a dark brown natural clay: probably the upper surface of a weathered 'natural' post-glacial deposit. Along the length of the service trench along Kentstown Road, which was laid out c. 1795, this brown clay was cut by:

- Ditch 1 was oriented east-west, 0.60m deep by 1.5m wide. A gravel deposit, perhaps road make-up, had slumped into the fill. No Finds were recovered, but the layer above contained 18th-19th century Chinese-pattern pottery and some broken tile/brick material.' The ditch is interpreted as the 'Town Boundary Ditch' that defined the northern end of the medieval borough along the Kentstown Road. The blue clay fill implies a probable waterlian deposit and therefore Ditch 1 may be a drainage ditch doubling as a boundary.
- Ditch 2 was a 0.4m deep (max.) and 1.3m wide. It was filled with a dark grey/blue compact clay layer. Finds from the fill consisted of post-medieval

pottery and butchered animal bone. The blue clay implies a probable waterlian deposit and therefore Ditch 2 may be a drainage ditch doubling as a boundary

- Ditch 3 was a large ditch up to 3.4m wide and oriented north to south. It ran across the road and continued towards the church and cemetery. Probably a property boundary.

Above the brown clay and the ditches was a lens of gravel 1.5m long and up to 0.2m deep in the area of Ditch 1. This was perhaps consolidation for slumping or a precursor for the 1795 Kentstown (Rathfeigh) road. Also in the area of Ditch 1 was an additional refuse layer of a dark grey deposit 0.2–0.25m thick, that contained stones, organic material, animal bone, twigs and post-medieval pottery. This could represent refuse dumped in the area of the town boundary. This layer and the brown 'weathered' natural was in general sealed by a grey soil layer containing post-medieval to late18th century finds. This could be a typical 'dark earth' or 'garden soil' and is probably directly associated with buildings, digging / agriculture, animal activity, dumping and various other town/garden activities all churned together. A similar layer of similar date occurs in Athboy. This layer (in both Ratoath and Athboy) is overlain by the present road formation material.

Located in the Kentstown Road were the remains of a stone-built cellar or cistern, probably of 15th-18th century date. Three courses of stone were identified in the service trench, forming a corner to a structure of unknown dimensions. There was a well-laid lime mortar floor and the walls were sealed with clay. The lower fills appeared to be waterlain, but a mortar floor would normally imply it was intended to be dry. The stated interpretation is, however, a possible cistern. The structure was sealed by the upper 'dark earth' c.18thcentury garden layer and then the 1795 Kentstown Road. The structure possibly represents a late medieval cellar (which could be any size or shape), and, because it lay close to the medieval church and could even represent the cellar to a gatehouse to the church precinct.

Near to the junction between the Kentstown Road and Main Street some cobbled surfaces showed open areas with nearby slate-roofed houses. This represents 17th century Ratoath as seen on the Down Survey mapping.

- Road 1 was uncovered c. 1m down. It was oriented east to west with an open, roadside drain. The laneway was set firmly into the brown natural clay. The drain consisted of large uncut stones placed in a single line to a height of three courses and bonded in clay. The drain was 0.3m deep at the western end, draining to the east. The laneway surface produced late medieval pottery and a metal knife blade.

- Road 2 was an area of rough cobbling uncovered 0.9m below the modern surface and partially overlying Road 1. The cobbles ran for approximately 4m and appeared to be set directly into the brown natural clay underneath. Broken slate fragments were found walked into the surface, as were animal bones. The pottery recovered appears to give a 17th-century date. This seems to be a repair to the Road 1 above and shows continued use of the open area or Roadway. The laneway seen by Road 1 and Road 2 may have been in use for several centuries until the 17th century or so.

- Wall 1 was an 18th/19th-century wall foundation. It was a clay-bonded wall foundation that ran beside the modern graveyard wall. It is likely that the wall was constructed in association with the 1795 Kentstown Road.

The majority of the finds from these works date to the late 18th century and come from the mixed garden soil or dark earth deposit that preceded the present Kentstown Road. The pottery assemblage is largely composed of 18th-century wares, mostly English imports. But there were also several residual sherds dating to the medieval period, including Leinster ware and a sherd from Chester. A considerable quantity of butchered animal bone was recovered, along with some clay tobacco pipe fragments, glass and modern floor tiles. All this is typical for 'back plot' garden activities and the various ditches show property boundaries and drainage of the heavy clay soils.

16 2002:1516
Service trenches on Main Street and Kentstown Road
02E1563
Service trenches were excavated to 0.4–1.2m below the modern ground level. Work extended north along Main Street and along the Kentstown Road on either side of the junction. Work also took place along a pathway close to the river and to the rear (east) of the motte.

Extensive modern disturbance was evident in most trenches, including earlier services, pits and gullies, and rubble spreads. The construction of the modern road surface on Main Street appeared to have largely removed evidence of earlier activity. Nonetheless, several cut features of medieval date were exposed.

A cesspit revealed on Main Street was excavated to a depth of 2m, at which point a sherd of Leinster cooking ware was recovered and the pit became waterlogged. A cesspit or rubbish pit would have been in association with a building and therefore forms part of medieval Ratoath town on the eastern side of the motte.

Two further medieval features were exposed beside the northern boundary wall of the Roman Catholic Church. The first was a U-shaped gully or shallow pit, 1.15m wide and 0.19m deep, which contained a single sherd of medieval green-glazed local ware. The second feature was a spread of clay or possible ditch fill, 4.4m wide that contained two sherds of Leinster cooking ware. This layer/fill was exposed in plan only, as groundworks did not extend beyond that depth.

20 2002:1520
Medieval ditch on the western side of the motte
02E1101
On the western side of the medieval motte, to the south of Main Street, a ditch at least 6m wide had a base c. 2m below present ground level. The bottom fill was gritty, dark grey clay. This was overlain by a soft, grey, silty material that varied in depth from 1m (in Trench 1) to 0.6m (in Trench 2). Some medieval pottery was recovered from the ditch fills. Three sections of this ditch were exposed and this ditch presumably represents the outer bailey for the adjacent motte. The motte on mapping shows an inner ring and an outer bailey, which the RMP records as rectangular in shape and

visible to the south-east of the motte. The present Main Street probably reflects the outer bailey ditch.

A smaller medieval ditch lay at right angles to the large ditch and was overlain by grey garden soil 0.7–1m deep. This ditch was narrower and shallower, but it also produced a small number of medieval pottery sherds.

12 2001:1046
Medieval ditches on Main Street
01E0248
Test trenching revealed a series of possible medieval ditches and two 19th-century buildings. The ditches were preserved in situ in all but one area—the foundation trench for the proposed development. Excavation of the ditch showed that it had been severely truncated by the construction of the 19th-century buildings as it only survived to a depth of c. 0.3m. The location of these ditches is within the presumed medieval town and they may represent property boundaries or agricultural activity.

AREA 2: MEDIEVAL TO POST-MEDIEVAL AGRICULTURE ON THE EASTERN SIDE OF RATHOATH (Fig 9)

Works in the area of the old Manor House, now the Nursing Home, revealed evidence for medieval to Post-medieval agriculture. The boundary ditches and furrows could either represent gardens associated with properties along Main Street or they could represent tilled strip-fields covered in urban rubbish. This dumping was a practice called manuring, when middens and manure were emptied over the fields to increase fertility.

7 2001:1041
Bronze Age activity and medieval to Post-medieval agriculture
01E0359
The first phase was a series of burnt spreads, probably truncated burnt mounds and pits. These probably date to the Bronze Age and reflect activity in the vicinity of the Broad Meadow River.

The second phase consisted of shallow boundary ditches that divided the site into strips between 12m and by 3m-wide. These appear to represent boundary ditches or large furrows connected with strip fields of medieval or late medieval date. The third phase was a series of furrows that probably dated to the 18th-19th century. Medieval pottery was recovered from the boundary ditches (large furrows) and from topsoil. The final phase showed modern land drains.

15 2002:1515
Medieval to Post-medieval agriculture
02E1454 (follow on from 01E0359)
Testing to the rear of the Manor House (now the Nursing Home) showed topsoil of a fine, grey/brown, silty clay 0.35–0.45m deep. Towards the Broad Meadow River to

the south, the subsoil dipped dramatically and topsoil depth increased to c. 0.7m. Topsoil overlay a series of ditch-like furrows running generally north-west/south-east. Some of these contained medieval pottery. There were also modern field drains. Numerous fragments of medieval and post-medieval pottery were collected across the site. Underlying subsoil was an orange-brown, compact, sandy clay.

AREA 3 SETTLEMENT AND BURIAL ON THE NORTH-WESTERN SIDE OF RATOATH (Fig 9)

Works connected with the Steeplechase Estate revealed a considerable cluster of archaeological remains. These date to the Bronze Age and Early Medieval periods and are not connected with medieval Ratoath.

22 2003:1452
Steeplechase Estate: General
03E1300
Prior to development, the area was used as pasture and was subdivided into fourteen fields. Apart from existing farm buildings and the areas to be retained as open spaces, the entire area of the development was stripped of topsoil.

The general stratigraphy consisted of a mid-brown silty clay topsoil 0.20-0.25m deep with moderate amounts of small stones. This overlay an interface topsoil layer 0.20-0.30m deep of orange/brown sandy clay with moderate to frequent amounts of small to medium stones. The natural subsoil consisted of a mid-orange/brown sandy clay with frequent small to medium stones, decayed limestone and sandstone. 18th or 19th century ridge and furrow was visible below topsoil all across the site. The discovered remains were recorded under separate Areas and Licences (below).

24 2003:1454
Steeplechase Estate Area 1: Burnt spread
03E1632
The spread had been truncated by a modern field boundary, and the remaining spread measured c. 5m east-west by c. 10m. This area is quite marshy and is within a natural depression in the landscape. The spread of burnt stone and charcoal was 10mm-0.20m thick. A small fragment of flint debitage was recovered from the main burnt spread. Three small post-holes underlay the main spread. Four drains had cut through the spread and associated features. A possible trough was identified 4.25m west of the main spread. Some very small shell fragments were recovered from its base. This pit had been cut by three later drains

A thin, isolated spread with charcoal and burnt stone was excavated c. 10m east of the main spread. It was within a natural marshy, peaty hollow in the landscape.

Topsoil finds included sherds of Black Ware, a lead shot or musket ball and a single small piece of burnt bone.

25 2003:1455
Steeplechase Estate Area 2: Two ring-ditches, burnt pits, kilns, possible field system
03E1781
Along the ridge of an east-west crest just north of the R125 Dunshauglin Road was a concentration of archaeology. Probable Late Bronze Age burials were seen by two ring ditches. Ring-ditch 1 was circular, c. 15m in internal diameter. Within the ditch, the fragmentary remains of one cremation were identified. Ring-ditch 2 was located 5.5m north of Ring-Ditch 1, Ring-ditch 2 had an internal diameter of c. 6m and no cremations were identified. No finds were recovered from either ring-ditch.

Ring-ditch 1 was cut by a curving ditch, forming an arc-shape. The terminals of this curving ditch were filled with a substantial amount of medium-sized angular rocks, as well as a large quantity of animal bone, including two boar tusks, two pieces of worked flint and some iron fragments.

29 2004:1324
Steeplechase Estate Area 3: Early medieval ringfort and cemetery
03E1781
Close to the R125 Dunshauglin Road was the western part of a circular, early medieval ringfort-enclosure containing a cemetery. Externally there was a metalworking area.

Ringfort enclosure
The enclosure ditch contained several fills and animal bone and two bone pin fragments were recovered. The enclosure had been damaged by a modern foundation trench and field boundaries.

Within the western area of the enclosure, several linear and curvilinear gullies or building slot-trenches, along with pits and spreads were examined. Many of the finds were concentrated along the surface fill of the enclosing ditch and included complete and fragmented bone tools, many associated with weaving, a spindle whorl, fragments of lignite bracelets, a blue glass bead, a fragment of an amber bead, two bone comb fragments, rubbing stones, a penannular brooch and many miscellaneous scraps of metal.

Burials
In total, 56 burials were excavated in the south-eastern quadrant of the enclosure. The skeletal remains were in various states of preservation and most were orientated roughly west-east with the head to the west. There were no clearly defined grave-cuts and no evidence for slab-lined graves or coffin nails. There were 46 burials excavated from the surface layer, nine from a second layer and one burial came from a third layer. There were no actual clearly defined layers; it was simply the case in certain areas where one burial was overlying another.

Some unusual burial rites were noted.

- Burial 12 was an adult crouched inhumation, lay on its left side.

- Burial 34 was of an adult in the supine position with the legs tightly flexed on top of the stomach area; a piece of slag was found in the sacrum area.
- Burial 35 was an extended supine adult inhumation with grave goods of a small rectangular metal bar and a small rectangular copper-alloy fragment.
- Burial 38 was an extended supine inhumation with a copper-alloy neck-ring; Burial 38 was radiocarbon dated to AD 580-680 (2 sigma calibration). The neck-ring is a unique artefact in an Irish early medieval context. There are some similarities to arm-rings and neck-rings in Anglo-Saxon burial contexts in England, but none with the ring-and-dot motif and simple interlocking clasp. The closest parallels for this artefact may lie in northern Europe.
- Burial 46 was an extended adult supine inhumation with evidence of ante-mortem injuries to the skull and grave goods of a metal knife blade and a small sub-spherical metal fragment.
- Burial 48 was an extended supine inhumation of a juvenile with associated grave finds of a metal needle and two pieces of slag.

Areas in the immediate vicinity of the enclosure
Immediately to the west of the Ringfort enclosure were features that probably formed part of a metalworking area, as a lead ingot and crucible sherd were found. The previous disturbance in this area hampered interpretation.

A large east-west boundary ditch extended out from the enclosure ditch on the south-east side and a substantial amount of 'smithing' slag and a portion of a lignite bracelet were recovered from the fill. South of this boundary and the Ringfort enclosure there was an annexe or enclosed area. Within this area a large charcoal spread, a small keyhole-shaped kiln and an internal ditch were excavated. A large volume of slag was also recovered from this area.

Immediately north of the Ringfort enclosure were several curvilinear features. A large volume of 'smithing' slag was recovered from the fills of two L-shaped ditches in this area.

32 2004:1327
Steeplechase Estate Area 4: Activity
04E0218
Topsoil was 0.2m to 0.9m thick, often including much modern rubbish and four fragments of early modern pottery were recovered. Topsoil overlay a linear band of natural yellow clay, a circular area of burnt clay, a large linear ditch and a circular area of burning. The remaining area showed three post-hole-type features. Subsoil consisted of bands of bright yellow silty clay and some areas within the natural had a higher stone content

33 2004:1328
Steeplechase Estate Area 5: Prehistoric Enclosure Ditch and early medieval field system
04E0218
The large, circular Prehistoric Enclosure Ditch had a diameter of 37m and, on

average, was 1m wide. The cut of this ditch was U-shaped and contained at least seventeen fills. The upper fill contained charcoal and the other fills were predominantly sterile silts (natural weathering fill). An animal skull (horse or cow) was found in the upper fill. Artefacts recovered from the feature include prehistoric pottery (probably Bronze Age) and a stone spindle whorl. Surface finds included worked flint and chert concentrated on the western side of the feature. Inside this large ditch a second, much smaller, circular feature was recorded and this probably represented a circular building. The Prehistoric Enclosure Ditch and associated deposits were excavated during 2005 under licence 05E0017 **Note:** No Summary for this Licence number available

Adjacent to the ring-ditch was an irregular, keyhole-shaped pit (2.2m north-south by 0.45-0.85m by 0.06m). The southern portion of this pit contained a disturbed, probably stone-lined, circular cut (0.4m by 0.45m by 0.15m). Finds included prehistoric pottery (including ?grooved ware), worked flint, bone and fragments of burnt bone. The pottery and bone formed separate groups within the fill, giving the possibility of deliberate deposition.

Other features included pits, keyhole-shaped kilns (probably early medieval in date), scorched (or fire-reddened) deposits and a large ditch. The large ditch (visible for 28.4m) was located 14m west of the Ringfort enclosure (Area 3, 03E1781). This probable field boundary ditch follows the same curvature as the Ringfort enclosure ditch and was probably associated with it. The ditch cut was U-shaped (3.4m wide by 1.4m deep) and it contained four silty clay fills and some slag. Between this feature and the Ringfort was a large, shallow U-shaped pit that contained some animal bone.

2.4 NO ARCHAEOLOGICAL SIGNIFICANCE EXCAVATIONS

Twenty summaries give limited archaeological information

2 1992:154
Fairyhouse Road, Ratoath
No archaeological significance
Mixed soil from 0.9m to 2.5m to subsoil.

3 1997:433
Curragha Road (r155), Ratoath
No archaeological significance
97E0365
Topsoil lay immediately over mottled, stiff clay with a lot of decayed stone. In Trench 2 there was evidence for a lot of modern dumping

4 1997:432
Ratoath
No archaeological significance
97E0293
Boulder clay was visible very close to the surface and rises to the north of the site.

The finds were of modern date.

5 1998:521
Curragha Road, Ratoath
No archaeological significance
98E0360
Trench 1 exposed a layer of yellow clay within natural boulder clay at its west end; there were no inclusions within the yellow clay to suggest that it had been redeposited. The three other trenches showed drains cut into the natural, dark grey-brown clay with much broken stone.

6 1998:522
Main Street, Ratoath
No archaeological significance
98E0296
The frontage on Main Street was sealed by a concrete slab as a floor for horse stables. Contamination was caused here by a leakage of diesel oil, which mixed with ground water to produce a viscous sludge. This was present in Trenches 1-3; Trench 4 showed natural, brown clay underneath the slab and stone filling. The other trenches further to the north showed evidence of dumping of modern rubbish and of redeposition of boulder clay in Trench 8.

9 2001:1043
Dunshaughlin Road, Ratoath
No archaeological significance
01E0174
To the north, some 19th-century house demolition rubble was mixed with the loose black clay topsoil. Modern Drains bottomed at approximately 0.5m below the present ground level. Natural subsoil was a mixed grey and yellow boulder clay, sandy in places and with gravel varying in consistency.

11 2001:1045
Fairyhouse Road, Ratoath
No archaeological significance
01E0721
The area had been extensively disturbed by earlier developments and through use as a garden.

13 2001:1047
Auld Stand Public House, Main Street, Ratoath
No archaeological significance
01E0248 ext.
Black silty clay was exposed in both trenches to a depth of 0.6–0.7m. The underlying natural subsoil was soft grey sandy boulder clay.

14 2002:1514
Ratoath
No archaeological significance
02E0316

The land is currently used for pasture and is very waterlogged with bad drainage. One dark area was tested but was not archaeological.

17 2002:1517
Ratoath
No archaeological significance
02E1626
The sod and topsoil were 0.23–1m deep and lay above a layer of mid-brown garden soil containing stone and brick fragments. Although a quantity of modern ceramics, glass and rubbish was identified in some of the trenches, the only find of archaeological significance was a body sherd of North Leinster cooking ware of early medieval date, decorated with two impressed seashells.

18 2002:1518
Ratoath
No archaeological significance
02E1854
The sod and topsoil had an average depth of 0.33m and lay directly above the natural clays and gravels. Some post-medieval and modern pottery sherds were recovered from the sod and topsoil.

21 2002:1521
Ratoath Nursing Home, Ratoath
No archaeological significance
02E0722
Some sherds of medieval pottery were recovered from the topsoil.

23 2003:1453
Ratoath
No archaeological significance
03E1416
Topsoil consisted of a mid-brown sandy silt c. 0.3-0.45m in depth overlying a yellow/brown stony subsoil of silty clay.

28 2003:1458
Main Street, Ratoath
No archaeological significance
03E1851
Trench 1 had disturbance by drainage trenches and soak holes.
The test-pit showed that the (demolished) 19th-20th C house was built directly on natural clay. Trench 3 showed that the house extensions were constructed immediately on top of natural subsoil.

30 2004:1325
Ratoath
No archaeological significance
04E0172
Significant amounts of topsoil and rubbish had been dumped from the adjoining building sites. The topsoil / redeposited topsoil overlay layers of dark silty material,

varying in depth, colour and stoniness.

34 2004:1329
Fox Lodge Manor, Ratoath
No archaeological significance
04E1231
Modern pottery fragments occurred in the topsoil, but also a flint flake, a broken flint blade and a body sherd of local glazed medieval pottery.

35 2004:1330
Main Street, Ratoath
No archaeological significance
02E1101 ext.
Topsoil varied 0.3m - 0.5m. It overlay natural brown boulder clay that contained loose stones. In the area of Block B, the topsoil was dark-grey and silty 0.6-0.8m deep. The natural subsoil was stiff grey/brown boulder clay with loose stones. Excavation of the Block B footings produced evidence for poor drainage in this part of the site. Deposits of grey silt were present throughout, but they were amorphous and could not be interpreted as ditches.

36 2004:1331
Main Street , Ratoath
No archaeological significance
Unlicensed monitoring
The foundation trenches were cut through subsoil of a sticky brown clay that contained loose and decayed stone.

38 2005:1237
Ratoath
No archaeological significance
05E0460.
One sherd of 13th-century green-glazed pottery was recovered.

42 2007:1382
Ratoath
No archaeological significance
07E0173
A huge quantity of building rubble had been dumped on the site creating a very steep slope, up to 5m deep. The rubble derived from the demolished Moatlands development, built in the mid-1990s. It was not possible to bottom the five test-trenches.

Eleven Summaries give no useful archaeological or works information
1 1991:108
Ratoath
No archaeological significance
No Licence number

6a 2000:0776: SAME AS 2001:1040
Ratoath

No archaeological significance
00E0923

6b 2001:1040
Ratoath
No archaeological significance
00E0923

10 2001:1044
Dunshaughlin Road, Ratoath
No archaeological significance
01E0275

19 2002:1519
Dunshaughlin Road, Ratoath
No archaeological significance
02E1446

26 2003:1456
Dunshaughlin Road, Ratoath
No archaeological significance
03E1898

27 2003:1457
Main Street, Ratoath
No archaeological significance
03E0773

31 2004:1326
Ratoath
No archaeological significance
04E0181

37 2004:1332
Main Street, Ratoath
No archaeological significance
03E1851

39 2005:1238
Curragha Road, Ratoath
No archaeological significance
04E1077

40 2006:1629
Main Street, Ratoath
No archaeological significance
05E1368

41 2007:1381
RATOATH

No archaeological significance
06E0915.

2.4 Map regression

The Down Survey mapping for Ratoath Parish, Ratoath Barony and County Meath (Figs 10-15) give a very good impression of the town in the mid to late 17th century.

Ratoath town lay mainly on the east-to-west R125 road with the town laid out in regular 'shots' or property boundaries to the east of the motte. The motte is noted as 'A Mount' with a tree on it on the Parish Map (Fig 12). The Church (now Church of Ireland) is marked a significant distance north of the motte. As the Down Survey is typically accurate regarding building locations, the 17th century or medieval church may lie slightly north of the present church. A sketch of Ratoath for the Down Survey shows the town, church and motte (Fig 11 inset).

On the western side of Ratoath the Down Survey Barony (Fig 12) and Parish (Fig 13) maps both show a walled enclosure containing buildings and a large house. Walled enclosures such as this occur on other Down Survey maps and they usually contain an labelled Church. Three symbols on the Ratoath Parish map could show multiple buildings or even a building and a cemetery (perhaps seen by headstones). This could potentially be the remains of the St Mary Magdalene Abbey mentioned by Lewis. The area where this is marked on the Down Survey is overlooking the Mill marked on the Broad Meadow River and there could be a connection between the two sites. The walled enclosure could also be a medieval moated manor house. The large house marked to the east of the walled enclosure is a normal symbol for a tower house or chief house for a townland. When the Woodlands housing estate was constructed in this area between 1995 and 2000 there does not appear to have been any archaeological involvement and no archaeological remains were identified.

The Down Survey mapping also shows several roads running to Ratoath. These are the roads west to Dunshaughlin, south to Dunboyne, east to Swords (as seen by Moulden Bridge) and the road north-east to Skryne are all indicated. A further road to Curragha, a precursor of the present R155, could have run north past the church of Ireland church. An overlay of all the Down Survey features on the 1837 OS shows their potential locations, Figs 13B-C.

The 1777-85 Taylor & Skinner Map 44 detail (Fig 14) shows Ratoath before the present Skryne and Curragha Roads were built. Originally the Curragha Road passed up Glebe Lane and to the east of the church. The Skryne Road may have been some sort of trackway along present Well Road. The map also shows a road heading to the south in the area directly east of the Ratoath Motte. This could be a road that crossed the Broad Meadow River at or near to present Bridge 3.

The 1817 Larkin Map (Fig 15) shows Ratoath with a similar layout to the 1837 OS. The Broad Meadow River crossing at or near to Bridge 3 is shown.

The 1837 Ordnance Survey shows Ratoath centring on the motte (Fig 16). The town is divided into two parts: that to the east is on one grid of property boundaries, and the

part to the west is on a slightly different grid. The eastern half was probably the medieval town as illustrated on the Down survey and the western probably represents 18th century expansion. The Down survey marks a large house to the north-west of the motte and this could represent a tavern or inn near the R155-R125 junction.

The 1837 OS also shows a track leading south from the Motte, across the Broad Meadow River via some stepping stones. In this location is the previous Roman Catholic chapel. It is possible to perhaps trace the outline of the bailey that once surrounded the medieval motte in the street pattern and maybe connect in the associated roads. The Police Barracks and the School mentioned by Lewis (above), and the Corn Mill, are marked on the Fairyhouse Road.

The 1837 OS shows a Cross located at the R150-R125 junction, in the middle of a triangular open area that probably was a market place. The 1913 and present maps and aerial image (Figs 17-19) initially show Ratoath as little changed, but this was all to change. In the 1996 census the population was 1,061; in the 2006 census, it was 7,249 and by 2011 the population had reached 9,043.

It is quite noticeable that there is still much green space in the centre of Ratoath and along the Broad Meadow River, which is in a fairly steep, wooded valley. Buildings are heavily concentrated along the street frontages. This is a feature of the town going back to the medieval period and repeated building in the same locations and the associated disturbances helps explain the relative lack of archaeological remains that have been found in the town. Where archaeological remains have been found they have been located in the present street area or on previously undeveloped land.

2.5 Detail discussion of the areas of the proposed works through map regression

Figs 20-23: These show the area of the R125-R155 junction and the motte in the centre of Ratoath. Please see figures for discussion points.

Fig 24: This shows the 1837 OS to the W of Ratoath in the lowland – wetland area that was a Lough and or mill pond on the 1650s Down Survey.

Figs 25-28: These show the Broad Meadow River valley to the east of the R155 and the area of the present Meadowbank Estate

Figs 29-32: These show the Broad Meadow River valley to the south of Ratoath Motte in the middle of the town.

Figs 33-36: These show the Broad Meadow River valley to the east of Ratoath.

3 ARCHITECTURAL HERITAGE

There are 12 Buildings or structures recorded on the National inventory of Architectural Heritage for Ratoath (Fig 5). These consist of the two churches, eight buildings, a hand pump and the Marian grotto. Of these, 10 are listed on the Meath Record of Protected Structures (Fox Lodge and the partly demolished building on Fairyhouse Road are not on the Meath RPS), Fig 6.

Fox Lodge, Ratoath, County Meath **14336001**

Detached three-bay two-storey house, built c.1800. Hipped artificial slate roof with rendered chimneystacks. Roughcast rendered walls. Tooled limestone block-and-start surrounds and sills to window openings.

Meath RPS number: NONE

The Manor House (former), Ratoath, County Meath **14336002**

Detached seven-bay two-storey former house, built c.1780, with two-bay full-height bow to rear elevation. Now in use as a nursing home. Pitched artificial slate roof with rendered chimneystacks and cast-iron rainwater goods.

Meath RPS number: MH044:310

Ratoath, County Meath **14336003**

Cast-iron water pump, c.1870, with foundry mark, banded shaft, fluted neck, cap and spout, and curved pumping handle.

Meath RPS number: MH044:308

Holy Trinity Roman Catholic Church, Ratoath, County Meath **14336006**

Detached church, commenced c.1820, remodelled and rebuilt c.1868 and c.1874. Comprising five-bay side elevations to the nave, with gabled entrance front c.1868 to the east, single-bay chancel to the west and vestry to the south, c.1874.

Meath RPS number: MH044:305

Holy Trinity Parochial House, Ratoath, County Meath

14336007

Detached three-bay two-storey parochial house, built c.1869. Hipped slate roof with ridge cresting and red brick chimneystacks. Roughcast rendered walls with red brick string courses.

Meath RPS number: MH044:303

Holy Trinity Parochial House, Ratoath, County Meath

14336008

Detached six-bay two-storey outbuilding, built c.1870. Hipped slate roof. Squared stone walls. Timber sash windows with yellow brick dressings and granite sills. Timber battened doors with yellow brick dressings.

Meath RPS number: MH044:304

Ratoath, County Meath

14336009

Freestanding Marian grotto, built c.1955. Comprising of niche with a statue of the Blessed Virgin Mary with canopy above, set against mosaic screen wall, set on mosaic platform and steps, bounded by wrought-iron railings.

Meath RPS number: MH044:306

Ratoath Glebe House, Ratoath, County Meath

14336010

Detached five-bay two-storey over basement former rectory, built c.1813, with flat-roofed central porch, now in use as a private house. Pitched slate roof with rendered chimneystacks. Roughcast rendered walls with a limestone plinth course.

Meath RPS number: MH044:309

Ratoath, County Meath

14336011

Detached square-profile three-stage castellated and pinnacled Church of Ireland church tower, built c.1817, with the ruins of the church walls to the east. Rubble stone walls with ashlar limestone pinnacles, cappings to castellations and string courses

Meath RPS number: MH044:307

Ratoath, County Meath 14336012

Detached three-bay two-storey Tudor style house, built c.1890, with gabled breakfront bay to north-west. Pitched slate roof with rendered chimneystacks. Roughcast rendered walls. Ashlar limestone dressing and label mouldings to window openings.

Meath RPS number: MH044:302

Park House, Ratoath, County Meath 14336013

Detached three-bay two-storey house, built c.1900, with flat-roofed central porch. Hipped slate roof with red brick chimneystacks. Roughcast rendered walls with a red brick eaves course. Segmental-arched window openings with granite sills.

Meath RPS number: MH044:301

Ratoath, County Meath 14336014

Detached five-bay single-storey house, built c.1800, with gabled central porch. Hipped corrugated fibre cement roof with a red brick chimneystack. Roughcast rendered walls, rendered to porch.

Meath RPS number: None: partly demolished by 2011 (see below)

Google Image April 2011

4 SITE VISIT

The site was visited on 13th November 2018. The photos are a ,mix of walkover and Google Street View.

The photos are discussed in association with the Discussion Areas in Section 6.1

5 Proposed Works (Figs 37-46)

The works drawings are annotated with details. These have been numbered by Drawing number and then a sub-number. These have then been drawn together into discussion areas A, B, C etc.

Reference	DISCUSSION	Comment	Within or adjacent to Notification Zone	Potential archaeological impact
802.1	802A	Existing kerb retained	No	No significant impact
802.2	802A	Existing verge retained	No	No significant impact
802.3	802A	Existing footpath retained	No	No significant impact
802.4	802A	Tie into existing footpath	No	No significant impact
802.5	802A	Upgrade existing bus stop	No	No significant impact
802.6	802A	Proposed raised crossing	No	No significant impact
802.7	802A	Remove existing verge and replace with raised cycle track	No	No significant impact
802.8	802B	Tie into existing footpath	Yes	No significant impact
802.9	802B	Proposed raised crossing	Yes	No significant impact
803.1	803A	Proposed raised crossing	Yes	No significant impact
803.2	803A	Reduce existing junction	Yes	No significant impact
803.3	803A	Proposed raised crossing	Yes	No significant impact
803.4	803A	Proposed raised crossing	Yes	No significant impact
804.1	804A	Proposed pelican crossing	Yes	Potential to reveal market area
804.2	804A	Existing bus bays retained	Yes	No significant impact
804.3	804A	New 2m wide footpath	Yes	Potential to reveal market area
804.4	804B	Upgrade existing bus stop	Yes	Potential to reveal market area
804.5	804B	Upgrade existing junction	Yes	Potential to reveal market area
804.6	804B	Proposed pelican crossing	Yes	Potential to reveal market area

Reference	DISCUSSION	Comment	Within or adjacent to Notification Zone	Potential archaeological impact
804.7	804A	Upgrade existing junction	Yes	Potential to reveal market area
804.8	804F	Replace existing crossing	Yes	No significant impact
804.9	804F	Proposed raised crossing	Yes	No significant impact
804.10	804C	Upgrade existing junction and add raised crossing	Yes	Potential to reveal old roads
804.11	804E	Proposed raised crossing	Yes	No significant impact
804.12	804D	Existing path to be widened (min 2.8m) at pinchpoints and resurfaced where necessary	Yes	Potential to reveal medieval artefacts
805.1	805A	Upgrade existing crossing and add raised crossing	Yes	No significant impact
805.2	805B	Upgrade existing junction	No	No significant impact
805.3	805B	Proposed raised crossing	No	No significant impact
805.4	805B	Upgrade existing cycleway	No	No significant impact
805.5	805B	Proposed raised crossing	No	No significant impact
805.6	805B	Upgrade existing junction	No	No significant impact
808.1	808A	Upgrade existing culvert	No	No significant impact
808.2	808A	Upgrade existing junction and add raised crossing	No	No significant impact
808.3	808A	Proposed 2m wide footpath	No	No significant impact
808.4	808A	Narrow existing road	No	No significant impact
808.5	808B	Upgrade existing crossing	Yes	No significant impact
808.6	808B	Upgrade existing junction	Yes	Potential to reveal old roads
808.7	808B	Redesignate existing footpath	Yes	No significant impact
810.1	810A	Proposed raised crossing	Yes	No significant impact
811.1	811A	Proposed crossing	Yes	No significant impact

Reference	DISCUSSION	Comment	Within or adjacent to Notification Zone	Potential archaeological impact
811.2	811A	Proposed shared cycleway + footpath	Yes	No significant impact
811.3	811A	Proposed shared cycleway + footpath	No	No significant impact
811.4	811A	Narrow existing road	No	No significant impact
811.5	811A	retain existing railings	No	No significant impact
811.6	811A	Widen footpath	No	No significant impact
811.7	811A	Retain existing crossing	No	No significant impact
811.8	811A	Proposed raised crossing	No	No significant impact
811.9	811A	Proposed raised crossing	No	No significant impact
811.10	811A	Proposed raised crossing, retain existing bus stop, reduce carriageway width	No	No significant impact
811.11	811A	Amend kerb line, raised crossing	No	No significant impact
813.1a	813A	Existing path to be widened (min 2.8m) at pinchpoints and resurfaced where necessary	Yes	Current footpath is 2.25m wide asphalt and kerbed in wood. This is on the line of an old Mill Race / Footpath. Potential to reveal medieval artefacts
813.1b	813B	Existing path to be widened (min 2.8m) at pinchpoints and resurfaced where necessary	Yes	Current footpath is 2.25m wide asphalt and kerbed in wood. This is on the line of an old Mill Race / Footpath. Potential to reveal medieval artefacts
813.2	813B	Upgrade existing public lighting	Yes	Old Mill Race / Footpath. Potential to reveal medieval artefacts
813.3	813D	Existing bridge crossing	Yes	Modern concrete bridge
813.4	813C	Proposed stepped access with handrails	Yes	Old Mill Race / Footpath. Potential to reveal medieval artefacts
813.5	813F	Upgrade existing public lighting	Yes	Area below medieval motte. Potential to reveal medieval artefacts
813.6	813F	Existing path to be widened (min 2.8m) at pinchpoints and resurfaced where necessary	Yes	Area below medieval motte. Potential to reveal medieval artefacts
813.7	813E	Proposed public lighting	Yes	Old Mill Race / Footpath. Potential to reveal medieval artefacts

Reference	DISCUSSION	Comment	Within or adjacent to Notification Zone	Potential archaeological impact
813.8	813E	Existing path to be widened (min 2.8m) at pinchpoints and resurfaced where necessary	Yes	Old Mill Race / Footpath. Potential to reveal medieval artefacts
814.1	814A	Existing path to be widened (min 2.8m) at pinchpoints and resurfaced where necessary	Yes	Old Mill Race / Footpath. Potential to reveal medieval artefacts
814.2	814A	Proposed public lighting	Yes	Old Mill Race / Footpath. Potential to reveal medieval artefacts
814.3	814B	Proposed stepped access with handrails	Yes	Old Mill Race / Footpath. Potential to reveal medieval artefacts
814.4	814C	Existing bridge crossing	Yes	Bridge is dated with a plaque of *James Corballis Esq. 1814.* Has been strengthened in the past. Presumably associated with Ratoath Manor House. Bridge may need upgrading in character. Plaque needs to be retained. James Corballis https://www.libraryireland.com/Pedigrees2/corballis.php. Corballis family name used in Ratoath *Corballis Shopping Centre*
814.5	814D	Proposed public lighting	Yes	Adjacent to river. Potential to reveal medieval artefacts
814.6	814E	Footpath-cycle link to housing estate	Yes	Adjacent to river. Potential to reveal medieval artefacts
814.7	814E	Proposed 3m wide greenway path	Yes	Adjacent to river. Potential to reveal medieval artefacts
814.8	814E	Footpath-cycle link to housing estate	Yes	Adjacent to river. Potential to reveal medieval artefacts
814.9	814F	Proposed boardwalk structure	Yes	If this is to be piled then there is very little potential for revealing archaeological remains or artefacts. This is a small patch of old beech woodland that is probably estate planting
814.10	814F	Proposed public lighting	Yes	Adjacent to river. Potential to reveal medieval artefacts
814.11	814F	Proposed stepped access with handrails	Yes	Adjacent to river. Potential to reveal medieval artefacts
815.1	815A	Existing path to be widened (min 2.8m) at pinchpoints and resurfaced where necessary	Yes	Adjacent to river. Potential to reveal medieval artefacts
815.2	815A	Proposed public lighting	Yes	Adjacent to river. Potential to reveal medieval artefacts

Reference	DISCUSSION	Comment	Within or adjacent to Notification Zone	Potential archaeological impact
815.3	815B	Existing bridge crossing	Yes	This is a three centre arch and skew bridge leading to now demolished Jamestown House. No bridge is marked her eon the 1837 OS so there may previously have been a ford. The skew bridge would be a more 1850s design and this bridge also includes very well cut voussoirs. Bridge currently has very low parapets that are raised by abutting wooden paling fence. May need upgrade in character.
815.4	815C	Proposed public lighting	Yes	Grassed area associated with modern housing estate. No archaeological potential
815.5	815D	Proposed public lighting	Yes	Grassed area associated with modern housing estate. No archaeological potential
815.6	815D	Existing path to be widened (min 2.8m) at pinchpoints and resurfaced where necessary	Yes	Grassed area associated with modern housing estate. No archaeological potential

6 ARCHAEOLOGICAL POTENTIAL

6.1 General discussion (Figs 37-46)

Discussion 802A (Fig 37, Photo 1)
This road, Sean Eiffe Park, is a modern alignment on a previously green field site. No archaeological impact is predicted.

Discussion 802B (Fig 37, Photo 2)
This road, Sean Eiffe Park, is a modern alignment on a previously green field site. However, this end of the road is within the Ratoath Historic Town ME044-034 Notification Zone. No archaeological impact is predicted.

Discussion 803A (Fig 38, Photo 3)
This road is a modern alignment on the general line of the old Ratoath to Dunshaughlin medieval road within the Ratoath Historic Town Notification Zone. No archaeological impact is predicted.

Discussion 804A-F (Fig 39)
All the Discussion areas 804A-F are within the Ratoath Historic Town Notification Zone.

Discussion 804A (Fig 39, Photos 4, 5, 6)
The east to west Main Street is a modern alignment on the general line of the old Ratoath to Dunshaughlin medieval road. Well Road seems to be a link to the Curragha Road and Skryne Road junction, both of which date to around 1800 and connect to the R155 Fairyhouse Road at this junction. However, this junction has been subject to extensive refurbishment in the recent past.

Discussion 804B (Fig 39, Photos 4, 5, 6)
The east to west Main Street is a modern alignment on the general line of the old Ratoath to Dunshaughlin medieval road. The 1837 OS shows the 'Market Cross' ME044-034008 in the middle of the junction. This cross was reduced to its base only in the early 19th century and this base was damaged and removed in the 1920s. The implication is that this R125-R155 junction was a market area in the past. This junction has been subject to extensive refurbishment in the recent past.

The footpath at the R125 junction West side has a 'Replica of the Congressional Cross erected by the people of Ratoath 1993' surrounded by six bollards.

Discussion 804C (Fig 39, Photos 7, 8, 9)
Main Street here is a medieval junction near to the motte ME044-034001. The road may well be curving around an earlier rampart enclosure defining the medieval settlement. This junction is overlooked by the Protected Structure Marian Grotto ME044-306, which was itself built on the site of a previous 'Weighing Machine', which implies this junction was also a market place in the past. Nearby archaeological monitoring / excavations on the Skryne Road shows considerable archaeological survival in the area. The present Skryne Road was laid out around 1800 (it is not on the 1777-85 Taylor & Skinner *Roads of Ireland*) and the previous 'Drogheda' / Curragha road passed to the east of Ratoath Church down Glebe Lane.

Discussion 804D (Fig 39, Photos 10, 11)
The present footpath and lighting is on the line of a track on the 1837 OS. This track curves around the outer boundary that itself encircles the medieval motte ME044-034001 and previously led down to a Roman Catholic Chapel and a crossing point of the Broad Meadow River to the south-west. This might reflect a medieval road and river crossing point.

Discussion 804E (Fig 39, Photo 13)
Well Road R155 seems to be a link from the R125 to the Curragha Road and Skryne Road junction, both of which date to around 1800 and connect to the R155 Fairyhouse Road to the south.

Discussion 804F (Fig 39, Photo 14)
Main Street here is roughly on the line of a medieval road near to the motte ME044-034001. The road may well be curving around an earlier rampart enclosure defining the medieval settlement.

Discussion 805A (Fig 40, Photo 15)
Discussion area 805A is within the Ratoath Historic Town Notification Zone.
The R125 to the east of Ratoath is roughly on the line of a medieval road that is marked on the 1650s Down Survey. It most probably originally passed straight in front of the Ratoath Manor House, now the Silver Springs Nursing Home, but was realigned to curve around to the north sometime in the 18th century

Discussion 805B (Fig 40, Photo 16)
The R125 to the east of Ratoath is roughly on the line of a medieval road that is marked on the 1650s Down Survey.

Discussion 808A (Fig 41, Photo 17)
The R155 Curragha Road in this area was probably laid out around 1800 (at the same time as the Skryne Road).

Discussion 808B (Fig 41, Photos 18, 19)
Discussion area 808B is within the Ratoath Historic Town Notification Zone.
The R155 Curragha Road and the Skryne Road in this area were probably laid out around 1800.

Discussion 810A (Fig 42, Photo 20)
This section of the R155 Fairyhouse Road shows a distinct curve as the road descends to the south to cross the Broad Meadow River. Whether or not this curve reflects the outer boundary to a large circular enclosure is not known. There is a Smithy marked on the 1913 OS map and this seems to be a retained, but disused building on the road.

Discussion 811A (Fig 43, Photos 21, 22)
The very northern end of this section lies within the Ratoath Historic Town Notification Zone. The R155 Fairyhouse Road in this location is roughly on the line of an earlier road heading to the south towards Dublin as shown on the 1650s Down Survey. The present road is outside medieval Ratoath and is not indicated on the 1777-85 Taylor & Skinner Map 44 – but that does not mean it was not there. The

R155 is shown on the 1837 OS and adjacent is a school (now rebuilt as Ratoath Junior National School), a Police Station (demolished) and 'The Mill Tree' (demolished) which is probably a coaching inn / public house.

Discussion 813A (Fig 44, Photos 23, 24, 25)
The very eastern end of this section lies within the Ratoath Historic Town Notification Zone. The proposed cycleway is along an existing footpath with existing public lighting: widening the footpath from around 2.20m to 2.80m and upgrading the public lighting. A footpath is marked in this area on the 1913 OS. The footpath in Discussion 813A has a distinct dip and ridge running north to south and this could relate to a previous mill pond lip.

Discussion 813B (Fig 44, Photo 26, 27, 28, 29)
The existing footpath along this section seems to have been built entirely within an old mill race (Mill Race 1). This might be a tail race falling away from the mills shown on the OS mapping in the area of Tesco's, but it could also relate to an earlier mill. Whatever mill race this relates to, it is earlier than the 1837 OS and the race rejoined the Broad Meadow River a little to the east of the 1837 OS 'Stepping Stones' (see Discussion 813D). Mill Race 1 survives as the southern side of the present footpath only. Here it is formed of an almost vertical terrace cut-bank around 1-1.5m high that supports very old trees, with their roots helping to revet the bank. The northern side of Mill Race 1 does not survive, but the 1913 OS shows a second, separate mill race Mill Race 2 in this area that lies between Mill Race 1 – now occupied by the footpath - and the Broad Meadow River. Mill Race 2 on the 1913 OS rejoins the Broad Meadow River around 80m west of the present Bridge 1 crossing (Discussion 813D) – with the riverside footpath continuing along the older, longer mill race. Mill Race 2 shown on the 1913 OS has since been filled in to rejoin the Broad Meadow River around 60m east of the R155, and the area of the previous mill race is now a vegetated verge zone alongside the Broad Meadow River. Any widening of the present footpath through this area should not interfere with the Mill Race 1 terrace cut-bank on the southern side of the footpath.

Discussion 813C (Fig 44, Photo 30)
There is a path implied here on the 1837 OS and shown in this general area on the 1913 OS. The present unmade slippy path has eroded any surfacing it once had but probably survives in a roughly similar condition to the original layout. The path and stepping stones seem to cut though the Mill Race 1 tail race but these elements might all be contemporary. In any case the path forms part of an old crossing point of the Broad Meadow River.

Discussion 813D (Fig 44, Photo 30)
This is an ancient crossing point of the Broad Meadow River. It is approached by two old routeways from the south and two from the north. The crossing point lies directly below Ratoath Motte ME044-034001 and as a crossing point, may well pre-date the motte. Medieval river crossing points usually focus on broad, shallow parts of a river and it is clear that the Broad Meadow River has here been embanked on both sides. The 1837 OS shows a 'Stepping Stones' crossing at this location and by the 1913 OS these have been replaced by a bridge. The present crossing bridge here is a modern concrete replacement to the 1913 OS bridge.

Discussion 813E (Fig 44, Photo 31)
The existing footpath here has been constructed alongside the southern side of the Broad Meadow River, at the base of a fairly sharp, wooded slope up to the Meadowbank Hill housing estate. No footpath is marked on previous OS mapping, but some sort of unmade riverside path is likely. The existing footpath is created on an artificial riverside terrace that perhaps encroaches on the previous river bed area.

Discussion 813F (Fig 44, Photo 12) – See Also Discussion 804D
The existing footpath here lies on the line of an older path that is shown on the 1837 OS and is probably much older. There were occasional buildings on the southern side of this path in the past and the northern side is defined by the curving outer boundary to the Ratoath Motte. This boundary is not the boundary to the motte itself, but to an area of now wooded, south-facing hillslope between the motte and the River floodplain zone. It is likely this was a boundary to the medieval Ratoath settlement and the present footpath is a routeway running around that settlement. There is considerable security fencing along this boundary today. On the southern side of the present footpath the land seems to show a fine, gently sloping zone adjacent to the river, but also landfill and unmaintained grass and weeds.

Discussion 814A (Fig 45, Photo 31, 32)
The existing footpath lies alongside the western side of the current channel of the Broad Meadow River. This section of the Broad Meadow River was realigned to the east in the 19th century and both sides were steeply embanked, as seen from OS mapping.

Discussion 814B (Fig 45, Photo 32)
The 1913 OS shows a footpath leading to a bridge crossing point (Discussion 814C) in this rough location. There is nothing marked on the 1837 OS. At present there is an unmade, unofficial slippy access through the trees and down the slope from the south, but the area is restricted by several runs of security fencing.

Discussion 814C (Fig 45, Photo 33, 34)
This section partly lies within the Ratoath Historic Town Notification Zone. There is a single arched masonry bridge 'Bridge 2' at this location. The bridge has a plaque stating 'James Corbellis Esq. Bridge 1814'. The bridge was connected to the grounds of Ratoath Manor House on the eastern side of the Broad Meadow River. The bridge is not shown on the 1837 OS, but it might have been missed. The bridge arch western abutment has been strengthened with concrete and the river approaches have a form of rock armouring on the 1.5m high riverbank – western side. This armouring seems to imply there was a riverside road on this western side of the Broad Meadow River at that time. The parapets are 0.8-1.0m high with a cow-and-calf coping. The parapets show numerous, extensive repairs and variations in form and have probably been almost-completely rebuilt fairly recently.

Discussion 814D (Fig 45, Photos 34, 35, 36)
This section lies within the Ratoath Historic Town Notification Zone. There is only a narrow, grassed, unmade casual walking path along this area. The 1837 OS shows this area as the formal gardens to Ratoath Manor. These gardens are not marked in this area on the 1913 OS. Today the area is rank grass, weeds and occasional trees. The ground surface appears to be rutted as if run over by machines during nearby housing

estate construction. There could even have been dumping of spare soils in this area at that time as well.

Discussion 814E (Fig 45, Photo 37)
This section lies outside the Ratoath Historic Town Notification Zone. There is only a narrow, grassed, unmade casual walking path along this area. The 1837 and 1913 OS shows this area as part of the demesne estate to Ratoath Manor. There is some formal landscape planting but this has all since been cleared along the River. The new housing estate of 'The Village Green' showed evidence for cultivation ridges during its construction, confirming this as an area of fields. The ground surface appears to be rutted as if run over by machines during nearby housing estate construction. There could even have been dumping of spare soils in this area at that time as well.

Discussion 814F (Fig 45, Photo 35, 36, 37, 38, 42)
This area of old beech woodland has no formal path through it at present, but there is a casual, unmade walking route. This is probably along the line of an earlier trackway. This area is shown as woodland on the 1837 and 1913 OS mapping. At the south-eastern end a Lime Kiln is marked on the 1837 OS and there seems to be a hollow that might be a quarry in this area as well. Roughly in the middle of this area there is a 'stepping stones' crossing of the Broad Meadow River (some of the stones appear to be very large), but how old this is, is not known.

Discussion 815A (Fig 46, Photo 39)
This section lies outside the Ratoath Historic Town Notification Zone. There is only a narrow, grassed, unmade casual walking path along this area. The 1837 and 1913 OS shows this area as part of the demesne estate to Ratoath Manor. There is some formal landscape planting but this has all since been cleared along the River. The new housing estate of 'The Village Green' showed evidence for cultivation ridges during its construction, confirming this as an area of fields. The ground surface appears to be rutted as if run over by machines during nearby housing estate construction. There could even have been dumping of spare soils in this area at that time as well.

Discussion 815B (Fig 46, Photos 40, 41)
The main element here is a single arched, masonry bridge over the Broad Meadow River. The bridge (Bridge 3) appears to have a three-centre arch (similar to the bridges over the Boyne Navigation) with well cut voussoirs and rusticated abutment quoins. The bridge is slightly skewed NE-SW and has very low parapets with a cow-and-calf soldier course. A modern wooden paling fence on iron supports has been built to raise the parapet heights and there is a concrete bollard at the northern end to prevent vehicle traffic crossing. There is no bridge shown here on the 1837 OS but one is shown on the 1913 OS, leading to Jamestown House (demolished) to the south. The 1913 OS shows a previous fording point on the Broad Meadow River approximately 60m to the east and there may well have been a previous ford in the area of the present Bridge 3. The crossing point is shown as a townland boundary on the 1837 OS, but this boundary is moved eastwards when the Bridge 3 was built (or the 1837 is slightly inaccurate at this point). The present riverbanks have clearly been raised and formalised since the 1913 OS, but there is perhaps some rock armouring of the southern bank of the river channel that is probably older. The southern river bank is a quasi-vertical 'build' that perhaps reflects the location of a riverside road here.

Discussion 815C (Fig 46, Photos 42, 43)
The proposed cycleway-footpath is due to run along an existing paved footpath associated with the Jamestown Park housing estate landscaping alongside the Broad Meadow River. This landscaped area seems to be built up on modern soils and is separated from the river by a large hedge. Previously, an old road lead down to the River and a fording point on the 1913 OS and possibly this area is a much earlier fording point.

Discussion 815D (Fig 46, Photo 44)
The proposed cycleway-footpath is due to run along an existing paved footpath associated with the Jamestown Park housing estate landscaping alongside the Broad Meadow River. This landscaped area seems to be built up on modern soils and is separated from the river by a large hedge.

6.1 Impacts

Many locations in this project are within the Ratoath Historic Town ME044-034 archaeological Zone of Notification and as such will require Notification to the National Monuments Service at least two month in advance of any works so that they can give an opinion on any required or proposed archaeological response. In general the proposed works will be limited to the present street / footpath surfaces and landscaping so there is only a small potential for uncovering archaeological deposits, features or stray finds. However, if there is associated drainage, cable ducting and digging out of soft spots, the works may descend into archaeological levels more connected with medieval Ratoath. Should such works occur, the results are likely to be more connected with old street surfaces, market areas and their previous drainage arrangements than buildings / settlements or graveyards. The two Bridges, Bridge 2 and Bridge 3 should be treated sympathetically regarding any upgrading for use as a cycleway/formal footpath and the Corbellis plaque on Bridge 2 should be retained and cleaned.

Discussion 802A
No archaeological impact is predicted.

Discussion 802B
No archaeological impact is predicted.

Discussion 803A
No archaeological impact is predicted.

Discussion 804A
No archaeological impact is predicted.

Discussion 804B
The footpath at the R125 junction West side has a ‘Replica of the Congressional Cross erected by the people of Ratoath 1993’ surrounded by six bollards. This arrangement needs to be retained or removed and reset. Depending on any associated groundworks, this area has the potential to reveal archaeological remains or items

associated with medieval Ratoath: particularly the now-removed market Cross ME044-034008.

Discussion 804C
Any additional street furniture in front of the Protected Structure Grotto should be kept to a minimum and designed so as not to detract from the setting. Depending on any associated groundworks, this area has the potential to reveal archaeological remains or items associated with medieval Ratoath.

Discussion 804D
Depending on any associated groundworks, this area has the potential to reveal archaeological remains or items associated with medieval Ratoath.

Discussion 804E
Depending on any associated groundworks, this area has the potential to reveal archaeological remains or items associated with medieval Ratoath.

Discussion 804F
Depending on any associated groundworks, this area has the potential to reveal archaeological remains or items associated with medieval Ratoath.

Discussion 805A
Depending on any associated groundworks, this area has the potential to reveal archaeological remains or items associated with medieval Ratoath.

Discussion 805B
Depending on any associated groundworks, this area has the potential to reveal archaeological remains or items associated with medieval Ratoath.

Discussion 808A
No archaeological impact is predicted.

Discussion 808B
Depending on any associated groundworks, this area has the potential to reveal archaeological remains or items associated with medieval Ratoath.

Discussion 810A
Depending on any associated groundworks, this area has the potential to reveal archaeological remains or items associated with medieval Ratoath.

Discussion 811A
Depending on any associated groundworks, this area has the potential to reveal archaeological remains or items associated with medieval Ratoath. This is mostly concerned with the very northern end.

Discussion 813A
Depending on any associated groundworks, this area has the potential to reveal archaeological remains or items associated with medieval Ratoath. This is an area of riverside that may contain dumped, dredged material from the River and may also show evidence for previous mill races.

Discussion 813B
Depending on any associated groundworks, this area has the potential to reveal archaeological remains or items associated with medieval Ratoath. This is an area of riverside that may contain dumped, dredged material from the River and may also show evidence for previous mill races. The present vertical bank of the riverside footpath is probably part of a mill race that pre-dates the 1837 OS and should be retained. The trees associated with this mill race bank may require crown trimming in the future, but the trees should not be felled without thought as to how their root systems are holding the mill race bank together. This mill race is an historic feature of the town of Ratoath and could be promoted with additional information.

Discussion 813C
Depending on any associated groundworks, this area has the potential to reveal archaeological remains or items associated with medieval Ratoath.

Discussion 813D
The present modern bridge here (Bridge 1) has very low parapets and may require upgrading. If the bridge is due to be completely replaced then any associated groundworks have the potential to reveal archaeological remains or items associated with medieval Ratoath. This is an area of riverside that may contain dumped, dredged material from the River and may also show evidence for previous mill races or River crossing points.

Discussion 813E
Depending on any associated groundworks, this area has the potential to reveal archaeological remains or items associated with medieval Ratoath. This is an area of riverside that may contain dumped, dredged material from the River and may also show evidence for previous road surfaces.

Discussion 813F – See Also Discussion 804D
Depending on any associated groundworks, this area has the potential to reveal archaeological remains or items associated with medieval Ratoath. This path is quite close to medieval motte ME044-034001 and perhaps a boundary to the medieval settlement of Ratoath. This is an area of riverside that may contain dumped, dredged material from the River and may also show evidence for previous mill races.

Discussion 814A
The present river along this section is in a channel dating to the 19th century and the present footpath is on the line of the original infilled channel. Depending on any associated groundworks, this area has the potential to reveal archaeological remains or items associated with medieval Ratoath. This is an area of riverside that may contain dumped, dredged material from the River and may also show evidence for previous road surfaces.

Discussion 814B
Depending on any associated groundworks, this area has the potential to reveal archaeological remains or items associated with medieval Ratoath.

Discussion 814C
This crossing is the location of Bridge 2, a plaque-dated bridge referring to local man James Corbellis (Corballis) of Ratoath Manor (now the Silver Springs nursing home). Any upgrading of this bridge should be done sympathetically.

Discussion 814D
Depending on any associated groundworks, this area has the potential to reveal archaeological remains or items associated with medieval Ratoath. This is an area of riverside that may contain dumped, dredged material from the River. However, the area has perhaps been affected by nearby housing construction.

Discussion 814E
Depending on any associated groundworks, this area has the potential to reveal archaeological remains or items associated with medieval Ratoath. This is an area of riverside that may contain dumped, dredged material from the River. However, the area has perhaps been affected by nearby housing construction.

Discussion 814F
Depending on any associated groundworks, this area has the potential to reveal archaeological remains or items associated with medieval Ratoath. This is an area of riverside that may contain dumped, dredged material from the River and may also show evidence for previous road surfaces, quarrying and perhaps lime kilns.

Discussion 815A
Depending on any associated groundworks, this area has the potential to reveal archaeological remains or items associated with medieval Ratoath. This is an area of riverside that may contain dumped, dredged material from the River. However, the area has perhaps been affected by nearby housing construction.

Discussion 815B
This crossing is the location of Bridge 3, a well built, perhaps mid-19th century skew bridge probably associated with demolished Jamestown House. Any upgrading of this bridge should be done sympathetically.

Discussion 815C
This area of landscaped housing estate has very little potential for revealing any archaeological remains.

Discussion 815D
This area of landscaped housing estate has very little potential for revealing any archaeological remains.

6.2 Conclusions
The construction works should be subject to a programme of archaeological monitoring and metal detecting of spoil. These works should be followed by a full archaeological report submitted to the National Monuments Service.

7 ACKNOWLEDGEMENTS

Patrick Shore, Executive Engineer, Meath County Council

8 REFERENCES

Electronic Sources

www.excavations.ie – Summary of archaeological excavation from 1970–2009.

www.archaeology.ie – National Monuments Service website listing all SMR sites with aerial photographs.

www.osi.ie – Ordnance Survey aerial photographs (1995, 2000 & 2005) and historic OS mapping (first edition 6" and 25"). http://map.geohive.ie/mapviewer.html

http://www.logainm.ie/ - Placename index

http://www.buildingsofireland.ie/ -National Inventory of Architectural Heritage

http://countydevelopmentplan.meath.ie/adoptedplan/ - Meath County Council 2013, Meath County Council County Development Plan 2013-2019

Environment Protection Agency website
https://gis.epa.ie/EPAMaps/

http://downsurvey.tcd.ie/down-survey-maps.php Down Survey mapping

http://digitalcollections.tcd.ie/home/index.php?DRIS_ID=LCN14679989_001
Taylor & Skinner 1777-85 Maps of the Roads of Ireland

Google Maps

Bing Maps

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