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1.0 TRANSPORT AND MOBILITY MANAGEMENT AND CONNECTIVITY

1.1 Set back of boundary along the L-5331, Controlled Crossings and Enhancements to provide Cycling Facilities

The layout has been designed to create dedicated facilities for pedestrians and cyclists along the sites roadside frontage, on the southern side of the L-5331 public road, with pedestrians and cyclists given priority over vehicles at side road junctions. (See drawings by DMN Architects). The level and materials of the footpath and cycle facilities will be maintained through the estate road junctions to indicate priority for Vulnerable Road Users (VRU) in accordance with DMURS.

Where VRU require to cross the carriageway of the L5331, uncontrolled crossings are proposed.

To the southwest of the site travelling to/from the Mallow town direction, a 3.0m wide two-way cycleway adjacent to a 2.0m wide footpath is proposed to assist cyclist/pedestrians to safely negotiate the L5331/L1246 junction. Connection to this proposed link to/from the nearby facilities (schools/shops) is explored further in the Section 1.3 below.

A 4.0m wide raised shared (for cyclists and pedestrians) uncontrolled crossing of the L5331 is provided close to the L5331/L1246 junction to provide connectivity to the existing pedestrian facilities and planned active travel infrastructure in this area. Its location was chosen to address desire lines and to limit its impact on the nearby proposed N-72/L-5331 signalised junction. This crossing can be upgraded in the future to a controlled, Toucan crossing if required, when planned active travel infrastructure has been progressed in this area. This scenario has been assessed in the Traffic and Transport Assessment (TTA) to confirm that any queuing associated with a Toucan crossing will not block the N72 junction.

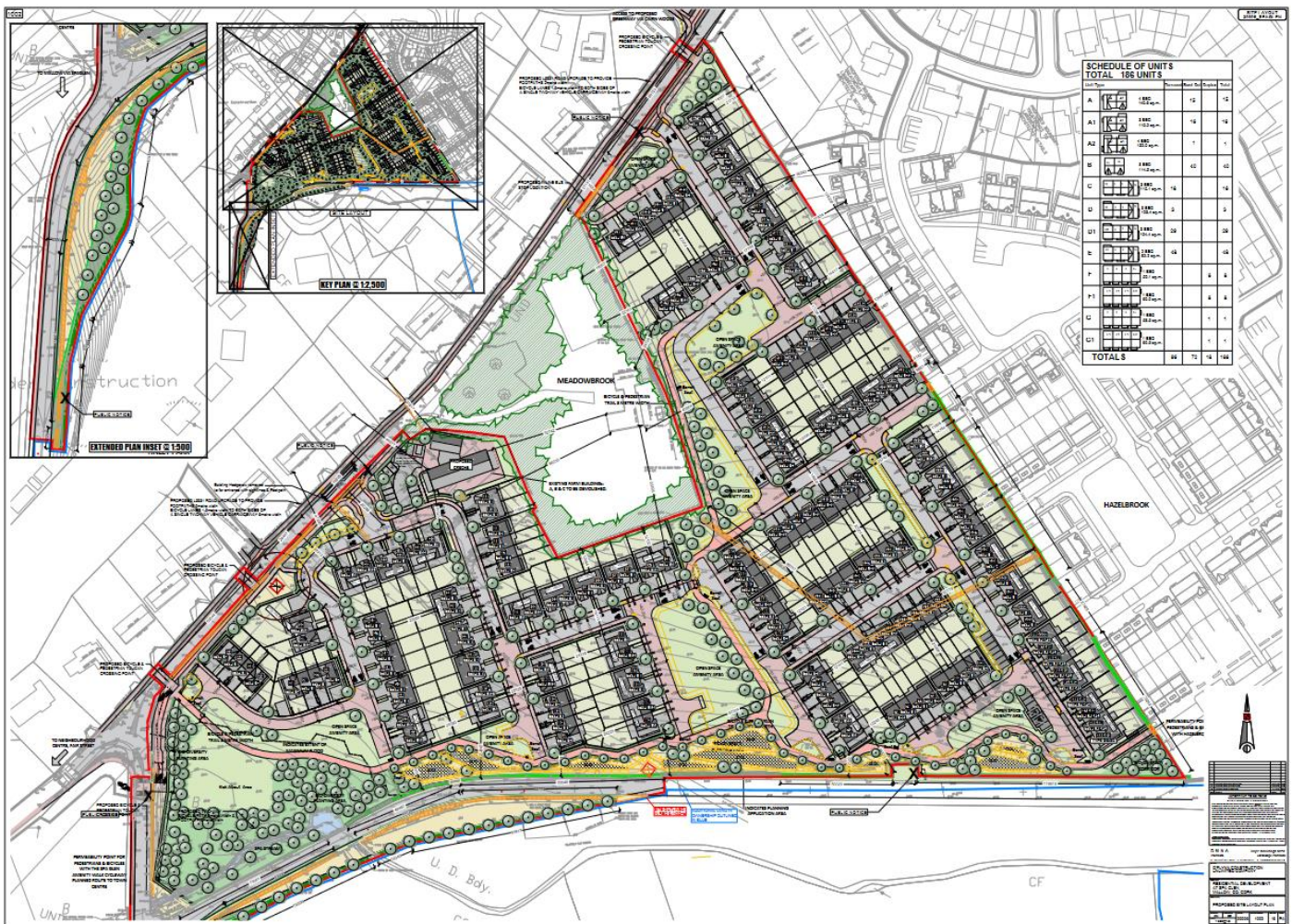
For VRU that wish to cross the L5331 join existing pedestrian infrastructure on the norther side of the road and to connect to the existing residential estates of Tinley Park and Cairn Woods, three further 4.0m wide shared, uncontrolled crossings will be provided. These crossings will also create a safe and direct route from the proposed development to the planned Active Travel Corridor which is intended to run along the northern boundary of these existing estates and these crossings can be upgraded at a later date to controlled, Toucan crossings when such active travel infrastructure has been progressed in this area.

The northern boundary of the proposed development has been set-back (southwards) to allow for the future provision of a 6.3m carriageway along the L5331 and a 3.5m wide cycleway/footpath along the northern side of the L5331.

Because it is likely that the proposed development will be progressed (subject to planning) before the future provision of a 2.0m footpath and 1.5m cycleway along the northern side of the Ballyvinitter Road (by Cork County Council) there will need to be an interim arrangement put in place by Cork County Council when the proposed footpath and cycleway along the southern side of the Ballyvinitter Road is provided as part of the proposed development.

It is suggested that the Ballyvinitter Road could be lined along the northern side such that the line of the future cycleway is line-marked to delineate the new road edge on an interim basis, with suitable tapers in the middle section of the road where the existing dwelling boundary on the southern side of the road will interrupt the line of the widened road.

The 6.3m wide road and 3.5m cycleway/footpath would be provided along the southern side of the Ballyvinitter Road as shown on the planning application drawings.



1.2 Audit of Connectivity to Public Transport Services

There are existing pedestrian footpaths between the proposed development and the bus stop on Park Road and the train station to the west of the development site. Many of these footpaths are below the appropriate standards as they are narrow in places with poor crossing facilities. There are no dedicated cycle facilities between the proposed residential development and these public transport facilities. Cyclists currently have to use the carriageway. Ideally, the planned Active Travel Corridor (See Section 1.5) would create an ideal route for users to access the train station, particularly given the width constraints of the existing streets on the northside of Mallow. Additionally, the streets on the north side of Mallow are used for HGV's travelling between the N72 and the N20. As such, the following options focus on the east/south side of Mallow Town.

A review of the existing L1246 between the proposed development and the nearby shops and schools along the L1246 was carried out as part of this exercise. The study identified the land take required to include a shared surface area on both sides of the L1246 connecting to the local shops and schools.

It should be noted that Cork County Council have plans for the upgrade of the L1246 which will significantly enhance access from the development site area to schools and the town centre using active travel which is considered critical for the development of this area.

Currently the L1246 is a two-way carriageway with a narrow footpath on the southside of the carriageway. To provide a shared pedestrian and cycle facility on both sides of the carriageway would require land take from the surrounding properties. The existing widths between property boundaries is not sufficient for the required cross-section. To determine the land-take required to provide a 3m wide shared surface on both sides with the two-way single carriageway, a drawing

was prepared to show the extent of the land take. See Drawing 22201-JBB-XX-XX-DR-CR-00056 submitted separately as part of this planning application.

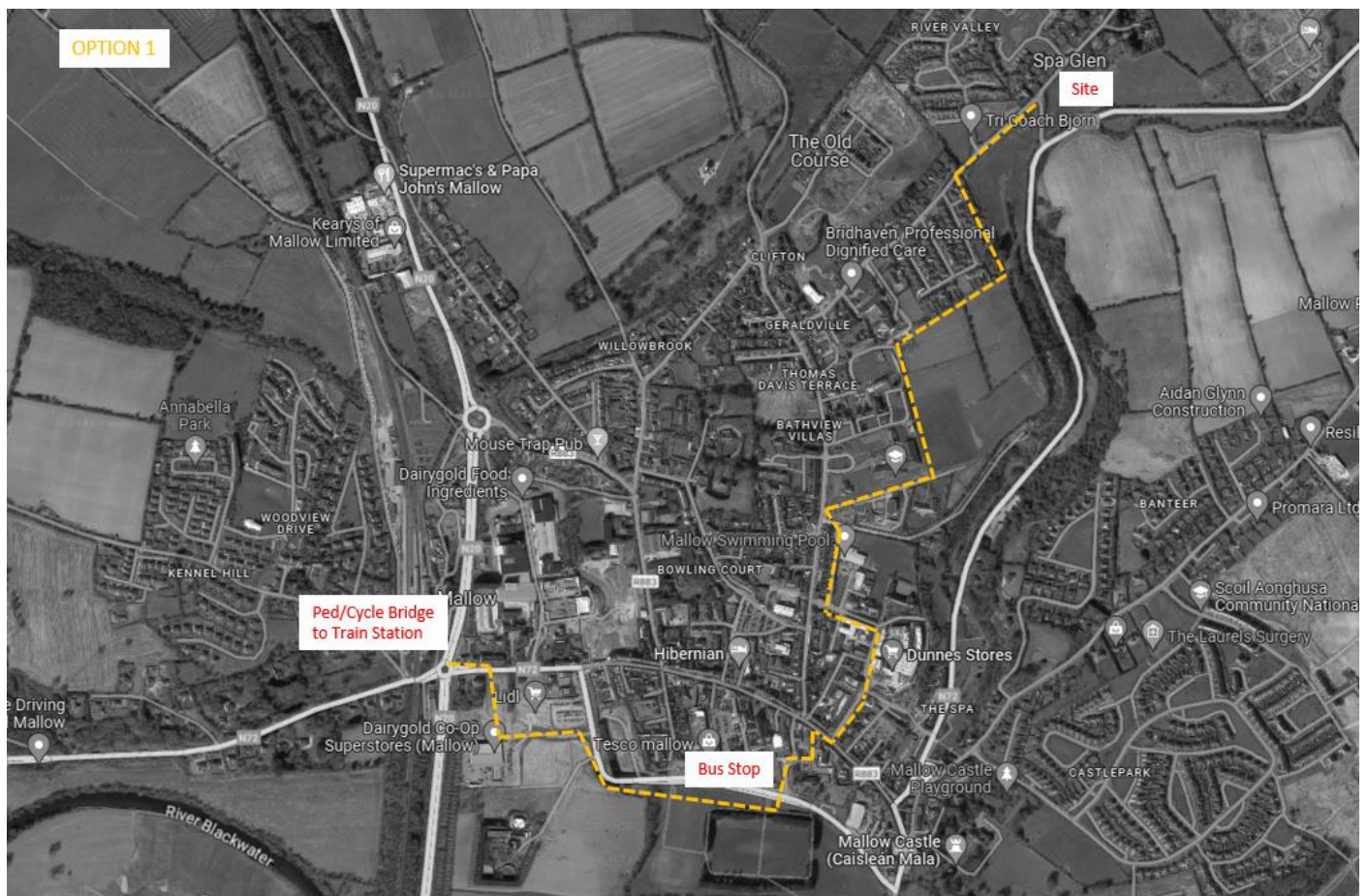
Some significant retaining structures would be required in areas of the route, given the existing level differences between the surrounding properties and the road surface. The proposal would provide a good level of service for pedestrians/cyclists accessing the local Centra shop and the local school (Scoil Íosagáin Infant School). As shown in the drawing, a 4.0m wide shared surface facility could be provided through a disused laneway to provide access to the local schools.

In total, approximately 30 landowners would be affected by the proposals. An alternative off-road route is available which would connect the proposed residential development with the local schools, shops and the town centre for onward connectivity to the public transport facilities.

At a high level, the alternative route for the pedestrian/cycle facilities appears to affect less landowners and be less complicated from an engineering standpoint, resulting in likely lower cost compared to the route on the L1246. However, it is less direct and a detailed route selection including multi criteria analysis (MCA) would need to be carried out to arrive at an optimum solution.

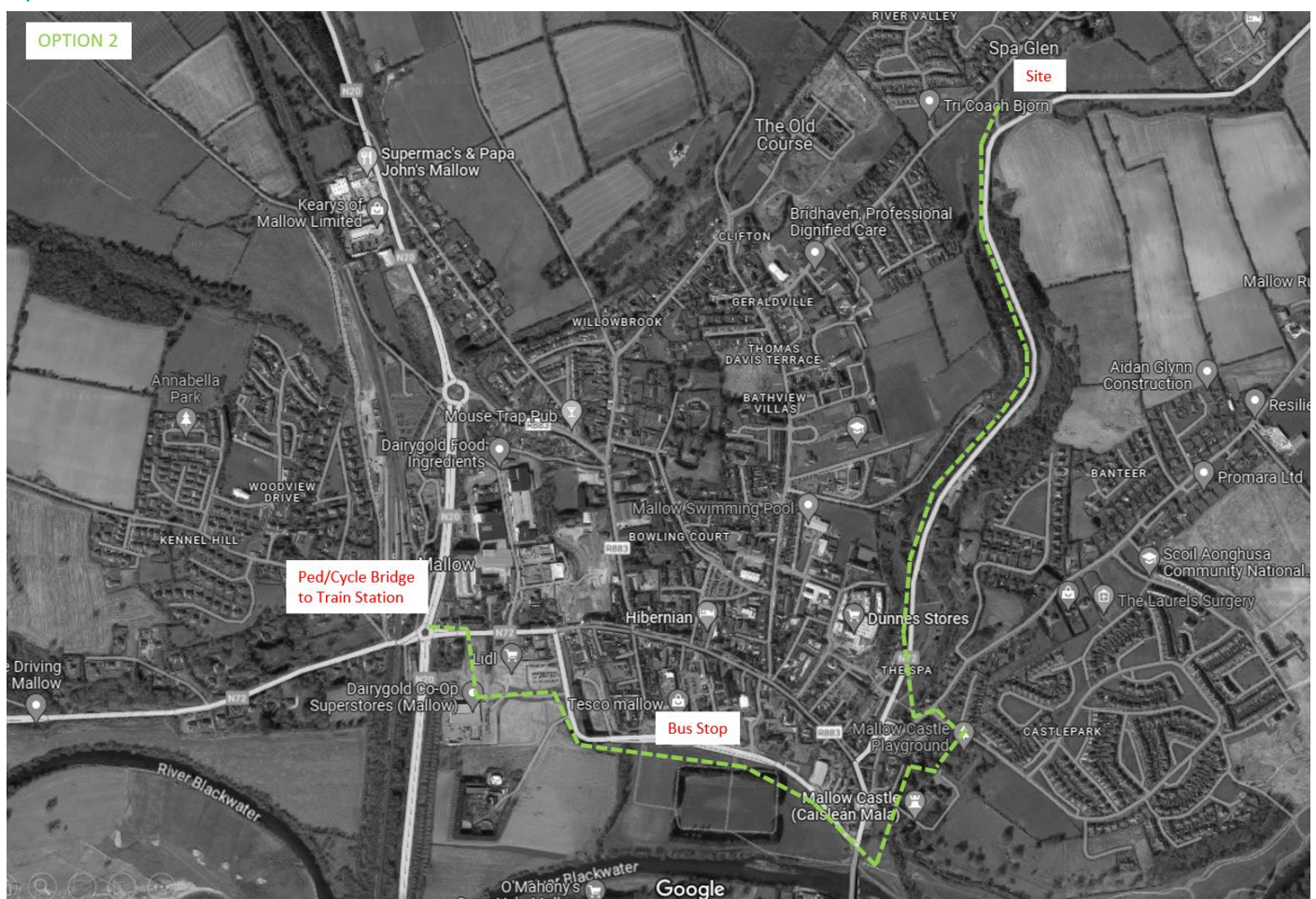
Drawing 22201-JBB-XX-XX-DR-CR-00056 illustrates a number of feasible route options that could be developed which would create a 4m wide shared cycle and walking facility connecting the development to the town centre and onwards to the public transport facilities. A number of high-level options have been developed, however, a combination of these options could also be feasible. To identify which route option is the most appropriate, a detailed MCA would be required. Drawing 22201-JBB-XX-XX-DR-CR-00057 provides a sketch of the facilities linking to the schools and towards Mallow and a high-level indicative route is shown in the following sections for each option.

Option 1



Option 1 would create a connection between the proposed residential development and the public transport facilities whilst also picking up the local shops, schools and Mallow Town Centre. The route would create a dedicated off-road facility connecting to the local schools. A reallocation of road space would be required on New Road, William O'Brien Street and on Main Street, through the reallocation of street parking and through a reduction in lane widths. Appropriate crossing points would be required to cater for cyclists and pedestrians. A contra-flow two-way cycle lane could be provided on a short section of Main Street between William O'Brien Street and Ball Alley Lane. A link from Main Street to the Bus Stop could be created through Ball Alley Lane connecting to the Bus Stop. From here, the redevelopment of Mallow Town Park (illustrated on BSM_MasterPlan_Sheet2of3_DwgNo.373 and BSM_MasterPlan_Sheet3of3_DwgNo.374 included in Appendix 1 of this report) will create facilities for pedestrians and cyclists to travel west. A new link between Mallow Town Park and the redevelopment of Dairygold would be required. The redevelopment of Dairygold provides for cyclists and pedestrians and would bring users out on the N72 where they could connect to the ped/cycle bridge for access to the train station.

Option 2



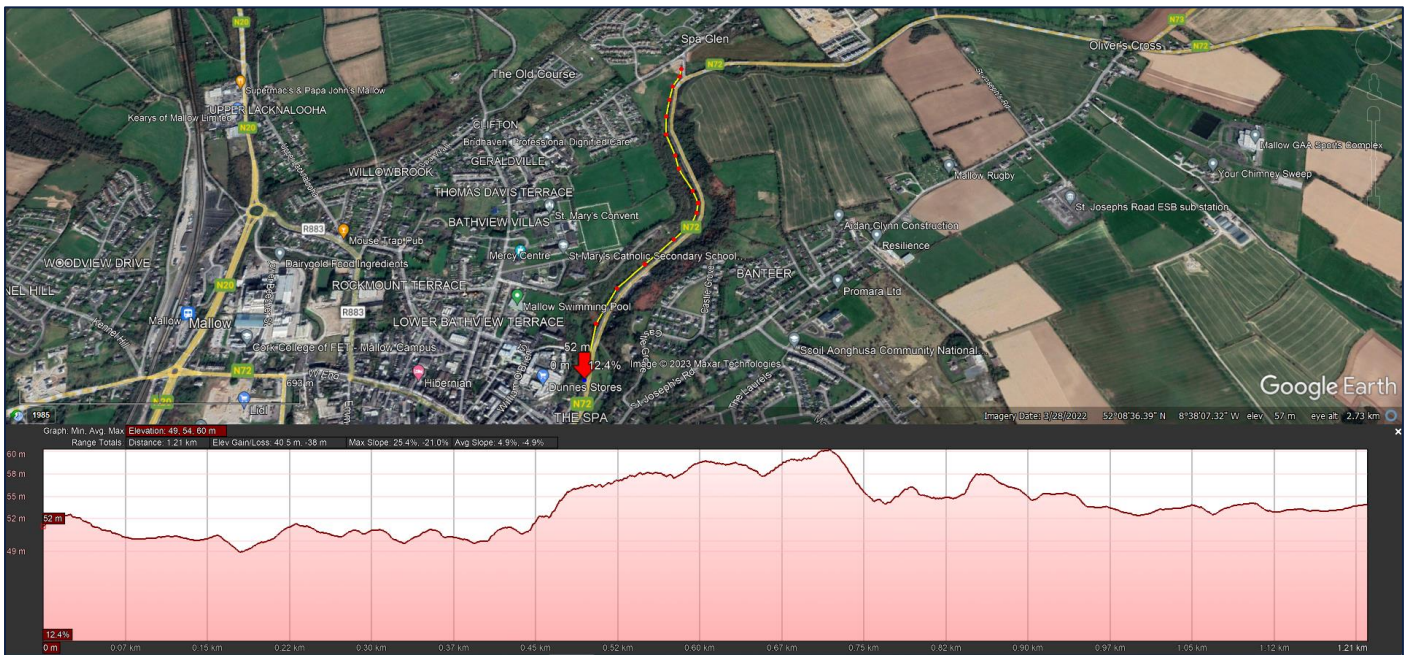
Option 2 was explored using the existing N72 route through Spa Glen, however, there does not appear to be sufficient width to provide an appropriate shared surface and two-way traffic lanes. This route is used by a high volume of HGV's therefore a minimum width of 3.25m would be required per traffic lane. Additionally, the existing speed limit on this route is 80kph and Table 3.2 of TII DN-GEO-03047 outlines 'minimum horizontal separation (Rural National Road Infrastructure)'. For a route with a speed limit of 80kph, the desirable minimum separation is 2m (including any hardstanding) and 1m (excluding any hard shoulder). As such, based on these requirements, it is not deemed possible to provide the ped/cycle facility along the N72 route. However, the standard states that:

- Where adjacent facilities are not provided, provision may be remote from the road on a suitable new route in accordance with the requirement of TII DN-GEO-03036.

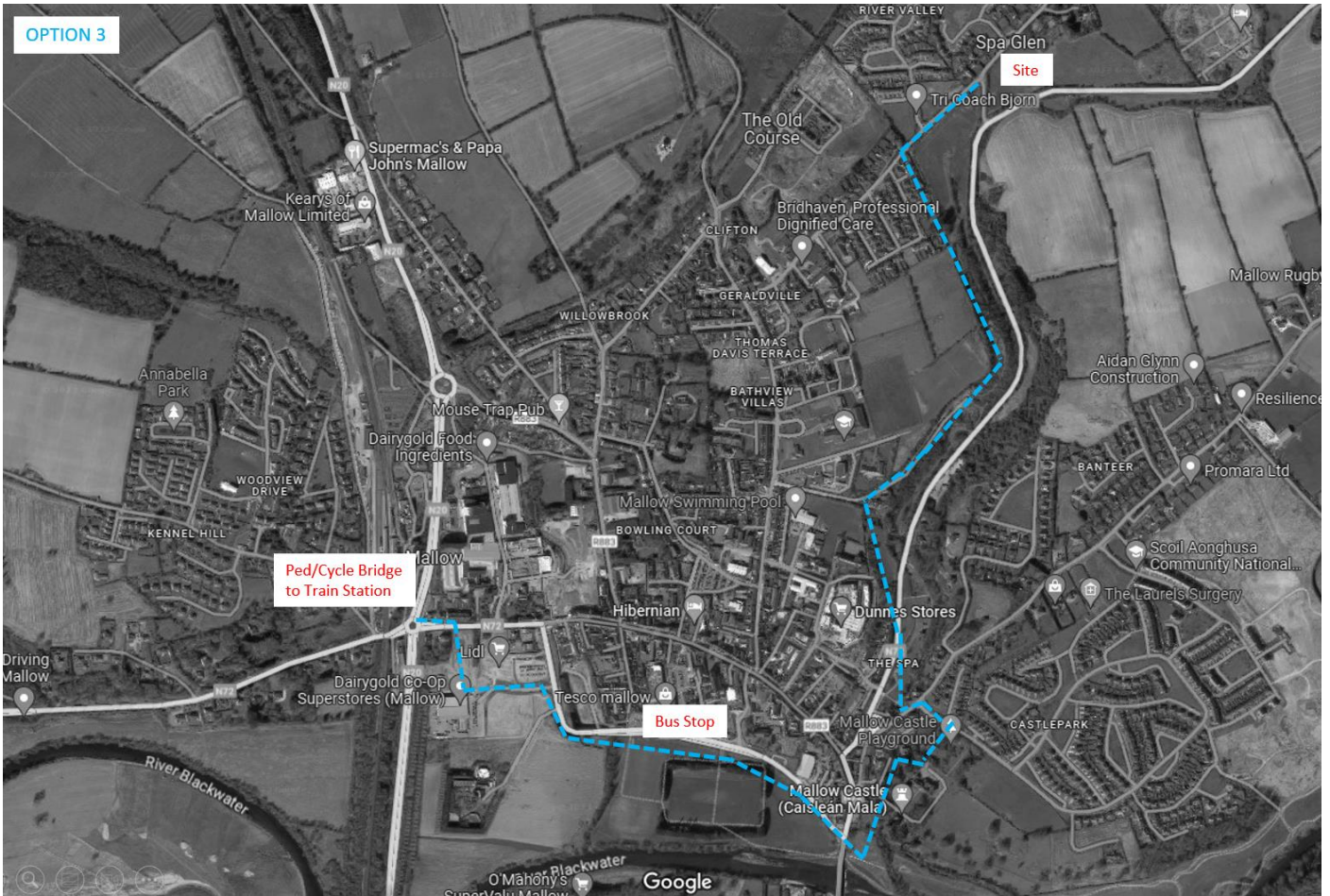
As such, a route Option 2 has been developed which runs adjacent to the N72 route through the Spa Glen and would connect the residential development to the Spa and the south side of Main Street. From here users could stay offline through the Spa Park and connect to the upgraded facilities through the Castle Ground and on to Mallow Town Park. Mallow Town Park is proposed to be upgraded (Illustrated on BSM_MasterPlan_Sheet2of3_DwgNo.373 & BSM_MasterPlan_Sheet3of3_DwgNo.374 included in Appendix 1 of this report) which users could connect to the Bus Stop on Park Road. A new connection would be required between the Town Park and the proposed new facilities on Dairygold land (Illustrated on Drawing 249457-ARUP-ZZ-00-DR-C-0001-Proposed Road and Carpark Layout included in Appendix 1 of this report) which would bring users out at the pedestrian/cycle bridge over the N20 connecting to the train station. This route option would provide users with a safe off-road facility to both public transport facilities. The route through the Spa Glen could compliment Green Infrastructure objective no. MW-GC-01 Spa Glen Amenity Corridor within the Cork County Development Plan 2022-2028 which states:

- Informal open space and recreational uses. Watercourses, woodland and riparian habitats on site should be retained and protected. Any development proposals in the vicinity of this corridor should seek to ensure that the corridor is strengthened and protected. Parts of the Spa Glen have also been subject of a Tree Preservation Order designation.

A review of the terrain indicates that a route adjacent to the N72 appears feasible through the Spa Glen. An assessment was carried out using Google Earth which shows vertical elevation changes over the length of the route. There are some elevated areas, however, where appropriate cut and fill could be utilised to create a gradual route with appropriate gradients.



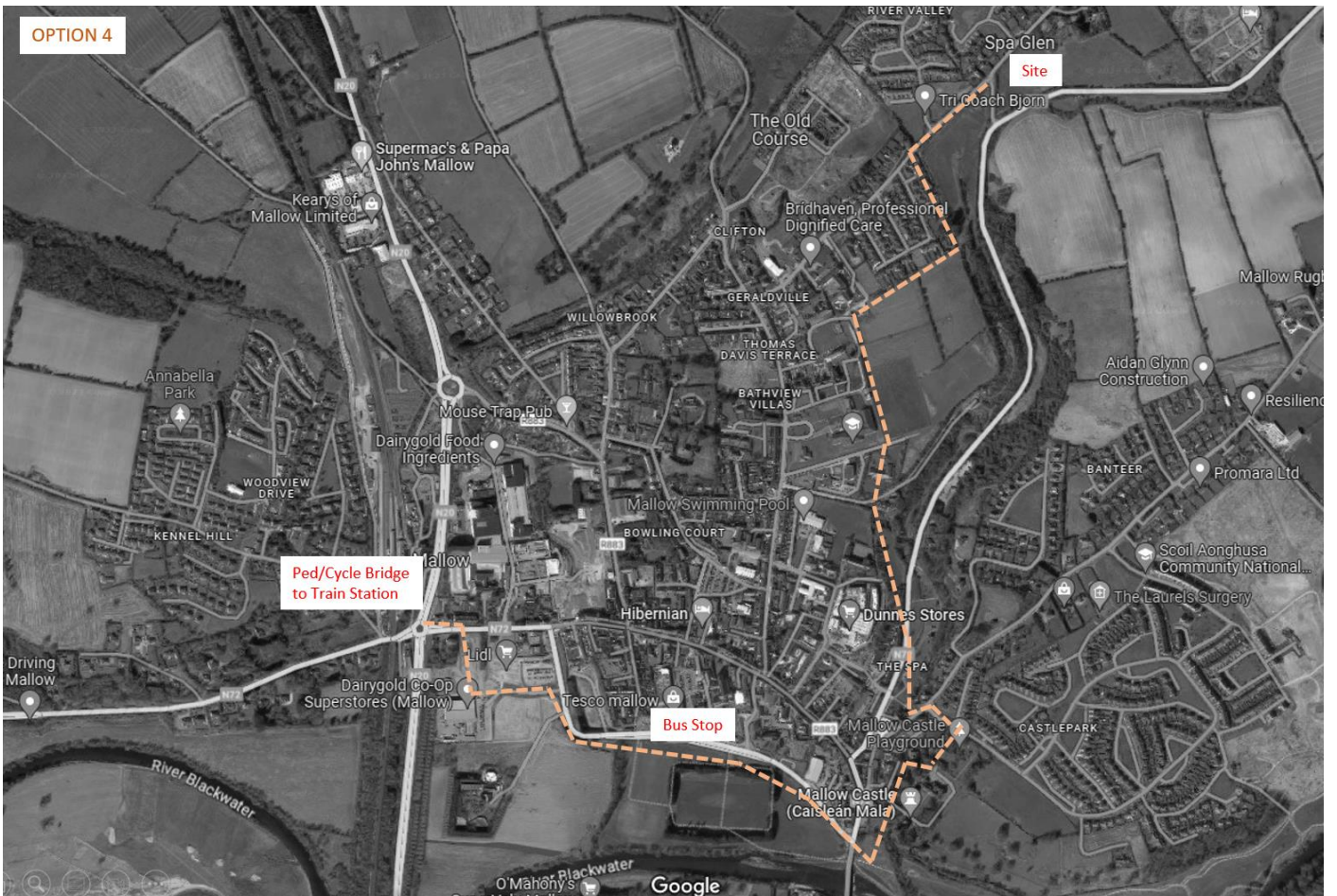
Option 3



Route Option 3 provides a similar route to Option 2 using the greenfields and existing accesses along the ridge of the Spa Glen was identified as a feasible route to connect to the Spa and the south side of Mallow Main Street and onwards to the public transport facilities. A review of the terrain using Google Earth identifies that a connection between the ridge and Spa Park appears feasible.



Option 4



In route Option 4, the pedestrian/cycle facility could pick up the schools and subsequently travel to the Spa and connect to the public transport facilities via the Town Park and Castle Grounds.

1.3 Audit of Connectivity to Proposed Active Travel Corridor

The Cork County Development Plan 2022-2028 illustrates a planned active travel corridor to the north of the town along the old railway line. The Specific Development Objectives for Mallow, Objective No. 'MW-U-04' states, 'Active Travel Corridor, subject to Environmental Impact Assessment and, if deemed to be required, Appropriate Assessment'. Subsequently, the N72-N73 Mallow Relief Road project has progressed the project with the preferred option identified for the relief road, including the active travel element.

Figure 1.1 illustrates the corridor, which links the residential areas in the north of the town to Mallow Train Station. While the route of this active travel route is not confirmed it is likely that it will tie-into the train station and in this context the proposed development can be linked to this active travel facility and subsequently the train station via two residential estates, Tinley Park and Cairn Woods.

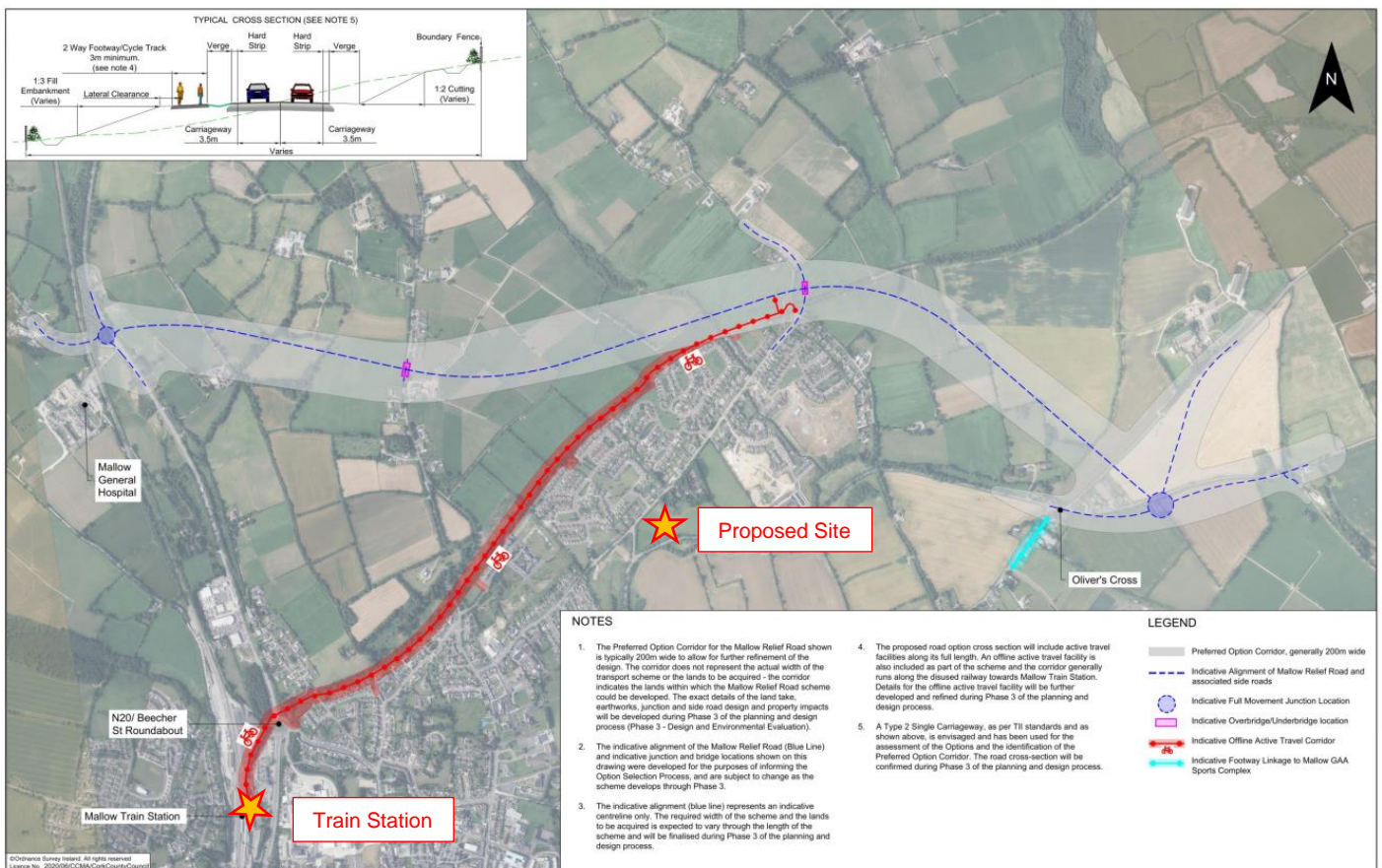


Figure 1.1: Preferred Option for Active Travel Route – N72/N73 Mallow Relief Road

A review of the local environment through Tinley Park and Cairn Woods revealed that the traffic volumes and speeds are low as would be expected in a cul-de-sac residential estate. As such, as per the Cycle Design Manual (Sept 2023), cyclists from the proposed residential development can use the existing quiet streets to access the active travel corridor. It is not deemed necessary to provide dedicated cycle facilities on these streets in line with section 7.1 of the National Cycle Manual (NCM), Figure 1.2. They could, however, be developed through the green areas if required.

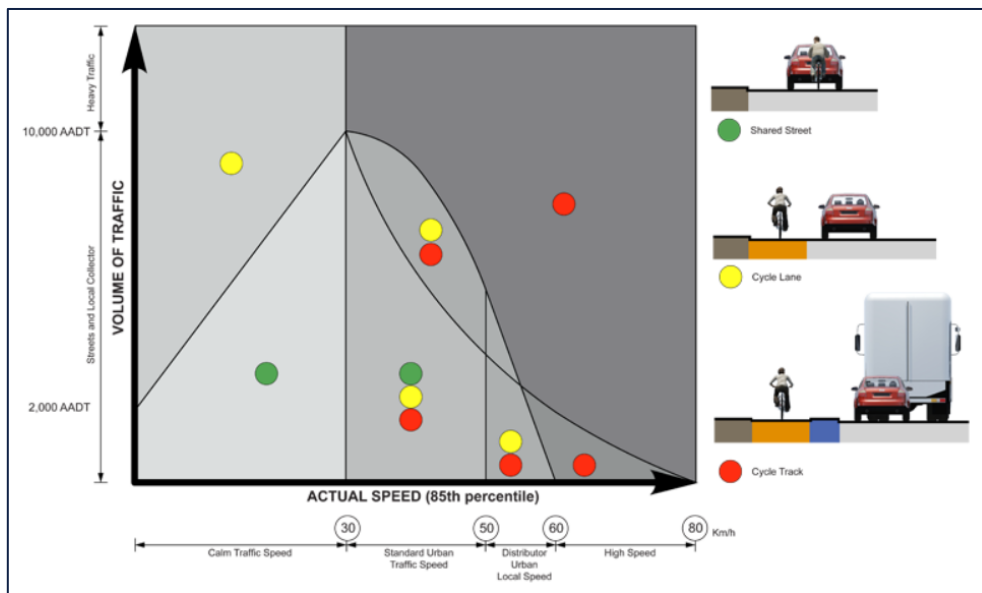


Figure 1.2: Section 7.1 of the National cycle Manual

The layout of the proposed cycle facilities at crossings of the L5331 has been prepared to provide safe access to these residential estates. Filtered permeability would need to be created to/from Tinley Park and Cairn Woods to the planned active travel corridor. Some of the existing pedestrian facilities would need to be widened to create a shared surface to connect to the proposed active travel corridor.



1.4 Parking Proposals

Table 12.6 of the Cork County Development Plan 2022-2028 outlines the car parking requirement for new residential developments. This table illustrates that the maximum parking requirement for a residential development is 2 spaces per dwelling house as a maximum. The proposed layout includes for an overall provision of 354 parking spaces plus 2 accessible parking spaces for the dwelling units, which is 4.5 parking spaces less than the maximum allowable provision assuming that the 18 no. 1-Bed Duplex Units are classed as apartment units in respect to Table 12.6 below.

Table 12.6: Car Parking Requirements for New Developments (Maximum per sq. m.)	
Development Type	Parking Provision Requirement
Other cultural / recreational & leisure uses	Dependent on nature and location of use.
Residential: Dwelling houses Residential: Apartments	2 spaces per dwelling unit 1.25 spaces per apartment unit

It is noted that the requirements above are a maximum provision and the proposal is to provide less than that maximum requirement.

The connectivity measures to be provided by the Applicant, as detailed above, will encourage and provide for the use of sustainable travel modes but the full impact of these measures cannot realistically be achieved until the intended wider active travel/improved public transport measures are provided by the Local Authority/TII/NTA.

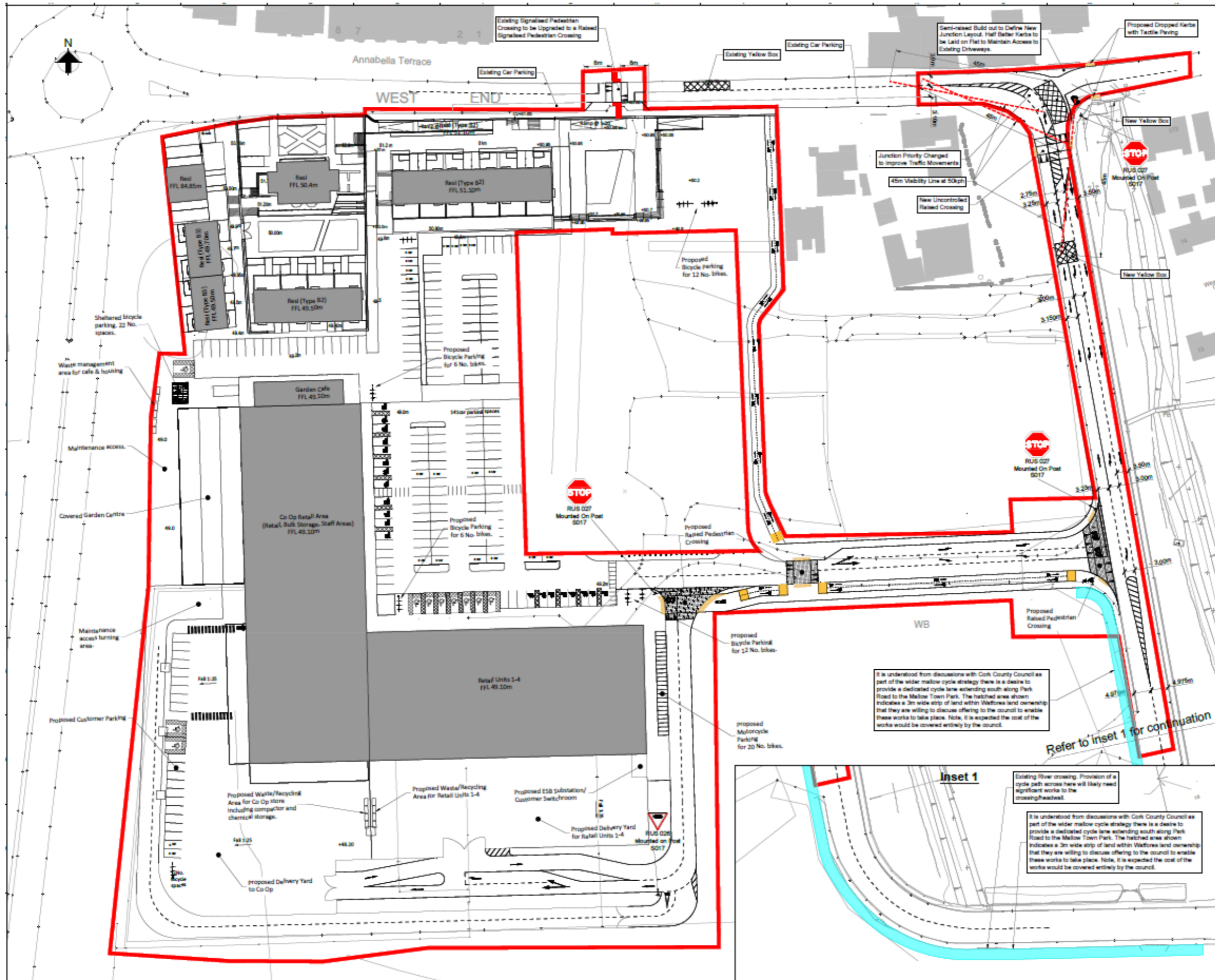
In this context the provision of 354 parking spaces plus 2 accessible parking spaces for the dwelling units is considered a reasonable and practical proposal.

For the creche parking provision it is proposed to provide 7 staff spaces plus 2 visitor spaces plus 1 accessible space, and the provision of a bicycle rack. This provision is 1 more space than what is with the maximum requirement of the Development Plan.

Appendix 1: BSM and Arup Drawings







NOTES:

- All levels relate to OD Main Head.
- Do not scale from this drawing. If in doubt, ask.
- This drawing is to be read in conjunction with all other drawings and specifications.
- Refer to Architects drawings for proposed surface finishes.
- Refer to 245457-ARUP-ZZ-00-DR-C-000 for engineering details for surface finishes.
- All road markings and traffic signs drawings should be read in conjunction with the Department of Transport Traffic Signs Manual (TSM)
- All sign mounting height shall be 2300mm high and have a minimum clearance of 500mm from road side edge unless stated otherwise.
- This drawing should be used for the design element identified. All other information shown on the drawing is to be considered indicative only.

Legend:

- Proposed Site Boundary
- STOP: Worked STOP Marking 1800mm High as per M 114 of the TSM (Traffic Signs Manual)
- (RRM 001): Traffic Signs Manual Line Marking Reference
- Proposed Retention Socket to be IP, 75mm RS or Similar Approved
- Proposed Red Tactile Paving
- Proposed Buff Tactile Paving
- Proposed Entry Treatment Ramps
- Proposed Raised Signalled Pedestrian Crossing
- Proposed Buff Corduroy Paving

PO3	03/04/21	RM	NH	TL
Issued for RSA				
PO2	06/05/20	RM	NH	TL
Issued For Planning				
PO1	03/04/20	BM	NH	TL
Issued For Planning				
Rev	Date	By	Check	Appr

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Client: **Walfore Limited**

Project Title: **Mallow South Town Centre Development**

Drawing Title: **Proposed Road and Carpark Layout**

Scale: 1:500

Discipline: **Civil Infrastructure**

Category: **02 - Suitable for Information**

App. Job No: **245457** Rev: **P03**

Date: **245457-ARUP-ZZ-00-DR-C-0001**

Inset 1

Existing river crossing. Provision of a cycle path across here will likely need significant works to the crossing/headwall.

It is understood from discussions with Cork County Council as part of the wider mallow cycle strategy there is a desire to provide a dedicated cycle lane extending south along Park Road to the Mallow Town Park. The hatched area shown indicates a 3m wide strip of land within Walfore land ownership that they are willing to discuss offering to the council to enable these works to take place. Note, it is expected the cost of the works would be covered entirely by the council.

Refer to inset 1 for continuation