Transport Report

Duncannon Fort Masterplan
Wexford

Kevin McShane Ltd.
555 Lisburn Road
Belfast
BT9 8GQ

T: +44 (0)28 9560 9798

Prepared by: .....
Declan Diamond
Senior Transport Planner

Checked by: .....
K McShane
Managing Director

Approved by: .....
K McShane
Managing Director

Rev No	Comments	Checked by	Approved by	Date
A	Updated following design team review	DD	KMS	May 23

j

Kevin McShane Ltd. 555 Lisburn Road, Belfast, BT9 7GQ.
Telephone: 004428 9560 9798

Job No: 23-032

Date Created 29 May 2023

Contents

Table of Figures

Table of Tables

Kevin McShane Ltd.
555 Lisburn Road
Belfast
BT9 8GQ

T: +44 (0)28 9560 9798

1. Introduction

Background

Kevin McShane Ltd. have been commissioned to provide Transport Planning input to the detailed feasibility study for the Duncannon Fort Masterplan. This interim report provides an analysis of:

- the existing public transport and sustainable travel provisions to/ from Duncannon,
- commentary on car parking availability in the area,
- an estimation of the car parking requirements of the redeveloped site; and
- discussion of possible mitigation measures to influence travel at the redeveloped site.

Site Location

The site comprises the c16th Century Duncannon Fort which includes 1940s era buildings which operated sporadically under military control until the 1990s.

The fort has most recently been recognised for its historical significance and opened as a visitor attraction. The fort currently offers guided tours to the public and hosts seasonal cultural events and exhibitions.

Access to the Existing Site

By nature of the site requirements during its former uses, the fort has a minimal number of access points. The main operational access is a shared vehicular/ pedestrian route from Duncannon town. The access accommodates one-way vehicle flow and provides a direct connection to the internal site courtyard over the site dry moat.

Development Proposals

The proposed development comprises of the restoration of the existing Duncannon Fort site and includes the upgrade of the buildings to accommodate a number of proposed mixed uses. The proposals will also include the provision of some on-site car parking and vehicle access. Pedestrian access to the Fort site will be upgraded along with and blue green infrastructure and footways and hardstanding.

2. Access by Sustainable Modes

This section presents a review of the accessibility to the development by non-car modes i.e., walking, cycling and public transport. An overview of the existing sites accessibility is presented in Figure 1 and Figure 2.

Existing Pedestrian Infrastructure

Pedestrian infrastructure in Duncannon is good but limited on approach to the fort. The road network consists of regional and unclassified roads.

R737 Main Street/ Strand Road operates a one-way vehicle system which circulates the town. Pedestrian footways are provided intermittently along Strand Road and consistently along both sides of Main Street and Church Road.

On approach to the fort access, a c.1.5m wide footway is provided along the beach and terminates c.60m from the main fort entrance.

Informal pedestrian crossing points are provided in the from of dropped kerbs through the town. There are no formalised pedestrian crossing points provided for those with mobility impairments.

The existing pedestrian infrastructure provision is summarised in Figure 1.

Existing Cyclist Infrastructure

There are no formalised cycle facilities in the immediate area of the fort. The surrounding roads are of sufficient surfacing and width to accommodate single file cyclists safe from approaching vehicular traffic.

Eurovelo Atlantic Route 1 runs through Duncannon. Eurovelo (The European Cycle Network) Incorporates existing and planned national and regional cycle routes into a single European network. Starting at Rosslare Harbour Ferry, the Wexford Route quickly takes cyclists to mainly quiet, scenic country roads and villages finishing at Ballyhack Ferry where you can continue on to Waterford. The route hugs the coastal roads predominantly and is a total of 120km of signed cycle route.

Cycle infrastructure is highlighted in Figure 1.

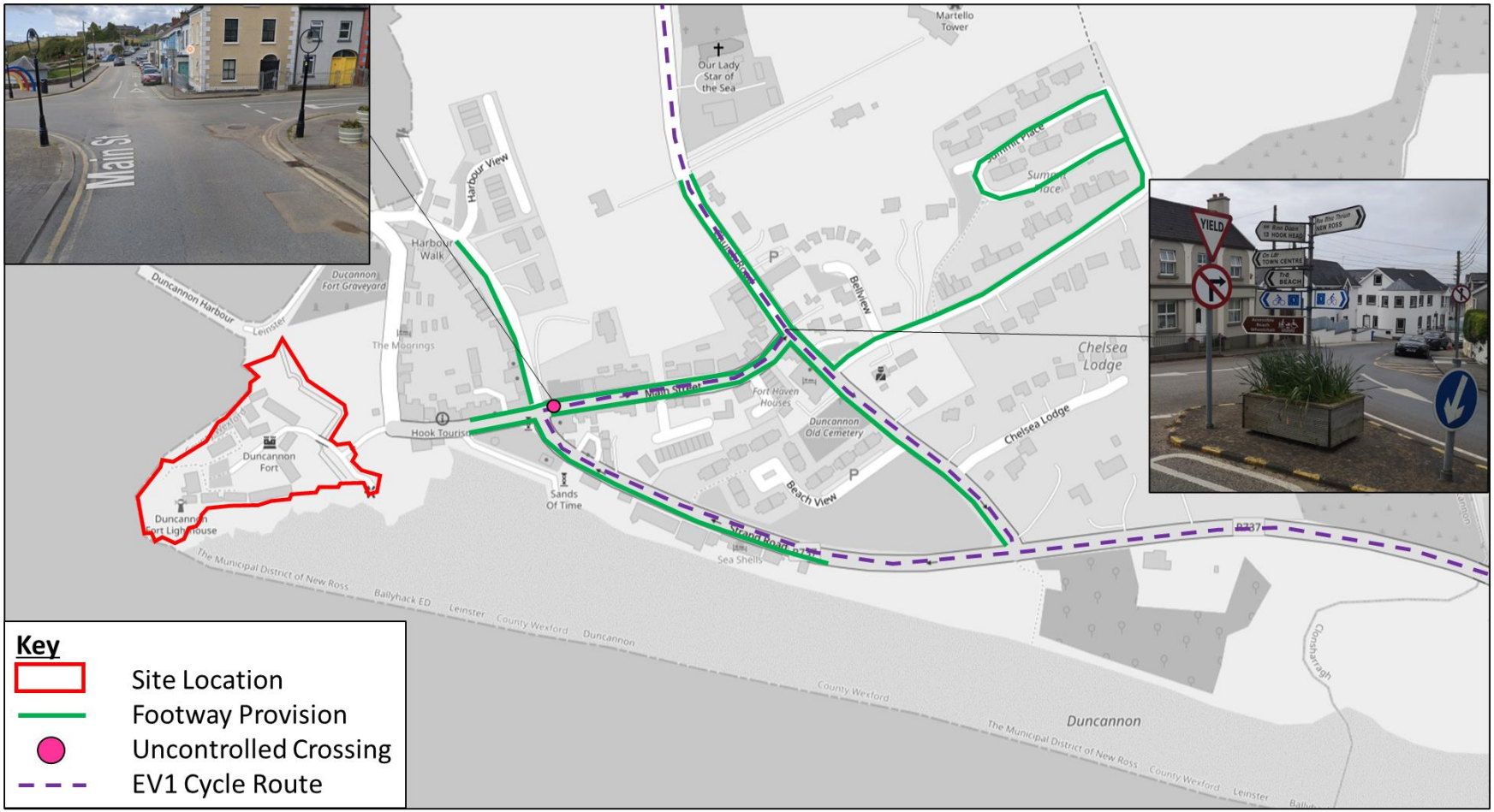


Figure 1 - Existing Cyclist/ Cycling Provision

Kevin McShane Ltd.
555 Lisburn Road
Belfast
BT9 8GQ

T: +44 (0)28 9560 9798

Existing Public Transport Infrastructure

The fort site benefits from a bus stop in close proximity to the site. The Bus Eireann, Duncannon (Strand Bar) stop is located c. 250m from the fort access.

Bus Eireann route 370 serves this bus stop and provides a connection from Waterford to Wexford via New Ross and Duncannon. The service runs Monday to Friday with frequent services throughout the day.

Duncannon benefits from access to the Transport for Ireland (TFI) Local Link services. Local Link provides public service and pre-book bus routes connecting rural communities in Co. Wexford.

Duncannon village vis served by the following routes: Hook Area to Waterford, Balliniry to New Ross, Hook Area to Wexford, Friday Community Link and the Rural Commute to Wexford (Saturday Nights).

The bus stop on Strand Road provides a set down area clear of traffic for passengers to alight. The existing public transport facilities in the vicinity of the development site are illustrated in Figure 2.

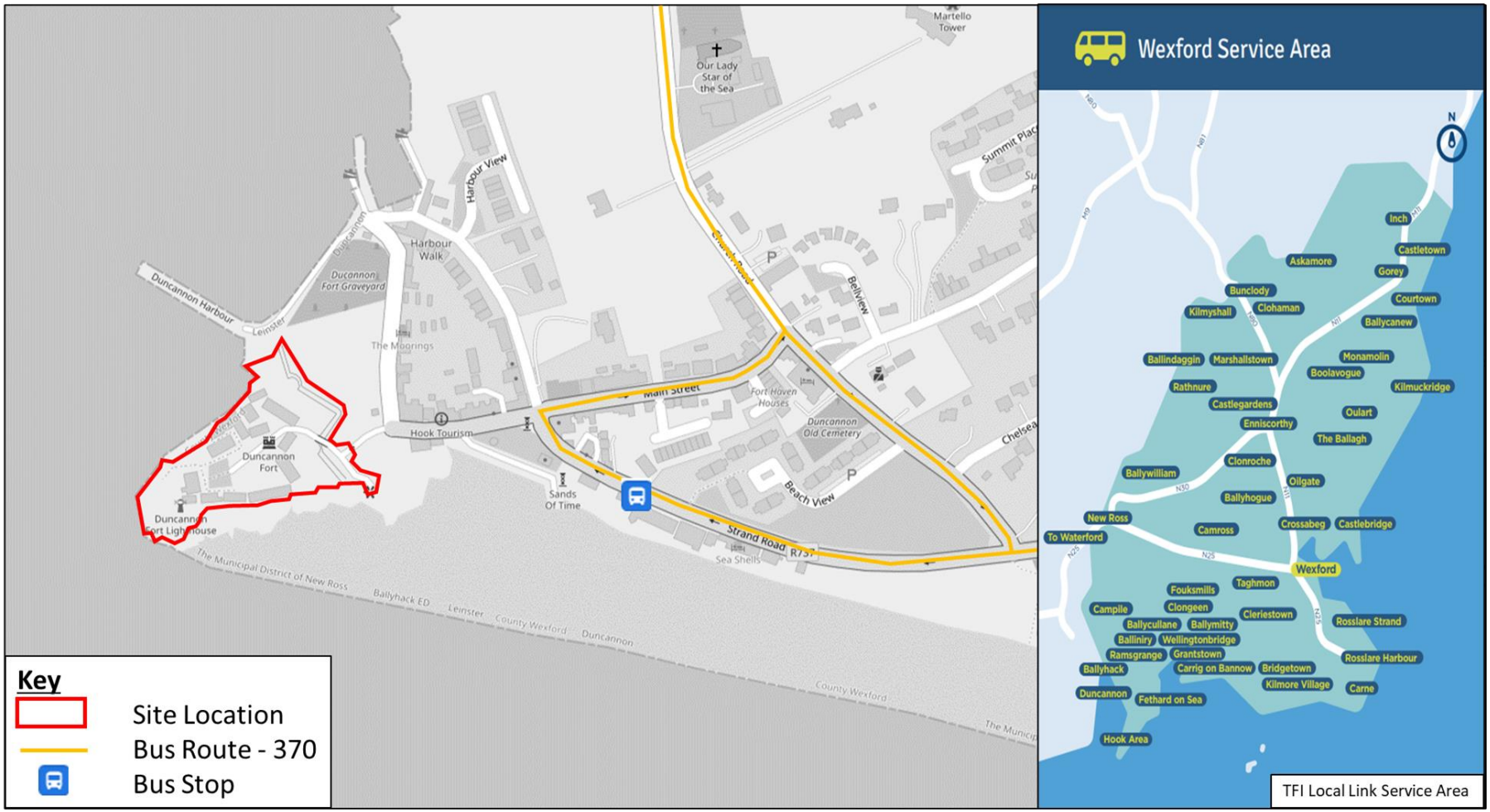


Figure 2 - Existing Public Transport Provision

Kevin McShane Ltd.
555 Lisburn Road
Belfast
BT9 8GQ

T: +44 (0)28 9560 9798

3. Car Parking

Existing Parking Provisions

The fort site currently provides a limited amount of car parking within the site.

Approaching vehicles enter the site from the town and pass over the internal bridge structure to the open courtyard area. The courtyard is a hardstanding area which provides unmarked parking.

There is currently no parking available on-site for visitors of the Fort.

Duncannon town itself offers free on-street parking. Visitors to the town may also park on Duncannon Beach when seasonal variances allow safe access.

Our Lady Star of the sea Church is located c.500m north of the fort and provides a marked area of off-street parking. There is 1 publicly available disabled parking space located on-street along Strand Road.

The proximity of on-street and beach parking to the fort site is highlighted in Figure 3.

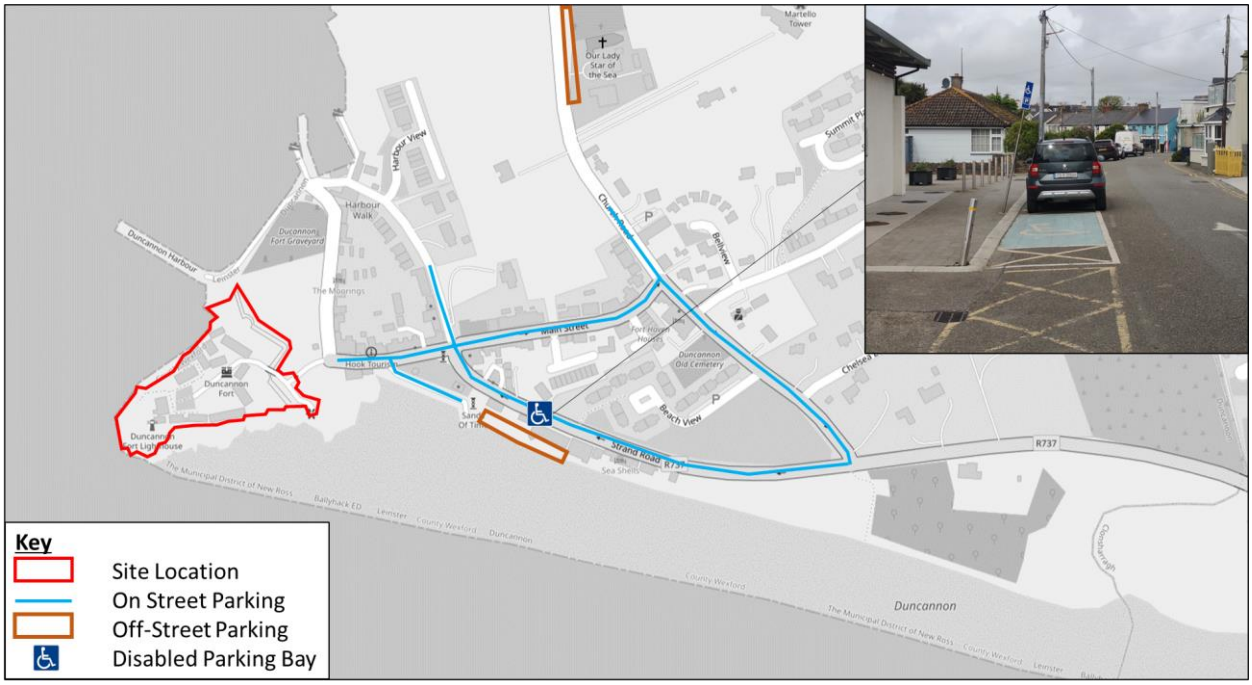


Figure 3 - Car Parking Accessibility

Kevin McShane Ltd.
555 Lisburn Road
Belfast
BT9 8GQ

T: +44 (0)28 9560 9798

Proposed Parking Requirements.

The redeveloped fort site will generate an increase in parking demand to users/ visitors / staff and others of the site.

The table below summarises the proposed land uses and associated parking requirements in accordance with the Wexford County development Plan 2021-2027.

Table 1 - Redeveloped Site Car Parking Requirements

Building Ref	Proposed Use	Layout	Parking Standards	Parking Requirements
1	Visitor Experience	70m2	1 space per 100m2	1
2a	Food Hall	35-50 Covers	Ancillary to other uses	0
2b				
3	Tourist Info/ Offices	67m2	1 space per 100m2	1
4a	Recreation Hall	130m2	1 space per 100m2	2
4b				
4c				
5	Accommodation	32 bed	1 space per 3 bedrooms	11
8a	Ancillary to Other Uses			0
8b				
8c				
9	Museum	388m2	1 space per 100m2	4
10	Retail	226m2	1 space per 100m2	2
11a	Retail	64m2	1 space per 100m2	1
11b	Accommodation	2 bed	*1 space per apartment*	1
12a	Retail	58m2	1 space per 100m2	1
12b	Retail	58m2	1 space per 100m2	1
12c	Accommodation	2 bed	*1 space per apartment*	1
12d	Accommodation	2 bed	*1 space per apartment*	1
13a	Retail	42m2	*1 space per apartment*	1
13b	Accommodation	2 bed	*1 space per apartment*	1
			Total	**29**

The table highlights that the redeveloped site would be required to provide c. 29 parking spaces to comply with car parking standards.

Note the maximum car parking standards for developments in a town centre or village centre have been applied for the retail/ museum/ community and office uses.

Accommodation car parking standards have been derived with reference to the normal maximum standards.

The table does not take account of any parking generated by the current site operation as a tourist attraction.

4. Travel to the Redeveloped Site

The review of existing travel infrastructure has highlighted that the site benefits from a limited level of sustainable and private car travel infrastructure.

To support the proposals and the introduction of a number of new site uses there is a need to manage and mitigate additional travel and car parking demands associated with the redeveloped site.

The table below summarises key aims which have been considered when analysing the future traffic and transport requirements associated with the redeveloped site.

Table 2 - Transportation Aims

Key Aim	Reason
Limiting vehicular traffic flow into the site	The fort access is below the required design standard to facilitate two-way vehicle flow. To ensure safe operation traffic volumes should be minimised.
Provide suitable access for non-motorised users	The current access is shared between NMUs and vehicles. Efforts should be made to maximise the available space to provide a segregated pedestrian/ cyclist access.
Promotion of sustainable travel modes	As private car infrastructure is limited alternative modes of transport should be considered and promoted.
Minimising the impact on existing local amenities and the town of Duncannon.	The creation of a desirable end destination is likely to increase users to the site. The impact of travel to/ from the development should be sufficiently mitigated to avoid any detrimental impact to Duncannon
Assessing the overall traffic impact of development proposals on the existing road network.	The redevelopment of the site will necessitate an assessment of the traffic impact on the current road network. Traffic surveys and local junction models will be required at the further assessment stages to determine and mitigate the traffic impacts.

Having considered the aims of the redevelopment, the following measures should be examined as mitigation proposals which would be delivered as part of the overall works.

1. **Provision of on-site car parking for future residents**

To discourage travel to the site by private car, parking should only be provided within the courtyard for those site users with the greatest need.

The development will be a zero-parking scheme with cognisance taken of accessibility for those with mobility impairments.

As a basic amenity requirement, car parking for disabled users should be prioritised over other site users.

Figure 4 highlights a potential location for disabled parking.

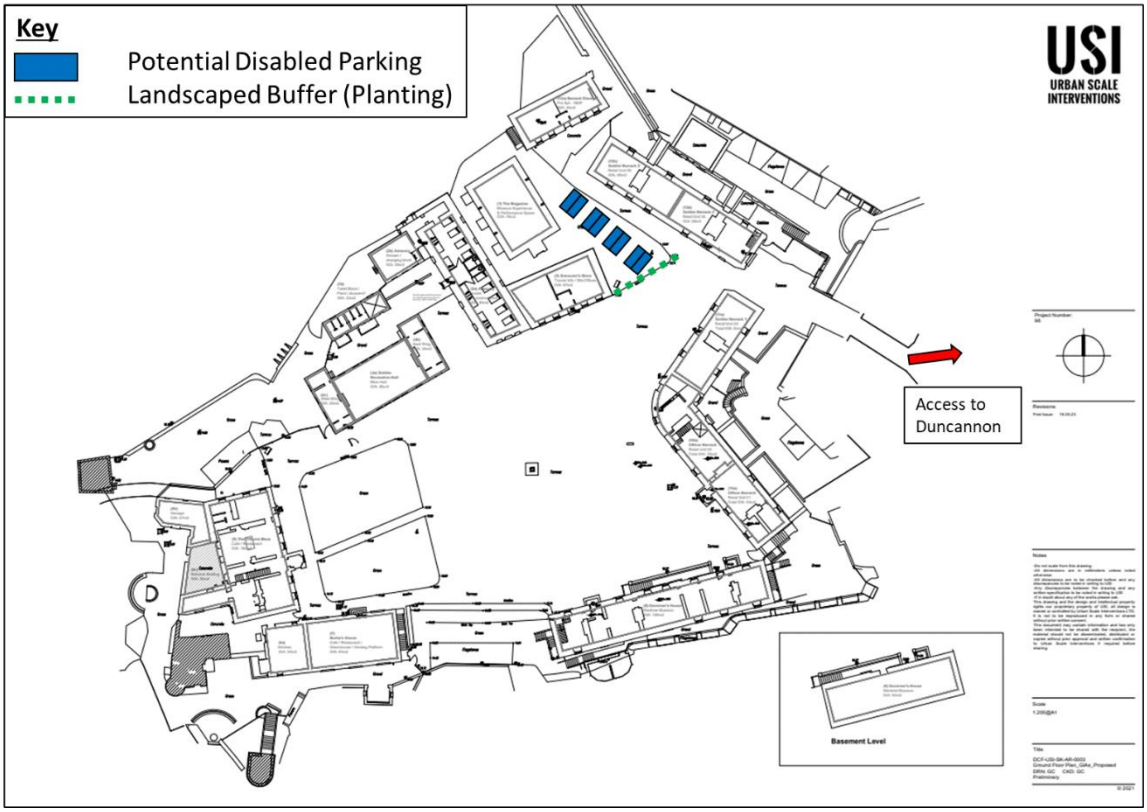


Figure 4 - Proposed Disabled Access Parking

Figure 4 illustrates 8no. parking spaces provided to the north of the site. A natural planted buffer should also be considered to screen the parking from other site users and discourage unauthorised use of the spaces.

Prioritising resident parking will limit vehicular traffic flow and minimise the impact on existing parking in Duncannon.

2. Minimal Servicing/ Staff Parking within the Site

Where operational needs allow, servicing of the commercial/ retail elements of the site should be minimal. Servicing should occur outside of normal operating times and be scheduled to avoid a build-up of service vehicles within the site. A dedicated shared managed servicing/ delivery location should be identified.

This location should be appropriately located to avoid impacting the general operation of the site and with consideration to the permanent residential users of the site.

Staff parking should be minimal (if any). If staff parking is a requirement this should be shared with the servicing area and managed to avoid the general operation of the remainder of the site. Figure 5 highlights an indicative location for the staff/ servicing area.

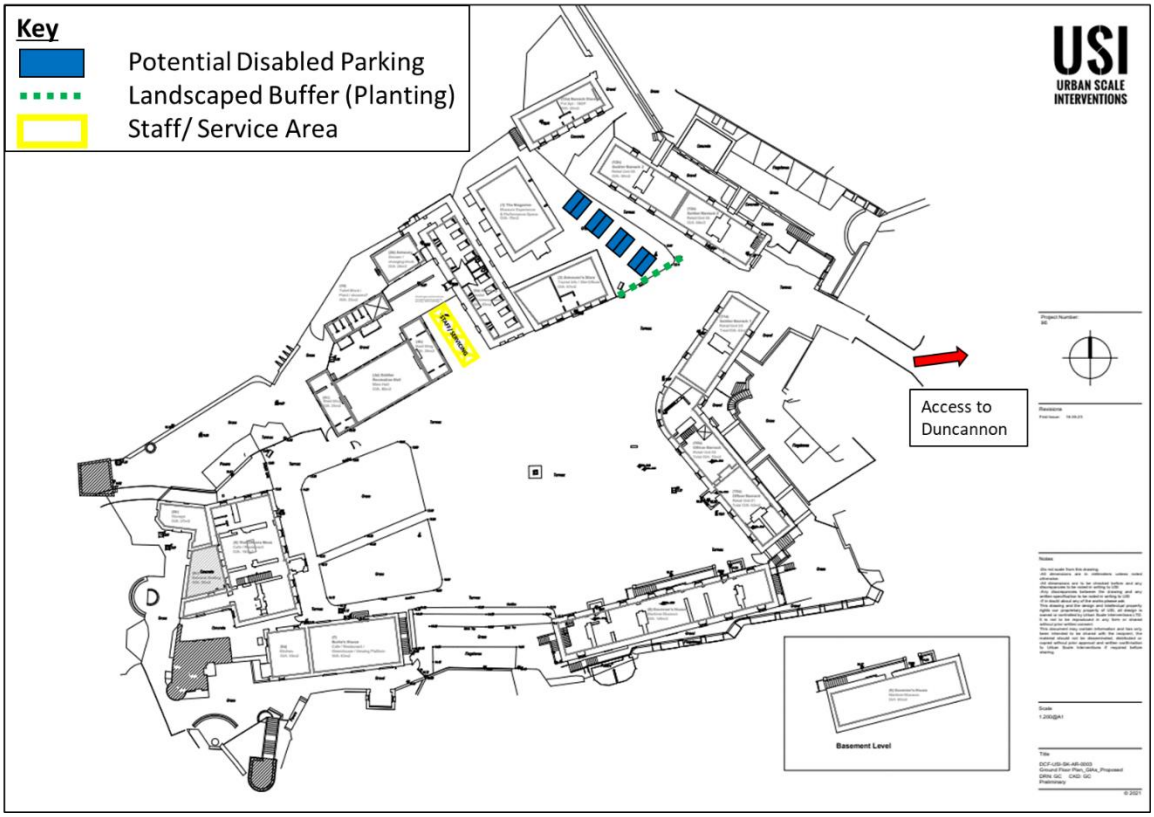


Figure 5 - Proposed Service Area

In addition to the servicing bay a Service Management Plan (or similar) can be submitted at the planning stage and would set out how the servicing within the site will be managed. The plan may become a condition of any ultimate planning approval.

A vehicle swept path assessment of anticipated servicing vehicles accessing the site is provided at **Appendix 1** of this report. The assessment highlights that vehicles can enter, turn and exit the site without impediment.

Provision of a shared managed service bay will meet the operational needs of the development while minimising vehicular traffic flow.

3. Identifying an off-site parking location

Whilst limiting private car travel should be considered, it is also necessary to accept that there will be an element of travel to the site by private car. To mitigate the impact on Duncannon, this car parking area should be off- site.

Areas along Strand Road c.800m from the fort have been identified as potential off-site car parking locations. These areas should be explored further.

Furthermore, as identified in the existing review of car parking the Our Lady Star of the Sea Church has been identified as a potential Park and Ride and Bike & Ride site to facilitate users of the Fort. Further engagement with the Church and other relevant stakeholders are necessary for formalise this potential parking accommodation.

In accordance with Table 1, car parking for c.29 spaces is required to comply with standards.

The remote nature of off-site car parks will be beneficial in minimising the traffic impact on the fort and Duncannon but will create a connectivity issue with the fort.

Accordingly, integrated transport solutions should be investigated.

Engagement with Hook Tourism should be considered to discuss a potential high frequency hop-on hop-off minibus service which would connect the car park to the fort and other local tourism attractions (for example Hook Lighthouse).

The potential off site car parks and the fort will require a dedicated set-down pick-up area for the minibus. Figure 6 proposes an indicative location within the courtyard of the fort.

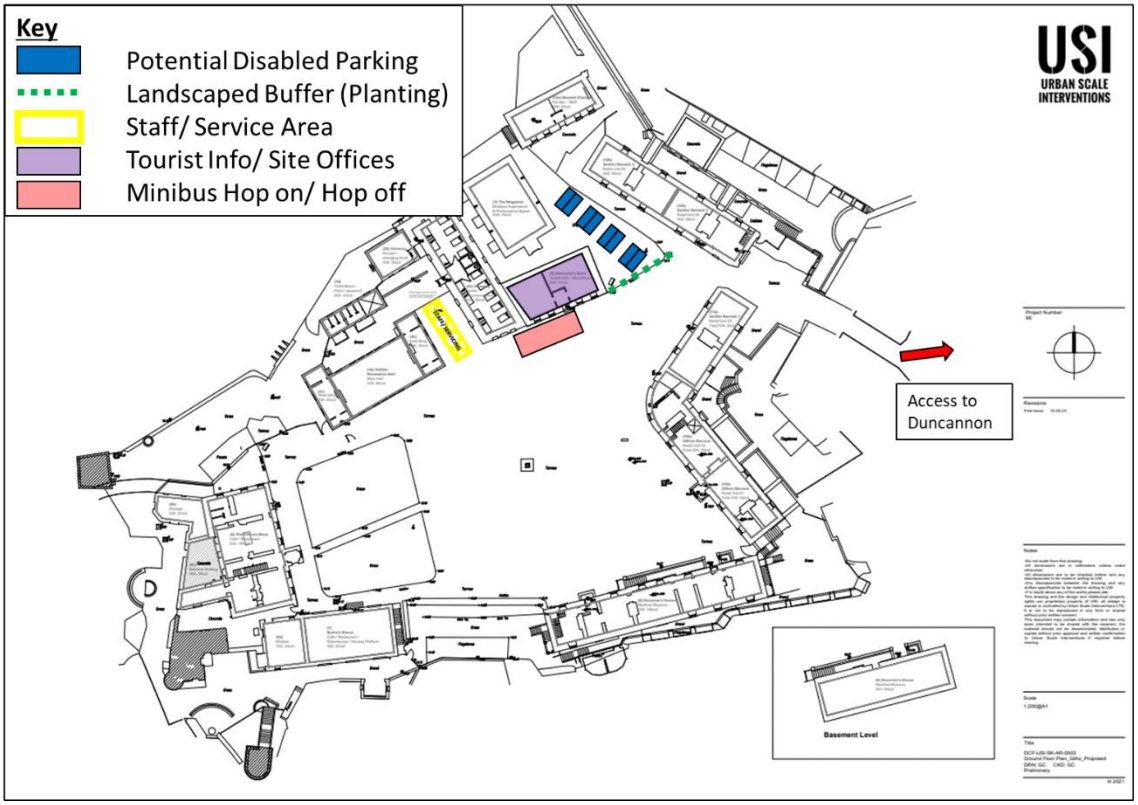


Figure 6 - Proposed Minibus Stop

The minibus stop would be conveniently located adjacent to the proposed tourist information building.

Management of vehicle access via an automatic barrier arm system should also be considered. This would avoid unauthorised access to the site and provide an element of traffic calming as vehicles would have to stop to allow the barrier to open and close.

For off-season travel, when the minibus is not in operation connectivity on foot should be improved.

This would require the implementation of an additional 600m of public footway along Strand Road from its existing terminus at the public toilets to the proposed parking location.

A vehicle swept path assessment of the minibus vehicle accessing the site is provided at **Appendix 1** of this report. The assessment highlights that the bus can enter, turn and exit the site without impediment.

Provision of off-site car parks will limit vehicular traffic flow and minimise the impact on existing parking in Duncannon.

4. **<u>Wider Public Realm Improvements to Duncannon and the Fort access</u>**

There is a need to promote the site as a destination which is accessible by sustainable modes of travel. Existing provisions for cyclists and pedestrians are limited and should be considered for improvement.

Pedestrian Improvements

Footway connectivity to the fort from Duncannon should be considered. Mobility impaired users should have a segregated access route to the fort which is separate from vehicular movements. At present, pedestrians are required to walk along the carriageway for c. 60m on approach to the fort entrance.

The provision of an appropriately wide, new section of footway would greatly benefit non-motorised user access to the site.

At the site entrance, the provision of a separated pedestrian/ cycle access through the Glaci should be considered (subject to archaeology studies). The pedestrian/ cycle route should be separate from any vehicle barrier system to avoid safety risks.

Separation of non-motorised and motorised users is essential in promoting an accessible development.

Noted planned improvements in Duncannon include a current planning application to develop lads adjacent to the fort. On completion this development will provide anew pedestrian footpath from the fort entrance along the southern side of Main Street.

It is also noted there are further prospective improvements planned along Strand Road. Council is presently considering the implementation of a standardised footpath along the beach front which will ultimately connect with existing footway provisions in Duncannon.

Cyclist Improvements

Duncannon benefits from its inclusion within the Eurovelo Cycle network. To promote the fort site as cycle accessible, cycle stands should be provided within the courtyard, adjacent to the Café/ restaurant elements.

In addition to infrastructure improvements, a travel plan (or similar) can be submitted at the planning stage and would set out how the site will promote sustainable travel and encourage a modal shift away from private car travel. The plan may become a condition of any ultimate planning approval.

Pedestrian and cyclist infrastructure improvements will promote the site as accessible for all and a sustainable travel destination.

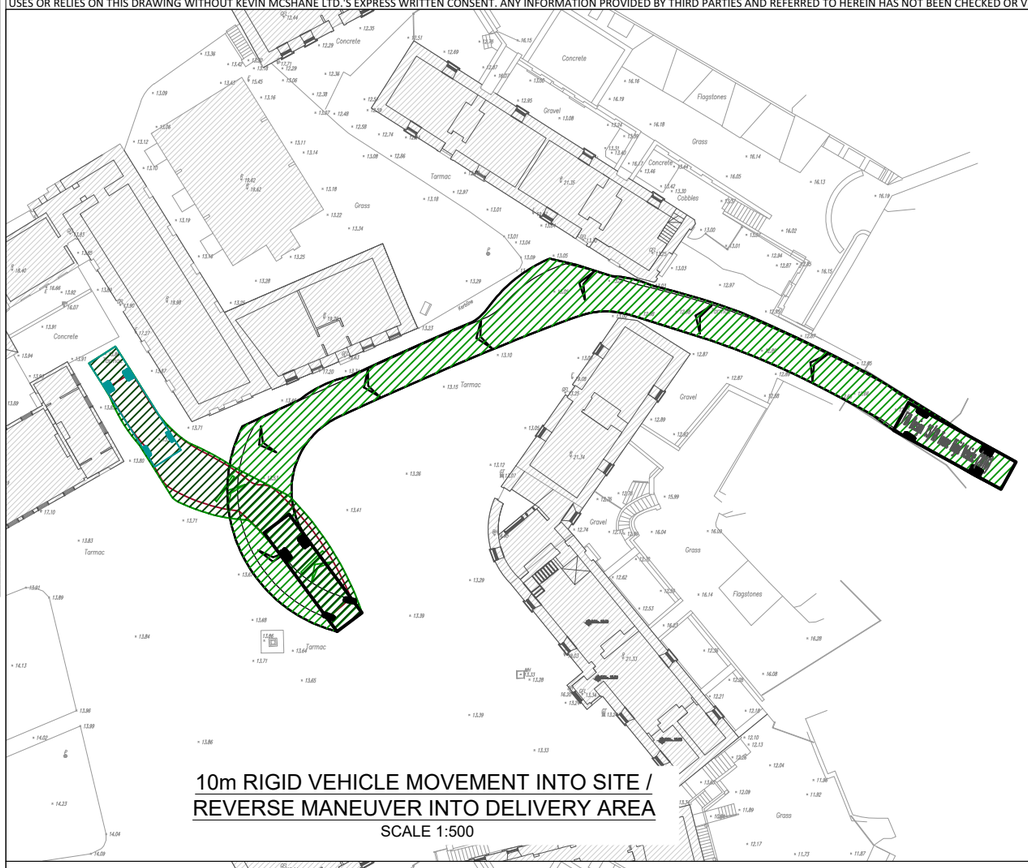
5. **Defined scope of future traffic surveys**

It will be necessary to assess the impacts of the redevelopment from a traffic generation viewpoint. A finalised development mix will be required to fully scope the extent of traffic surveys. These should include (but not limited to) Daily, Peak Hour and off-season traffic data collection. Traffic models of local junction can then be assessed to determine the traffic impact of the proposals.

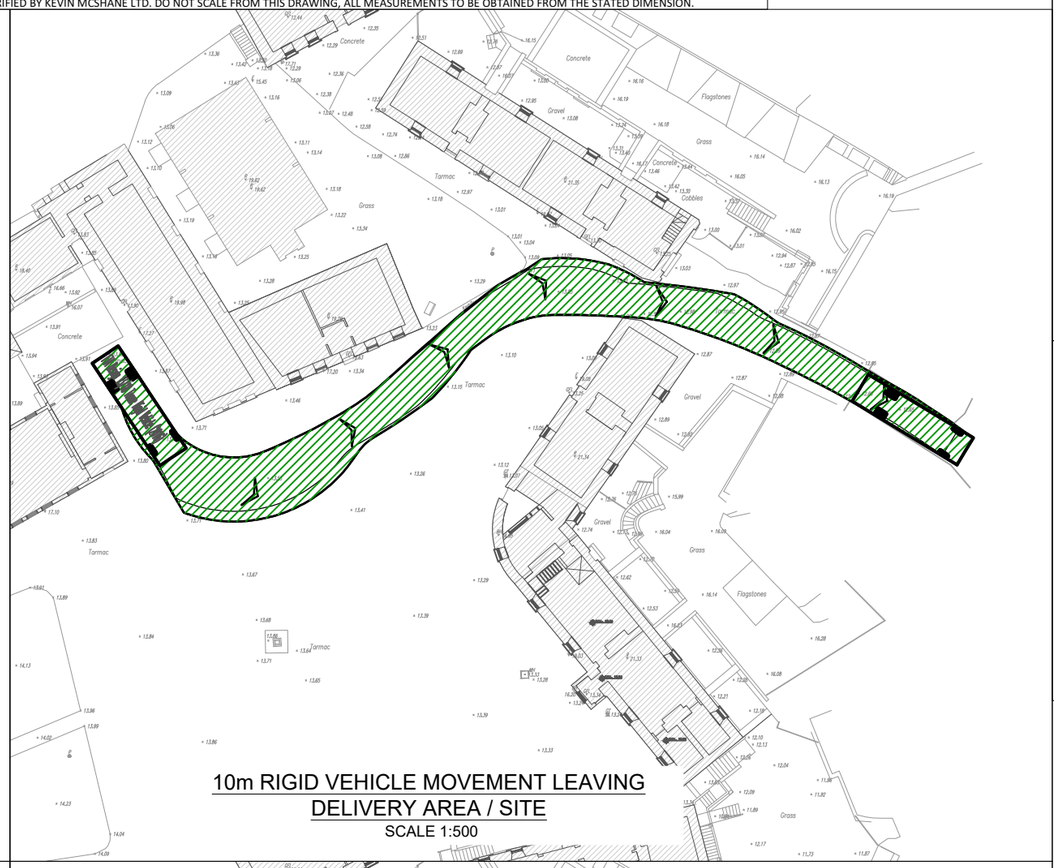
The further stages of assessment will require traffic data collection and junction model building.

Appendix 1

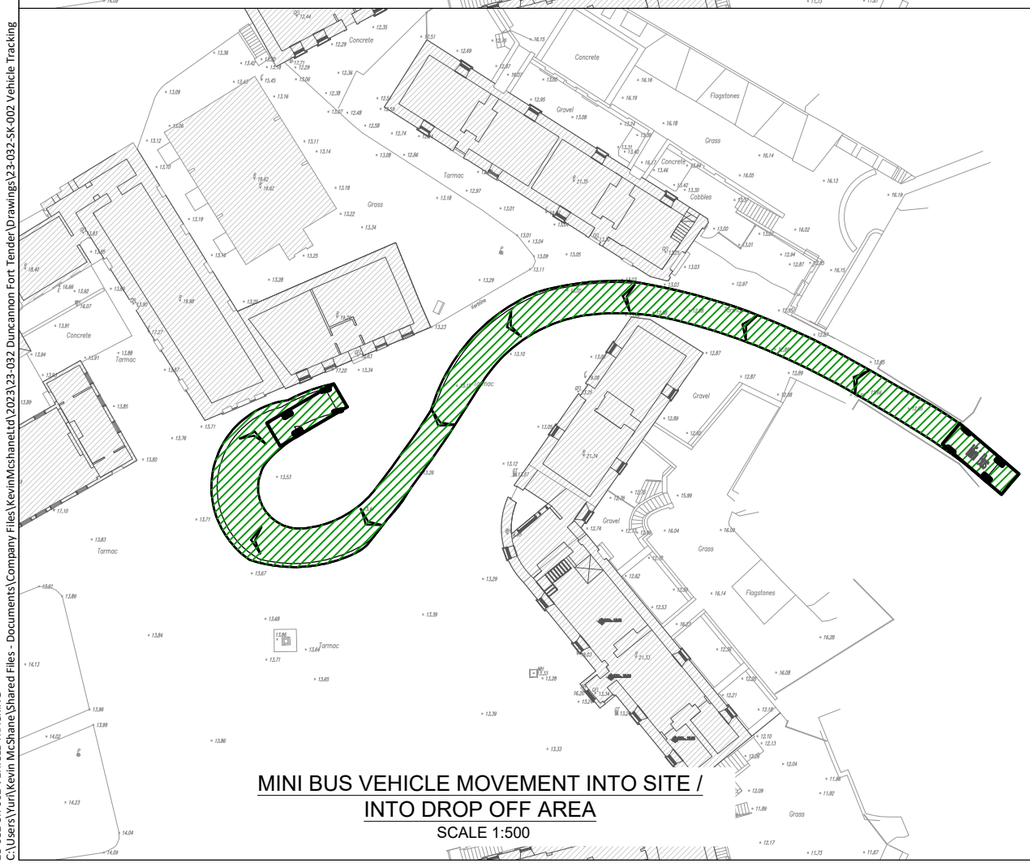
100
Millimetres
0
10



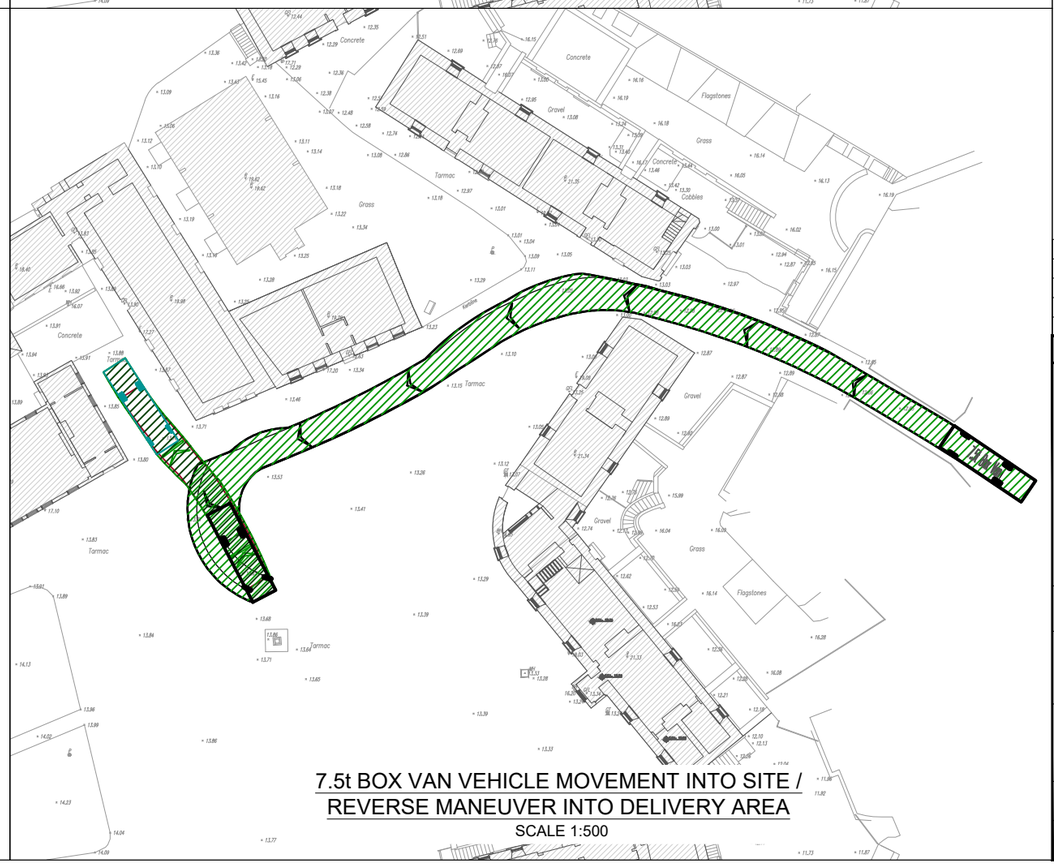
10m RIGID VEHICLE MOVEMENT INTO SITE / REVERSE MANEUVER INTO DELIVERY AREA
SCALE 1:500



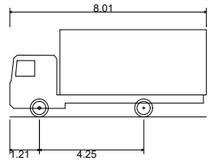
10m RIGID VEHICLE MOVEMENT LEAVING DELIVERY AREA / SITE
SCALE 1:500



MINI BUS VEHICLE MOVEMENT INTO SITE / INTO DROP OFF AREA
SCALE 1:500

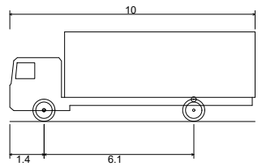


7.5t BOX VAN VEHICLE MOVEMENT INTO SITE / REVERSE MANEUVER INTO DELIVERY AREA
SCALE 1:500



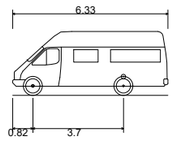
7.5t Box Van

Overall Length	8.010m
Overall Width	2.100m
Overall Body Height	3.556m
Min Body Ground Clearance	0.351m
Track Width	2.064m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	7.400m



FTA Design HG Rigid Vehicle (1998)

Overall Length	10.000m
Overall Width	2.500m
Overall Body Height	3.645m
Min Body Ground Clearance	0.440m
Track Width	2.470m
Lock to lock time	3.00s
Kerb to Kerb Turning Radius	11.000m



Mini Bus

Overall Length	6.330m
Overall Width	2.192m
Overall Body Height	2.601m
Min Body Ground Clearance	0.374m
Track Width	2.192m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	6.450m

Rev.	Date	Description	By	Chk'd	App'd

STATUS: SKETCH

Kevin McShane Ltd
Civil Engineering & Transport Planning
1st Floor, Albany House, 73-75 Great Victoria St, Belfast BT2 7AF
T: 028 95609798
E: info@kevinmcshane.co.uk

client: DUNCANNON VILLAGE RENEWAL

project: DUNCANNON FORT, DUNCANNON, CO WEXFORD

drawing: VEHICLE TRACKING

project no.	drg no.	rev no.
23-032	23-032-SK-002	-
drawn: YP	scale: AS SHOWN @ A3	date: 28-06-2023

23-032-SK-002 VEHICLE TRACKING
C:\Users\Yuri\Kevin McShane\Shared Files - Documents\Company Files\KevinMcshaneLtd\2023\23-032 Duncannon Fort Tender\Drawings\23-032-SK-002 Vehicle Tracking