

Appendix 2A:

Rathcoole Lands Land Use Concept and Zoning Proposals

SDCC Rathcoole Lands

Metropolitan
Workshop

Architecture + Urbanism

Land Use
Concept
and Zoning
Proposals

06th December 2021

The purpose of this document

The purpose of this document is primarily to investigate potential alternative land uses for lands at Rathcoole, the future development potential of the lands and to bring forward proposals for re-zoning having regard to protecting existing habitats, biodiversity and the Rathcoole woodlands, the need for social and affordable housing, community infrastructure and access in line with proper planning and sustainable development.

This work is being carried out subsequent to a previous draft masterplan outlined to South Dublin County Council in July 2019 and has been informed by (inter alia) ecological survey and flood risk assessment work carried out on the site.

The context for this document is framed by Objectives contained in the Draft South Dublin County Council Development Plan 2022 - 2028 (July 2021), particularly the following Specific Local Objective:

CS10 SLO 1:

To investigate the potential for alternative land uses for the lands currently zoned RES-N (To provide for new residential communities in accordance with approved area plans) and OS (To preserve and provide for open space and recreational amenities) as identified by the SLO on the CDP land use zoning map, having regard to protecting existing habitats, biodiversity and the Rathcoole woodlands, the need for social and affordable housing, community infrastructure and access. Following this assessment, and where alternative land use arrangements are identified in line with the proper planning and sustainable development of the area, to bring forward proposals for re-zoning.

The professional team

Client
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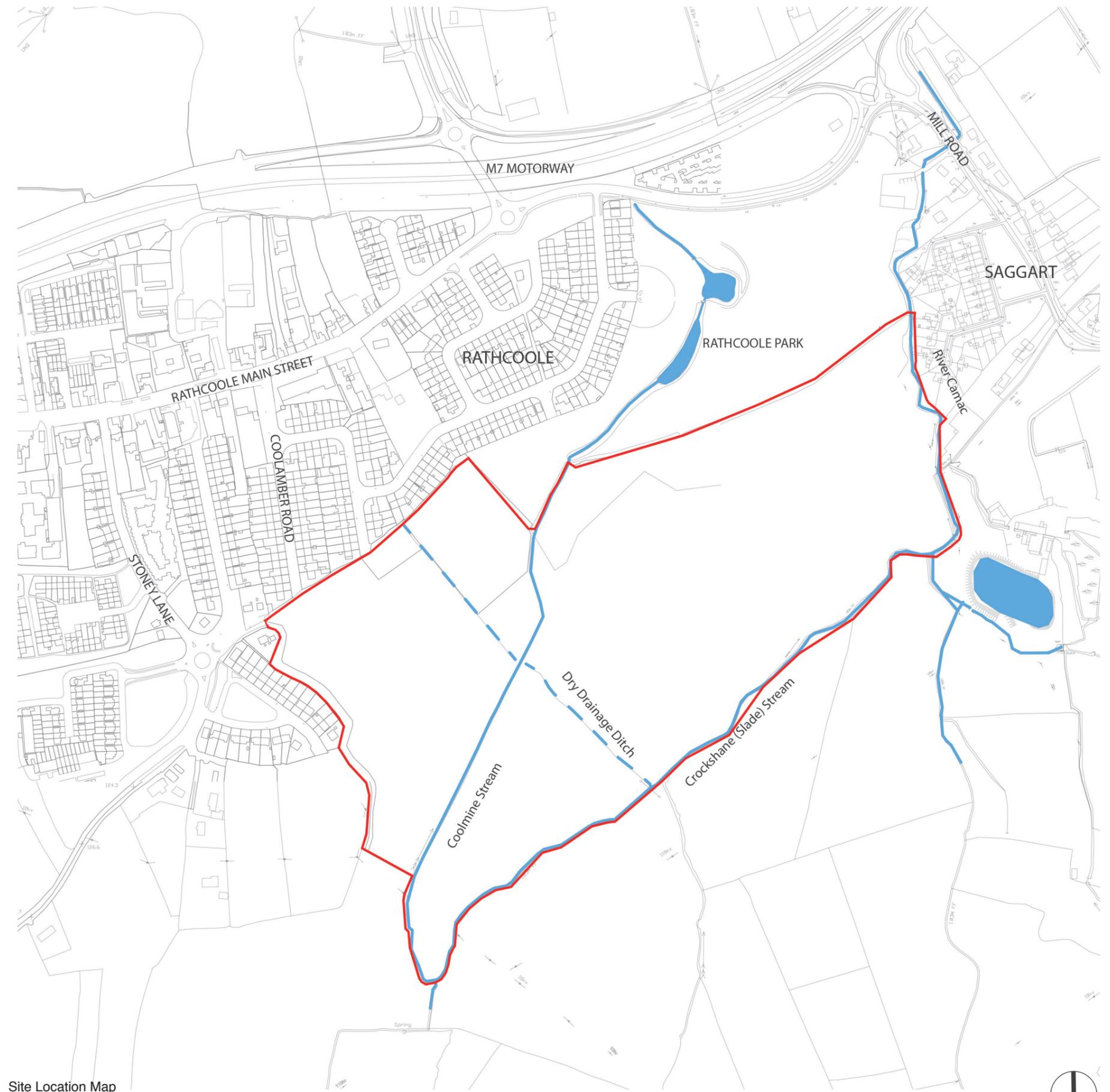


Site Location

The site in question is located on greenfield lands located to the south and southeast of Rathcoole Village. To the west of the site is the junction between Stoney Lane and Stoney Hill Lane.

The northern boundary of the site is backed onto by an existing residential development as well as the existing Rathcoole Park further east. The River Camac (a tributary of the River Liffey) forms the eastern boundary of the site with the village of Saggart located on the other side. The southern portion of the site is bordered by the Crockshane (Slade) Stream, with further greenfield lands to the other side.

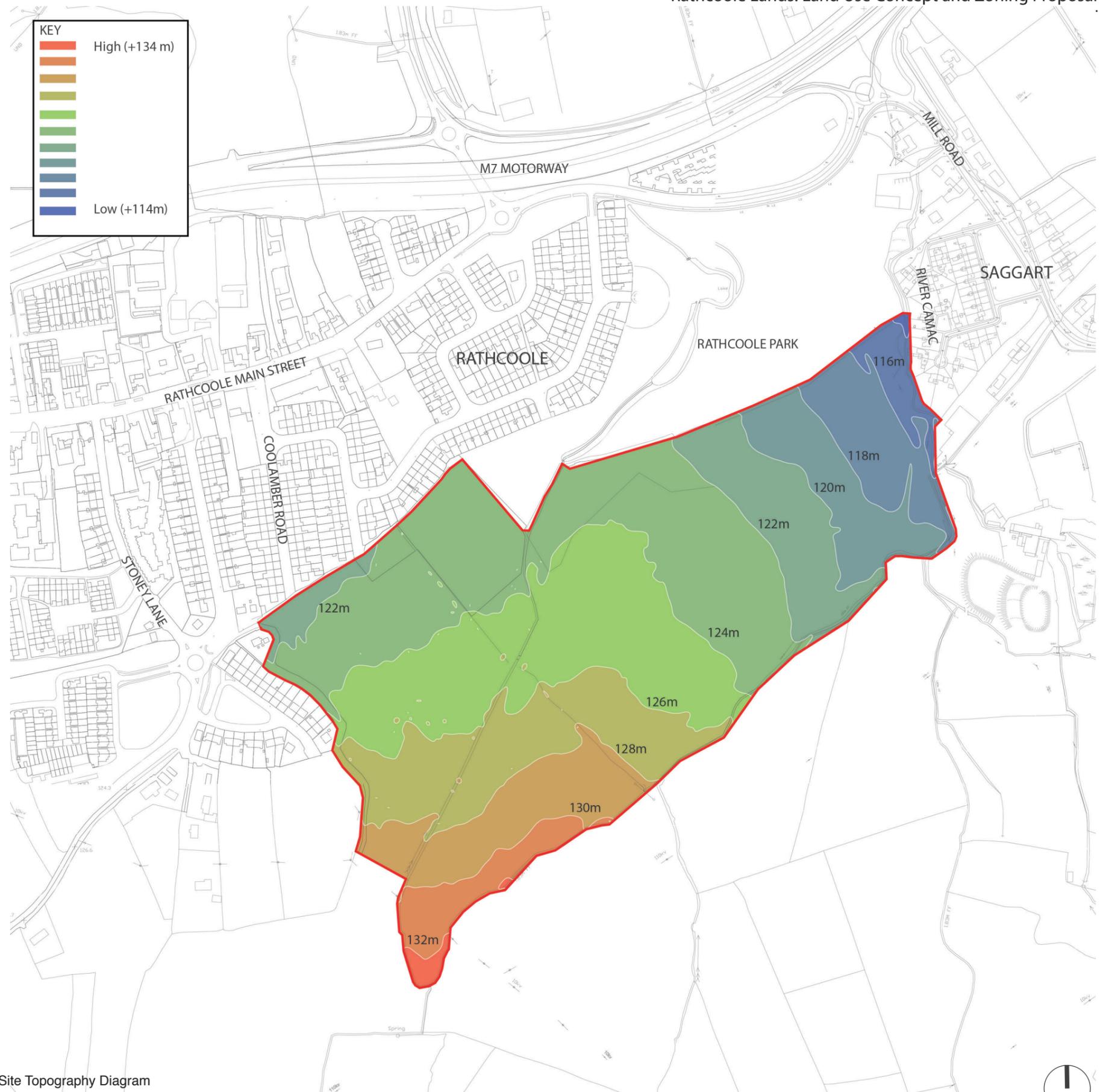
The Coolmine Stream runs through the site from the southern end in a northeastern direction into Rathcoole Park. There is also a smaller dry drainage ditch present that runs perpendicular to this with a northwest southeast alignment. (See opposite)



Site Location Map

Topography

The site is evenly sloped from its highest point in the extreme south of the site to its lowest point along its northern boundary. Over the length of the site there is a level difference of approx.16 metres with a shallow gradient. (Approximately 1 in 60)



Zoning

Zoning Objectives

The site features 3 distinct zoning areas under the *South Dublin Development Plan 2016-2022*;

- The north eastern section of the site is zoned as OS (To preserve and provide for open space and recreation amenities)
- The western section of the site is zoned as RES-N (To provide for new residential communities in accordance with approved area plans)
- There is also a small section of the site along its southern boundary zoned as RU (To protect and improve rural amenity and to provide for the development of agriculture)

Surrounding Zoning

In addition to the above zoning featured on site, to the north, west, and east of the site there are lands zoned as RES (To protect and/or improve residential amenity)

Site Specific Objectives

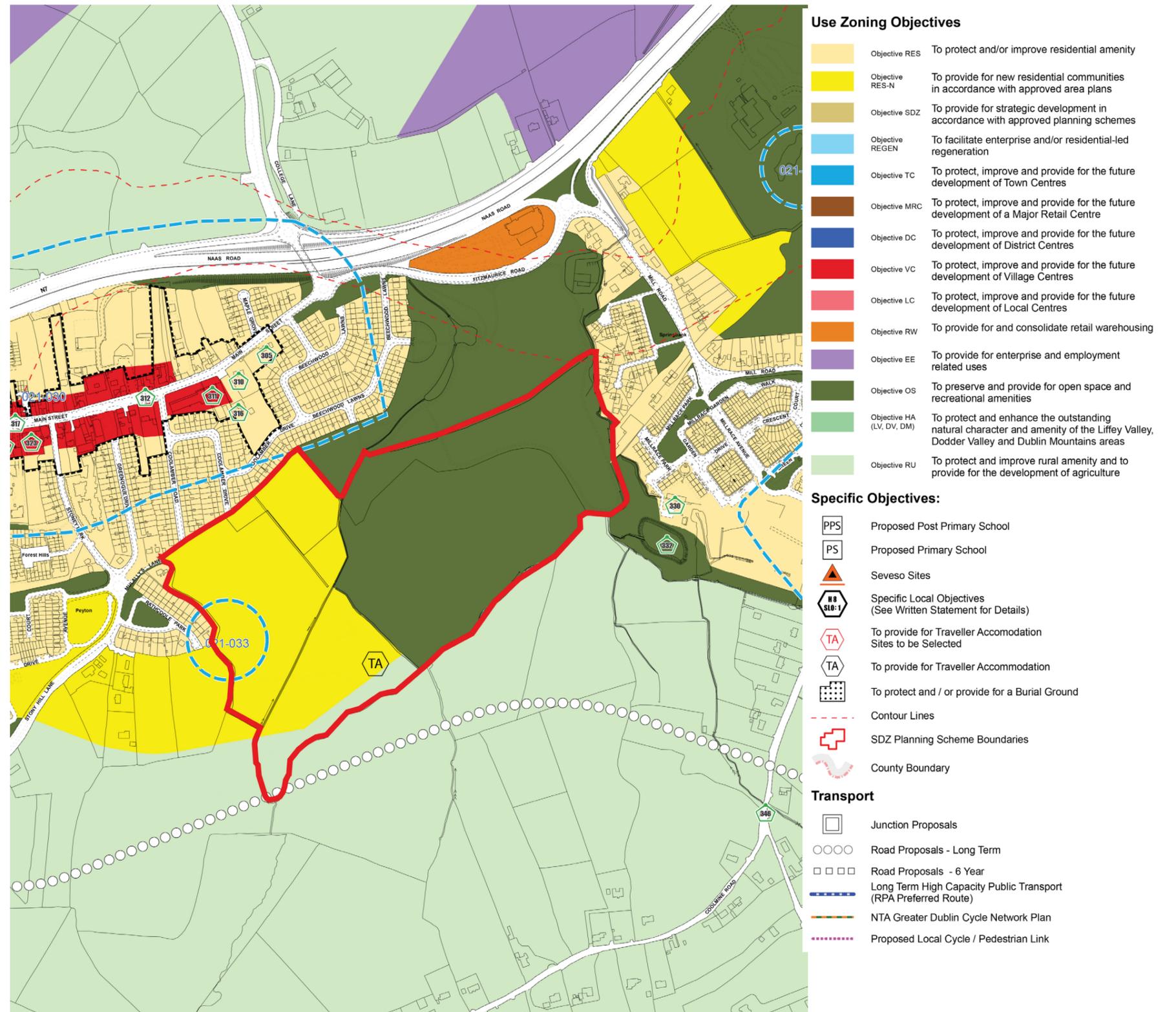
The site also contains a specific objective to provide for Traveller Accommodation. There is also a long-term road proposal shown which abuts the extreme southern end of the site. This is the Western Dublin Orbital Route which is proposed to run from the N81 (east of the site) to the Leixlip Interchange (west of site)

Draft South Dublin County Development Plan 2022-2028

The Draft County Development plan retains the same Zoning and Traveller Accommodation Objectives for the site when compared to the current County Development Plan. A specific Objective for a Proposed School (S) plus Two additional Specific Local Objectives have been added to the subject lands under the Draft County Development Plan as follows:

CS10 SLO 1: To investigate the potential for alternative land uses for the lands currently zoned RES-N (To provide for new residential communities in accordance with approved area plans) and OS (To preserve and provide for open space and recreational amenities) as identified by the SLO on the CDP land use zoning map, having regard to protecting existing habitats, biodiversity and the Rathcoole woodlands, the need for social and affordable housing, community infrastructure and access. Following this assessment, and where alternative land use arrangements are identified in line with the proper planning and sustainable development of the area, to bring forward proposals for re-zoning.

G17 SLO1: The current wildlife corridor between Saggart and Rathcoole be maintained and the need to preserve this wildlife corridor be incorporated into the design and development plans for Rathcoole park.



Site Zoning Diagram - Extracted from South Dublin Development Plan 2016-2022

Constraints and Opportunities

Metropolitan Workshop has identified the following Constraints and Opportunities for the site (See map on next page):

Constraints

- The site is traversed and bound by water courses and flood risk identification/assessment reports indicates that parts of the site are at risk of fluvial flooding
- There are a number of existing underground watermains present on the site which have associated wayleaves; in particular to the eastern end of the site and to the southern boundary:
 - 10m wayleaves (5m either side of the asset) to the watermain that runs parallel with the Crookshane/Slade stream as well as the watermain that runs parallel with the Camac River;
 - 16m wayleaves (8m either side of the asset) to the 2no. watermains that pass through the southern end of the site as well as the remaining watermain which runs north-south through the site and into Rathcoole Park.
- There are several overhead powerlines in the vicinity, some of which pass over the eastern end of the site. These include:
 - Medium voltage (10kV): There is a 6m safety zone present either side of these lines extending from the outer edge of the lines. (i.e. total width = width of lines + 12m)
 - High voltage (110kV) overhead powerline that runs parallel with the south eastern boundary. There is a 10m safety zone present either side of this line extending from the outer edge of the lines, however this zone does not intersect with the site at any point. (total width = width of lines + 20m)
- There are a number of ecologically sensitive habitats on the lands that require careful consideration
- The eastern, western, and northwestern boundaries of the site are formed by the rear gardens of existing estates, which offer reduced permeability and no passive surveillance.
- Waste Water capacity may be limited by surrounding existing infrastructure
- Site connectivity is constrained by way of their only being one access route through Mullaly lane which requires an upgrade.

Opportunities

- The site is a short walk from the centre of Rathcoole Village, which contains existing community, retail and residential amenities as well as public transport services. The village also provides opportunities for future transport links.
- There are a number of potential links and access routes to existing residential developments, as well as a potential future SHD development to the southwest of the site
- The existing natural environment can be integrated with development to create unique setting for education, housing and sports.
- There is potential for a strong landscape connection from the site through Rathcoole Park.
- Existing waterways offer potential for walkways and cycleways (subject to protecting environmental sensitivities) connecting through the site to the Greater Dublin Cycle Network via Saggart, City West and to the Slade Valley Trail and Kildare.
- Potential connection to Saggart and existing sports facilities to southeast
- Opportunity to tie in with GI policy in the Draft Development Plan including objective to development Rathcoole Woodlands as part of wider walking trail that links with Saggart.

Constraints and Opportunities

KEY

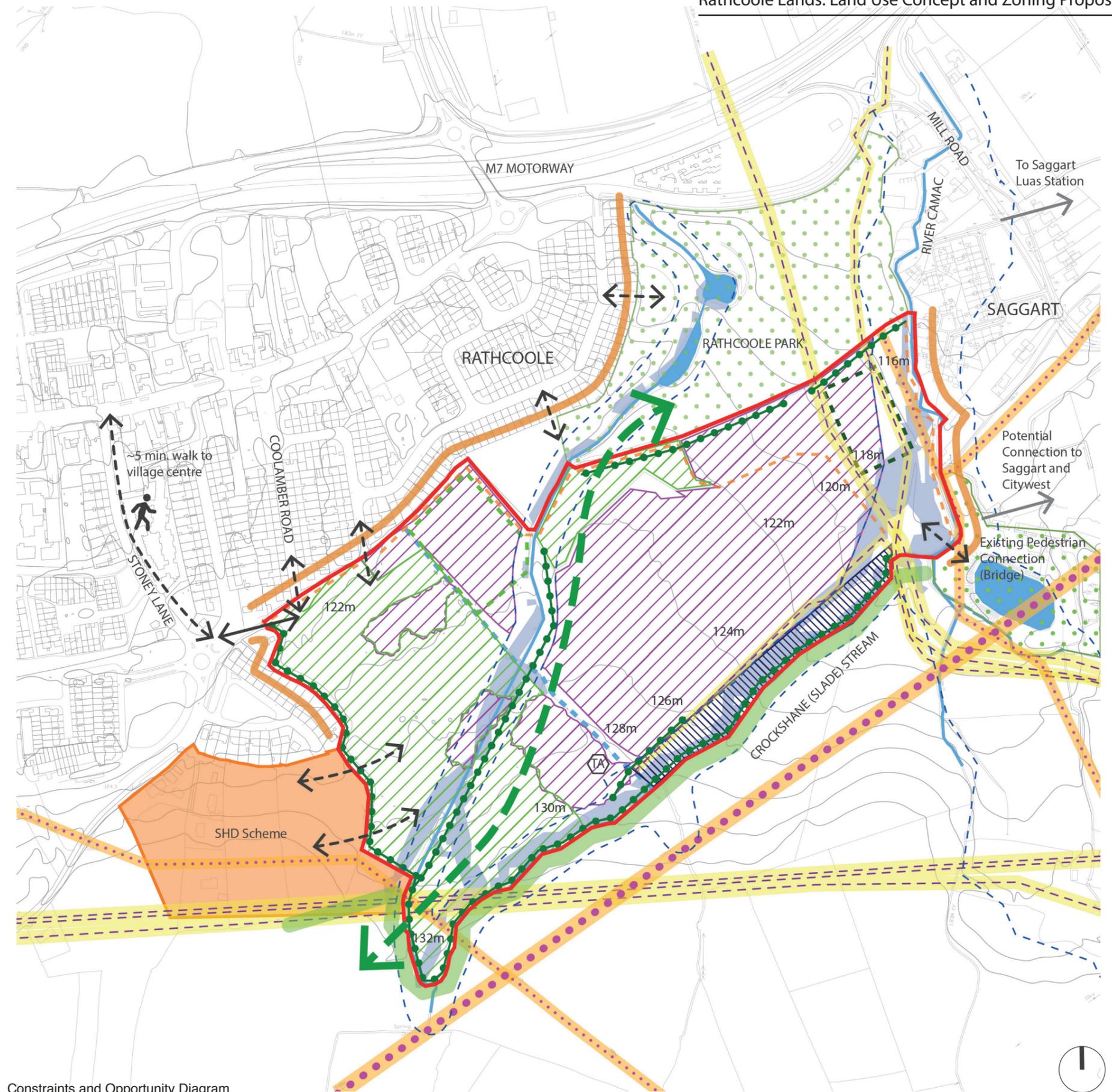
- Rathcoole Lands
- Streams/Watercourses
- Dry Ditch
- Agricultural Zoned Lands
- Ecology; Alluvial Woodland + Hay Meadow
- Area Excluding Annex I Habitats
- Orchid Rich Grassland
- Existing Hedgerows
- TA Development Plan Objective; Traveller Accommodation
- Existing Junior GAA Pitch
- Primary School Site

CONSTRAINTS:

- 25m Riparian Buffer Zone (10m riparian protected zone + 15m buffer for open space either side of the watercourse. Source: Planning For Watercourses In The Urban Environment by Inland Fisheries Ireland)
- Flood Zones (based on Draft County Development Plan 2022 - 2026 SFRA)
- Underground Services + Wayleaves
- Overhead Powerlines (110 kV) + Wayleaves
- Overhead Powerlines (10 kV) + Wayleaves
- Poor Rear Boundary - No Passive Surveillance
- Lack of Connectivity

OPPORTUNITIES:

- Adjacent SHD Scheme; potential future connections
- Potential Main Connection; Vehicular+Cycle+Pedestrian
- Potential Other Connections; Cycle+Pedestrian
- Potential Green Link to Rathcoole Park

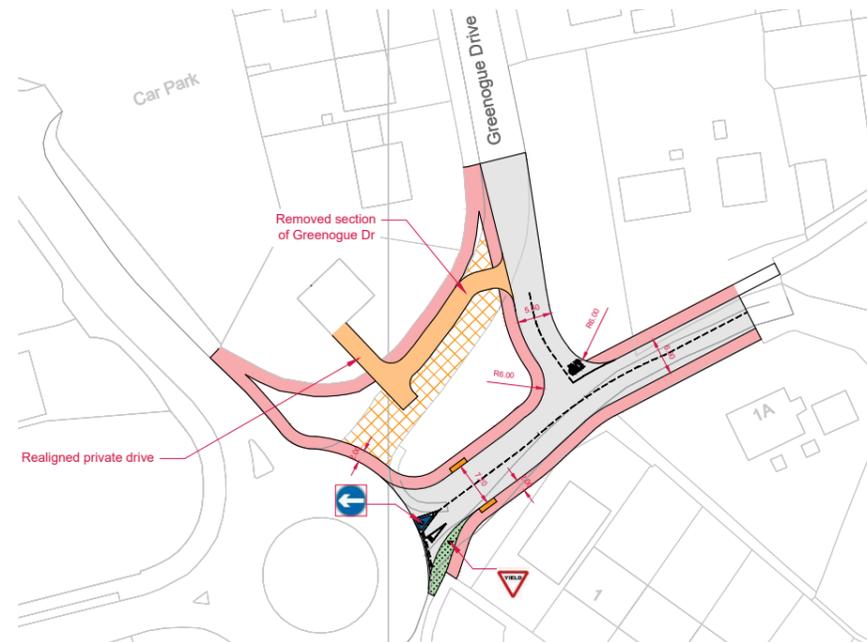


Constraints and Opportunity Diagram

Draft Scheme Analysis

Previous Draft Masterplan (July 2019)

- Draft masterplan scheme for 251 dwellings (151 houses; 27 duplexes; 73 apartments)
- Site Area: 12.69 Ha
- Residential Site Area: 6.94 Ha
- Density: 36.2 dph
- Building Heights: 1-4 storeys
- Also included: Primary School (See next slide for further analysis); Public Open Space (~3.36 Ha); GAA Facility (3 no. Senior Pitches, 1 no. Junior Pitch, Pavilion Building, and maintenance building)



Stoney Hill Road/Lane Access Arrangement from Draft Masterplan



Draft Masterplan

Draft Scheme Analysis

Department of Education Site

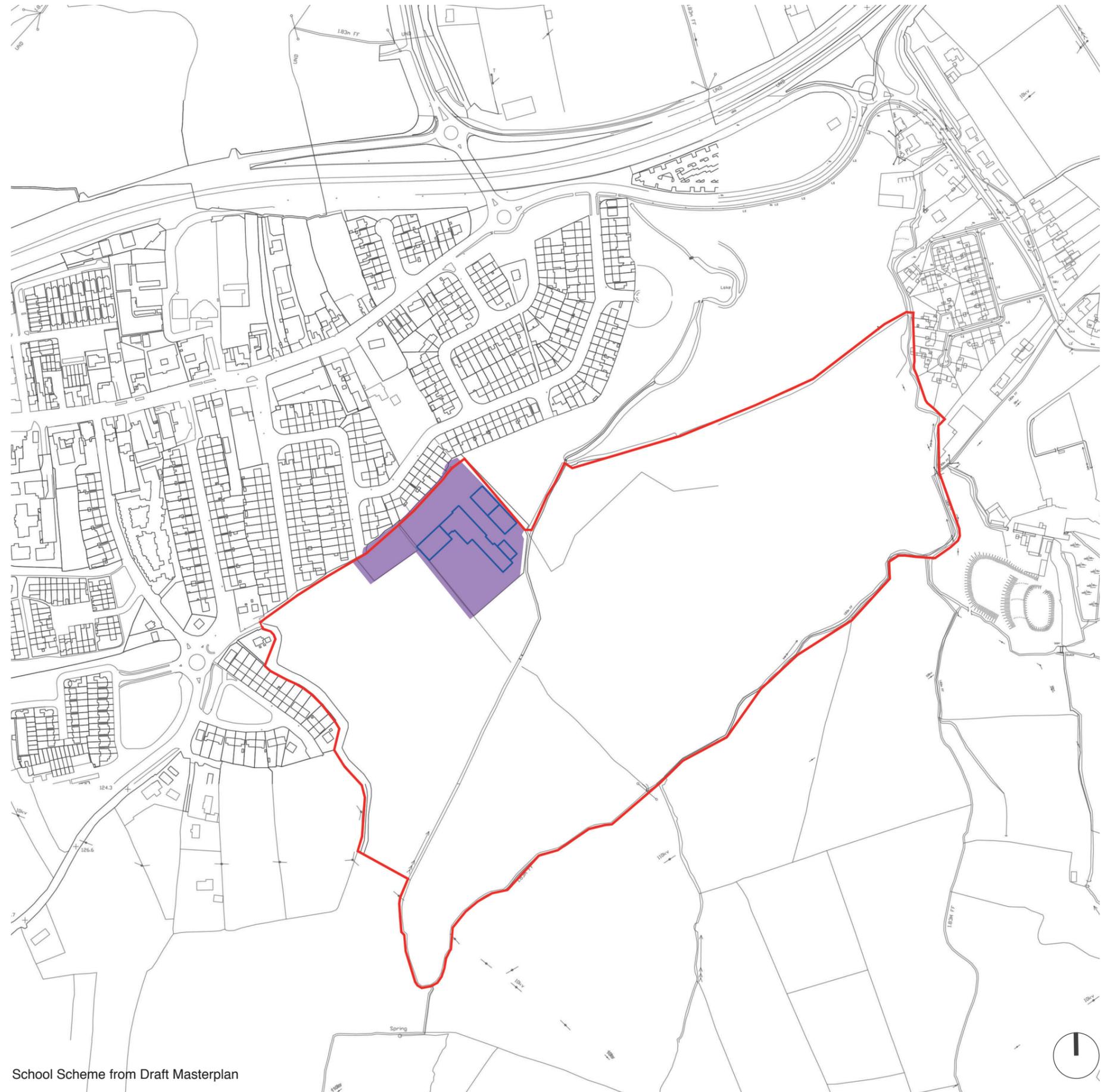
- For the purpose of informing land use and zoning proposals, the land use requirements for a single storey 18 classroom building are set out below.
- Department of Education site as shown on previous masterplan: 1.8 Ha
- Proposed single storey, 18-classroom building*. According to TGD-025 Identification and Suitability Assessment of Sites for Primary Schools (2007) recommended site area for a school of this size is 1.5 Ha for a 2-storey or 1.6 Ha for a single storey school. (see extract below)
- * 2-Stream (16 no. classrooms) + 2 no. SNU classrooms

Site Components (all figures in m ²)	Size of School			
	4 to 8 Classroom	8 to 16 Classroom	16 to 24 Classroom	24 to 32 Classroom
School Footprint (Two Storey Building)	1000	1600	2200	3500
Ballcourts	600	1200	1800	2400
Matching Green space	600	1200	1800	2400
Junior Play area	200	400	600	800
Matching Green space	200	400	600	800
Traffic Circulation (drop + pick up only)	1500	1500	2000	2500
Staff Parking (2 spaces/class)	550	800	1200	1400
Paths and Paving	1000	1200	1800	2400
Waste Treatment Plant	0	0	0	0
Parent Parking (ball court only)	0	0	0	0
Future Extension	0	0	0	0
Sub Total	5650	8300	12000	16200
+ Separation Zones 25%	1412.5	2075	3000	4050
Totals in sq m	7062.5	10375	15000	20250
Acre	1.75	2.56	3.70	5.00
Recommended Site Area in Hectares For Two Storey School Buildings	*0.71	*1.04	*1.5	*2.025
School Footprint (Single Storey bldg)	1500	2400	3100	5000
All other site elements	4650	6700	9800	12700
Sub Total	6150	9100	12900	17700
+ Separation Zones 25%	1537.5	2275	3225	4425
Totals in sq m	7687.5	11375	16125	22125
Acre	1.90	2.80	4.00	5.47
Recommended Site Area in Hectares For Single Storey School Buildings	*0.77	*1.14	*1.6	*2.2

***Note 1:** Where there is no public sewer and the on site treatment of effluent is necessary, the provision of a percolation area or other filter mechanism may require the site to be increased in size. The area required will be determined by the site conditions and therefore must be calculated on a case by case basis.

***Note 2:** Where additional accommodation (e.g. community facilities, special needs accommodation, etc.) is proposed, or where there is a possibility that it may be required, the above figures should be adjusted accordingly.

***Note 3:** In higher density urban developments where the optimum site area set out above can not be identified the Planning and Building Unit should be consulted at the earliest possible stage.



School Scheme from Draft Masterplan

Extract from TGD-025, p.6

Note on Parking

Based on the parking standards set out in the SDCC Development Plan (2016-2022) as well as the Draft SDCC Development Plan (2022-2028) [see extracts opposite], the parking maximum figures for the School + GAA facilities are calculated below.

For the purpose of informing land use and zoning proposals, the parking requirements for a single storey 18 classroom primary school, 3 GAA pitches and a changing pavilion are set out below.

Further to the location of the lands, Zone 2 parking standards have been applied.

18 Classroom School @ 0.5 Spaces per Classroom:	9 no. Spaces
3 GAA Pitches @ 7.5 Spaces per Pitch:	23 no. Spaces
330 sqm Changing Pavilion @ 1 Space per 40 sqm:	9 no. Spaces
Total Maximum Spaces:	41 no. Spaces

Table 11.23: Maximum Parking Rates (Non Residential)

CATEGORY	LAND USE	ZONE 1	ZONE 2
Accommodation⁶	Hotel ⁷	1 per bedroom	0.5 per bedroom
	Mobile Home Park ⁸	1 per unit	1 per unit
	Nursing Home, Retirement Home	1 per 4 residents	1 per 8 residents
	Student Accommodation	1 per 10 bed spaces	1 per 20 bed spaces
Civic, Community and Religious	Bank Community Centre Library Public Institution	1 per 25 sqm GFA	1 per 50 sqm GFA
	Place of worship	1 per 6 seats	1 per 12 seats
	Funeral Home	1 per 20 sqm GFA	1 per 20 sqm GFA
Education	College of Higher Education	1 per staff + 1 per 15 students	1 per 2 staff + 1 per 30 students
	Crèche School ⁹	1 per classroom	0.5 per classroom
Medical	Clinics and Group Practices	2 per consulting room	1.5 per consulting room
	Hospital	1 per 100 sqm GFA	1 per 150 sqm GFA
Retail and retail Service	Café Restaurant	1 per 15 sqm GFA	1 per 20 sqm GFA
	Bar Club ¹⁰	1 per 30 sqm	1 per 40 sqm
	Retail Convenience	1 per 15 sqm	1 per 25 sqm
	Retail Comparison	1 per 25 sqm	1 per 35 sqm
	Retail Warehousing	1 per 50 sqm	1 per 50 sqm
	Vehicle Service Station	1 per 250 GFA	1 per 250 GFA
Enterprise and Employment	Offices ¹¹ Manufacturing	1 per 50 sqm GFA	1 per 75 sqm GFA
	Warehousing	1 per 100 sqm GFA	1 per 200 sqm GFA
Sports and recreation¹²	Bowling Alley	3 per lane	1 per lane
	Archery Ranges Driving Ranges	1 per 3m of base line	1 per 3m of base line
	Clubhouse Gymnasium ¹³	1 per 20 sqm GFA	1 per 40 sqm GFA
	Courts Pitches	15 per pitch	7.5 per pitch
	Golf or Pitch And Putt Courses ¹⁴	2 spaces per hole	2 spaces per hole
Venue	Auditoriums Cinema Conference Centre Theatre	1 per 5 seats	1 per 10 seats
	Stadium	1 per 15 seats + 1 coach space per 500 spectators	1 per 15 seats.
Other	Marina (Canal)	1 space per berth (excluding visitor berths)	1 space per berth (excluding visitor berths)

Extract from SDCC Development Plan (2016-2022), Table 11.23

Table 13.25: Maximum Parking Rates (Non-Residential)

Category	Land-Use	Zone 1	Zone 2
Accommodation	Hotel ⁷	1 per bedroom	0.5 per bedroom
	Mobile Home Park ⁸	1 per unit	1 per unit
	Nursing Home Retirement Home	1 per 4 residents	1 per 8 residents
	Student Accommodation	1 per 10 bed spaces	1 per 20 bed spaces
Civic, Community and Religious	Bank Community Centre Library Public Institution	1 per 25 sqm GFA	1 per 50 sqm Gross Floor Area (GFA)
	Place of Worship	1 per 6 seats	1 per 12 seats
	Funeral Home	1 per 20 sqm GFA	1 per 20 sqm GFA
Education	College of Higher Education	1 per staff plus 1 per 15 students	1 per 2 staff plus 1 per 30 students
	Crèche School ⁹	1 per classroom	0.5 per classroom
Medical	Clinics and Group Practices	2 per consulting room	1.5 per consulting room
	Hospital	1 per 100 sqm GFA	1 per 150 sqm GFA
Retail and Retail Service	Café Restaurant	1 per 15 sqm GFA	1 per 20 sqm GFA
	Bar Club ¹⁰	1 per 30 sqm	1 per 40 sqm
	Retail Convenience	1 per 15 sqm	1 per 25 sqm
	Retail Comparison	1 per 25 sqm	1 per 35 sqm
	Retail Warehousing	1 per 50 sqm	1 per 50 sqm
	Vehicle Service Station	1 per 250 sqm GFA	1 per 250 sqm GFA
Enterprise and Employment	Offices ¹¹ Manufacturing	1 per 50 sqm GFA	1 per 75 sqm GFA
	Warehousing	1 per 100 sqm GFA	1 per 200 sqm GFA
	Bowling Alley	3 per lane	1 per lane
	Archery Ranges Driving Ranges	1 per 3m of base line	1 per 3m of base line
Sports and Recreation¹²	Clubhouse Gymnasium ¹³	1 per 20 sqm GFA	1 per 40 sqm GFA
	Courts Pitches	15 per pitch or court	7.5 per pitch or court
	Golf or Pitch and Putt Courses	2 spaces per hole	2 spaces per hole
Venue	Auditoriums Cinema Conference Centre Stadium Theatre	1 per 5 seats	1 per 10 seats
	Stadium	1 per 15 seats plus 1 coach space per 500 spectators	1 per 15 seats
Other	Marina (Canal)	1 space per berth (excluding visitor berths)	1 space per berth (excluding visitor berths)

Extract from Draft SDCC Development Plan (2022-2028), Table 11.23

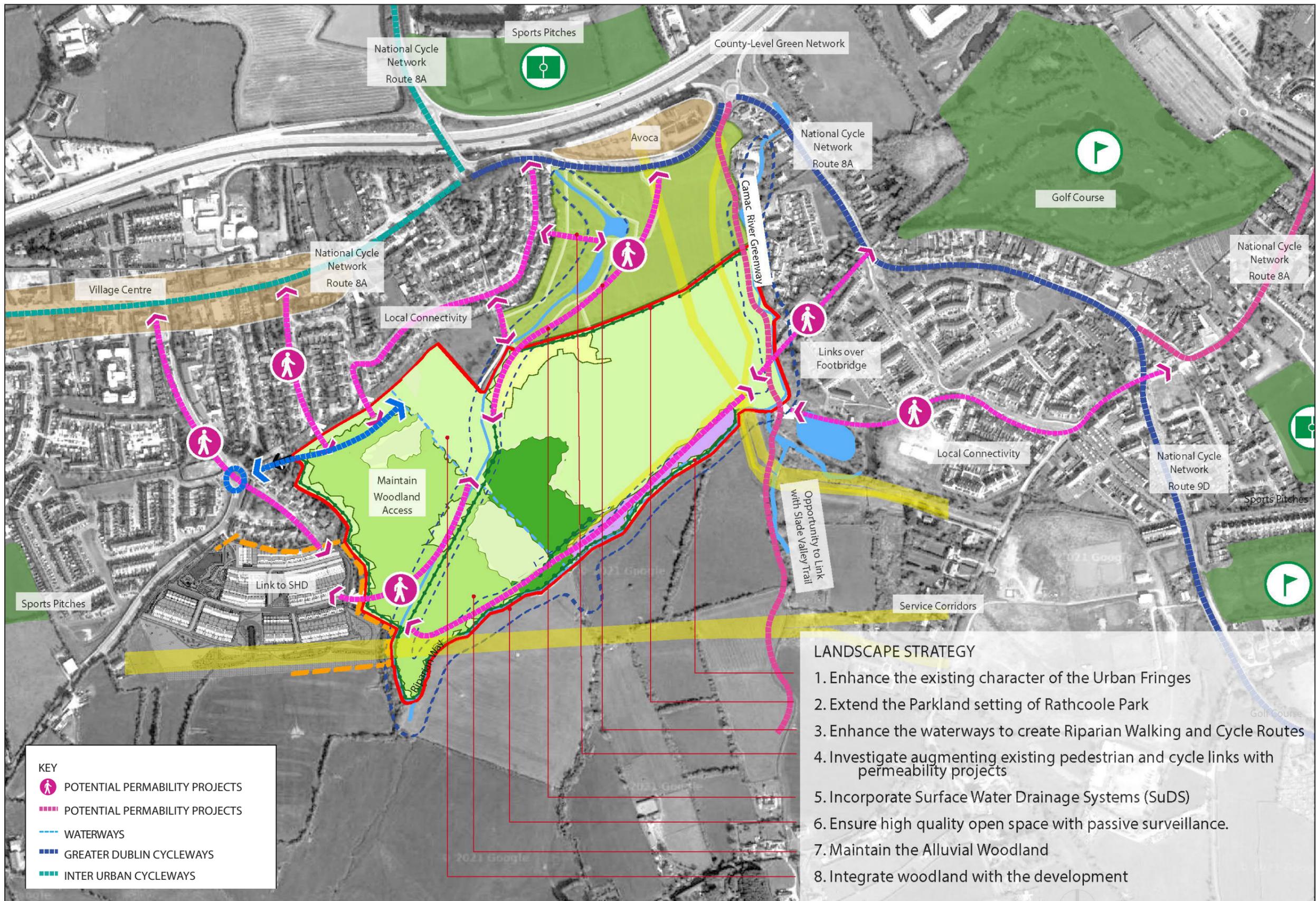
Existing Condition and Constraints Map

- - - - - Site Boundary
- Watermain Wayleaves:
 1. 300mm Ductile Iron Main - 5m Wayleave either side of pipe
 2. 600mm Ductile Iron Main - 5m Wayleave either side of pipe
 3. 1200mm Ductile Iron Main - 8m Wayleave either side of pipe
 4. 33"mm Ductile Iron Main - 8m Wayleave either side of pipe
- — — — — Watercourse
- - - - - Dry Ditch
- Rathcoole Park (~8.2 Ha)
- - - - - 25m Riparian Corridor*
- ● ● ● ● Hedgerow (~2310m)
- - - - - Adjacent SHD Scheme
- 8.0 Ha Existing Alluvial Woodland
- 2.4 Ha Existing Immature Woodland
- 0.9 Ha Existing Hay Meadow
- 0.9 Ha Existing Orchid Rich Grasslands

*25m offset from centreline of watercourses allowed for green corridors (10m riparian setback + 15m middle zone. Source: Planning For Watercourses In The Urban Environment by Inland Fisheries Ireland)



Landscape - Existing Conditions



Emerging Land Use Concept

Further to SLO 1 of the Draft County Development Plan, the Emerging Land Use Concept below represents an initial investigation into the potential for alternative land uses on the lands, having regard to protecting existing habitats, biodiversity and the Rathcoole woodlands, the need for social and affordable housing, community infrastructure and access. Informed by the existing conditions and constraints of the lands, including those identified by ecological survey work, this concept is then further developed in the coming pages into an Preferred Land Use Concept that tests and progresses the Emerging Land Use Concept and helps bring forward proposals for re-zoning.

Note, figures in red below denote plus or minus to existing condition (area or length)

--- Site Boundary	7.5 Ha Retained Alluvial Woodland	-0.5 Ha
Watercourse	1.8 Ha New Alluvial Woodland	+1.8 Ha
- - - Dry Ditch	0.3 Ha Retained Immature Woodland	-2.1 Ha
Rathcoole Park (~8.2 Ha)	0.4 Ha New Immature Woodland	+0.4 Ha
- - - 25m Riparian Corridor	0.7 Ha Retained Hay Meadow	-0.2 Ha
Hedgerow (~2265m) -25m	1.5 Ha New Hay Meadow	+1.5 Ha
Adjacent SHD Scheme	0.9 Ha Orchid Rich Grasslands	+0.0 Ha
← Vehicular Connection	3.3 Ha Net Residential Area*	
→ Pedestrian/Bicycle	1.6 Ha School Site	
↔ Connection	6.0 Ha GAA Site	
↳ Looped Drop-off - access for refuse collection, deliveries etc.		

* Net Residential excludes the school, open spaces and roads. 116 - 165 dwellings provided based on a residential density of 35 - 50 dph

Assessment Criteria

● Housing Delivery	● Positive to Objectives
● Contiguous & Sequential Development: consolidated utilities and built form	● Neutral to Objectives
● Annex I Protection	● Negative to Objectives
● Other Biodiversity Protection	
● Green Infrastructure & Connectivity	
● Vehicular Access & Servicing	
● Community & Social Infrastructure	

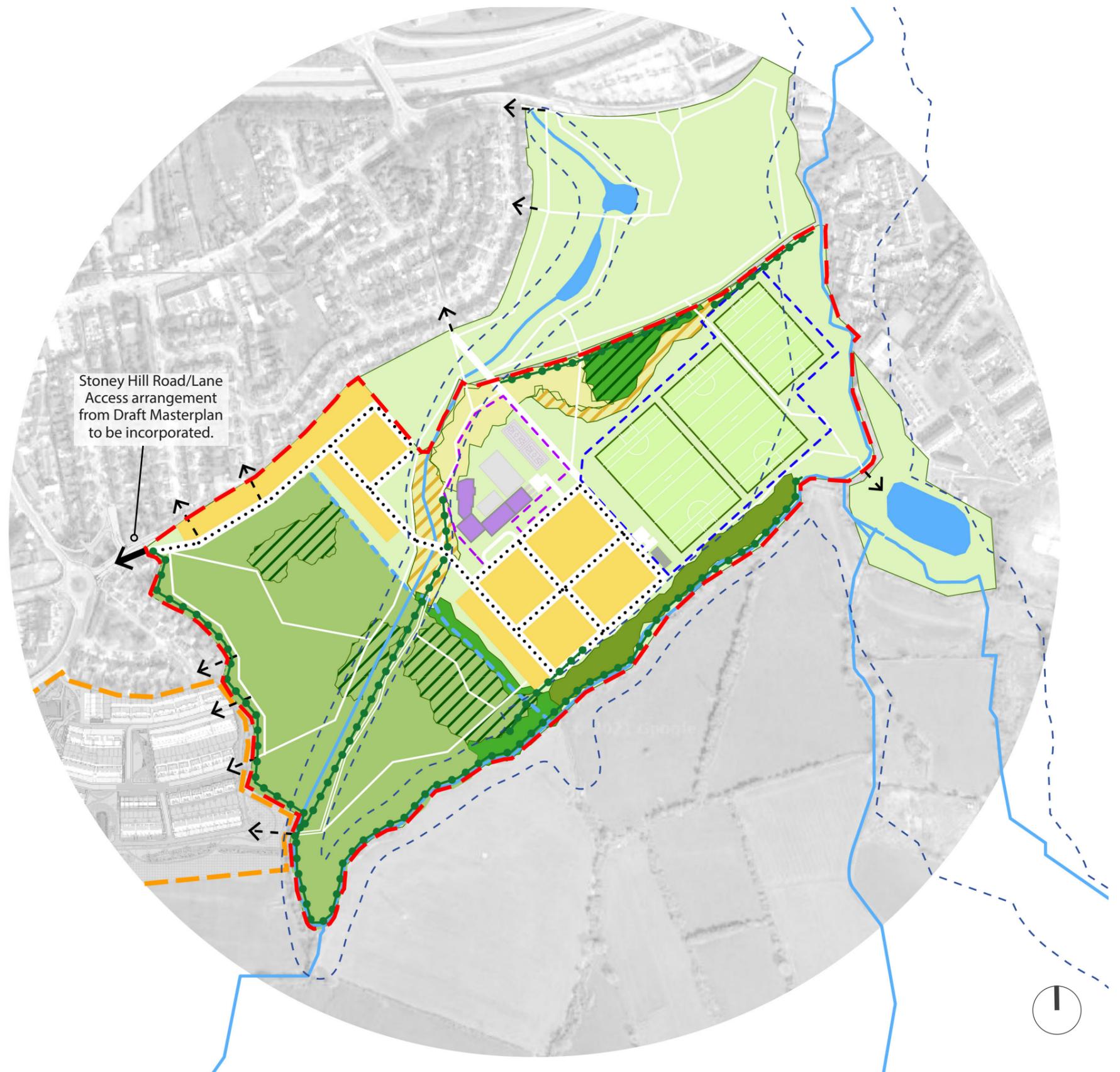


Preferred Land Use Concept

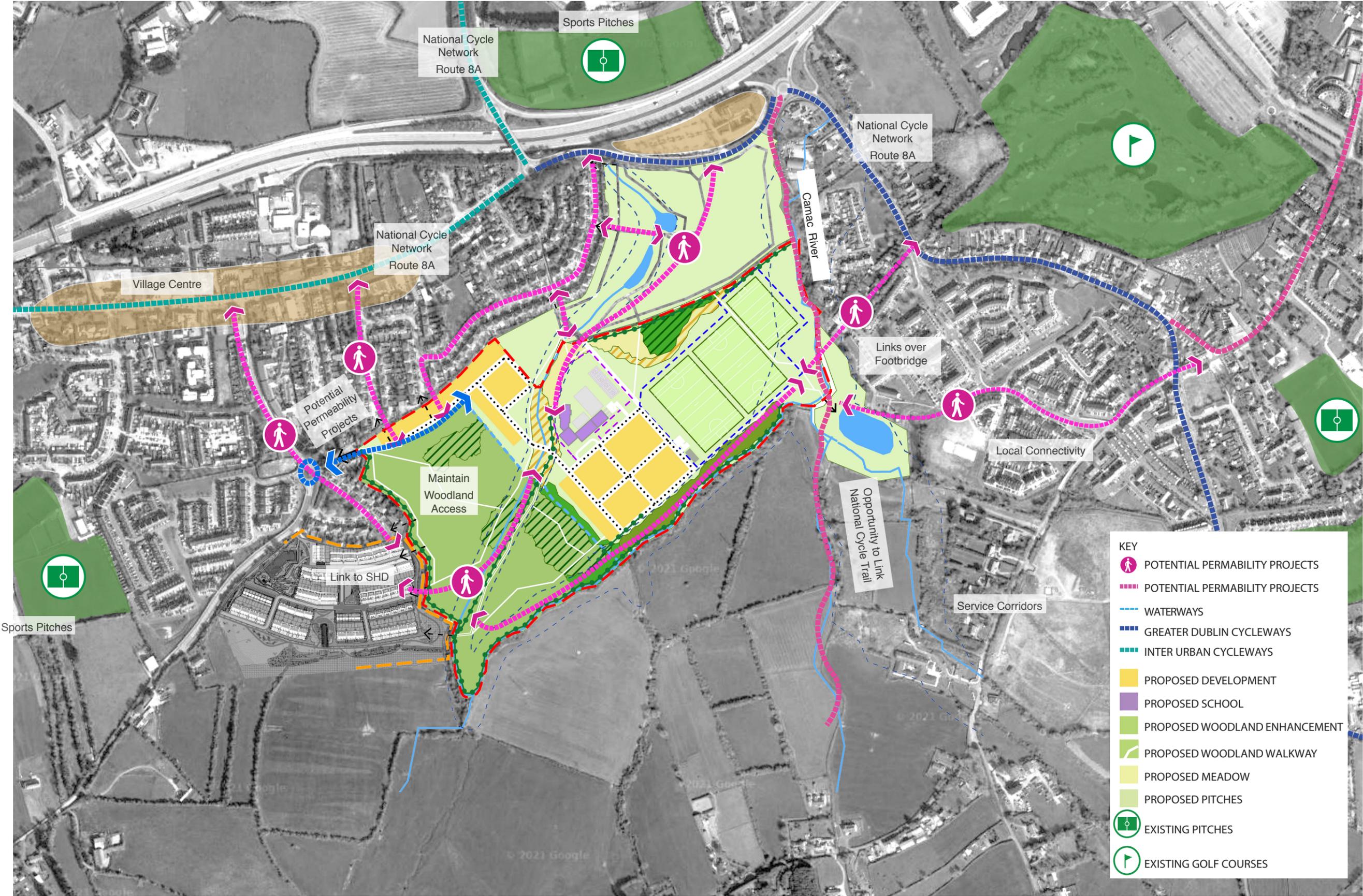
As a progression of the Emerging Land Use Concept, the Preferred Land Use Concept below further tests the capacity of the lands for social and affordable housing, community infrastructure and access. In line with proper planning and sustainable development, the Preferred Land Use Concept places additional emphasis around protecting existing habitats, biodiversity and the Rathcoole woodlands by seeking to ensure that there is no net loss of woodland (overall) while maintaining a net gain in Alluvial Woodland as well as Hay Meadow. This Land Use Concept will also help ensure that there is an appropriate public open space provision for new homes.

Change from Existing Condition:		
7.6 Ha	Retained Alluvial Woodland	-0.4 Ha
1.8 Ha	New Alluvial Woodland	+1.8 Ha
0.5 Ha	Retained Immature Woodland	-1.9 Ha
0.5 Ha	New Immature Woodland	+0.5 Ha
0.6 Ha	Retained Hay Meadow	-0.3 Ha
0.4 Ha	New Hay Meadow	+0.4 Ha
0.9 Ha	Orchid Rich Grasslands	+0.0 Ha
4.7 Ha	Net Residential Area (excluding school, open spaces, roads)	
1.6 Ha	School Site	
5.0 Ha	GAA Site	

- Zero loss of Annex 1 habitat when Alluvial, Immature and Hay Meadow considered as a whole
- Approximately 41 dwellings per hectare net, with a mix of apartments, duplexes, houses and traveller units
- School site located adjacent to GAA lands and sited between Hay Meadow and woodland
- 2 Full size, 1 junior GAA pitch



Landscape Concept - Preferred Land Use Strategy



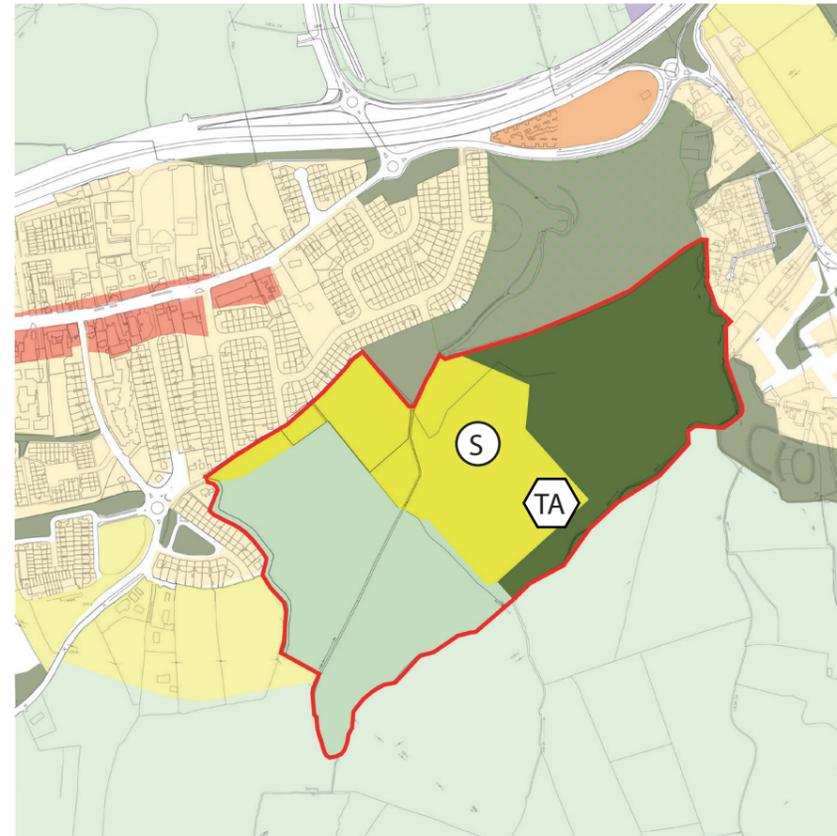
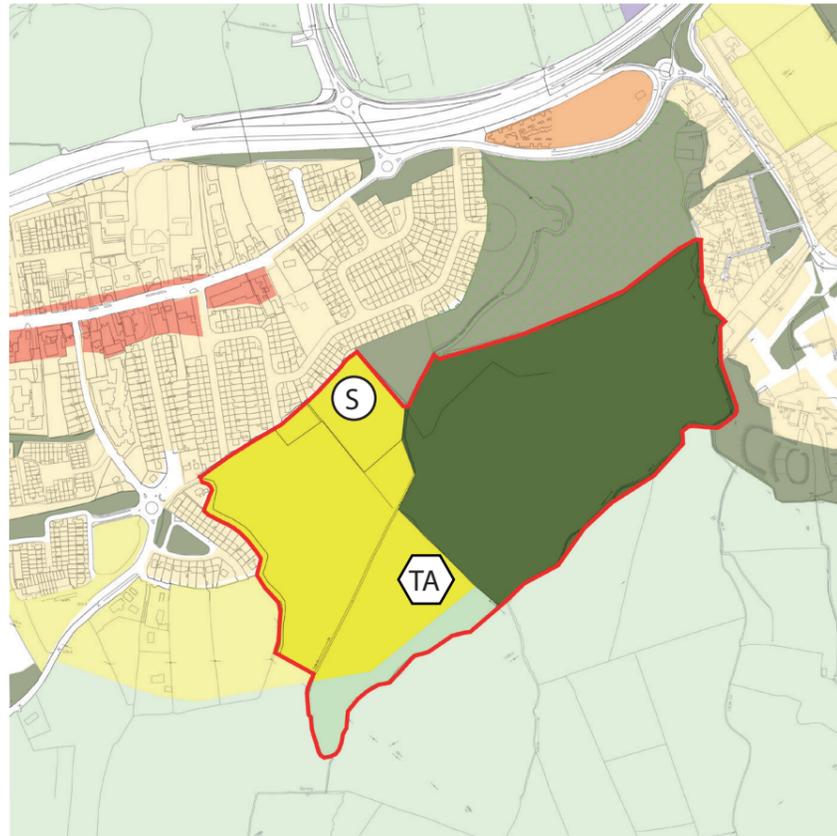
Zoning Mapping

Zoning Objective Key

- RES-N (New Residential)
- RU (Rural Amenity)
- OS (Open Space)

- RES (Existing Residential)
- VC (Village Centres)
- RW (Retail Warehousing)
- EE (Employment)

- TA To Provide For Traveller Accommodation (indicative sites)
- S Proposed School



Zoning as per SDCC Development Plan 2016-2022 and Draft Development Plan 2022-2028

Emerging Concept Zoning Map

Note: Extent of proposed RES-N zone includes school site and dedicated public open space that will serve residential development as per the Preferred Land Use Concept and Landscape Strategy

