



Fort Dunree Regeneration

Trip Generations Report

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1 INTRODUCTION

1.1 BACKGROUND

KH Chartered Engineers has been instructed by Failte Ireland/Donegal County Council to carry out this Trip Generations Report for the regeneration of the existing Fort Dunree site.

1.2 SITE LOCATION

The proposed development is an upgrade to Fort Dunree, a site located within Dunree Head, Linsfort, Buncrana.

Figure 1.1 Site Location



1.3 POLICY REVIEW

As a starting point for this report, a review of the following policies and reference documents have been undertaken:

- “Donegal County Development Plan 2018-2024”, Donegal County Council (June 2018);
- “PE-PDV-02045, Traffic and Transport Assessment Guidelines”, Transport Infrastructure Ireland, (May 2014);
- “PE-PAG-02017, Project Appraisal Guidelines for National Roads Unit 5.3 – Travel Demand Projections”, Transport Infrastructure Ireland, (October 2021);
- “DN-GEO-03031, Rural Road Link Design”, Transport Infrastructure Ireland (May 2023)

1.4 OBJECTIVE

Typically, generated trip rates are taken from the recognised TRICS database, which surveys the number of vehicles generated by a range of different sites (residential, commercial, educational etc.) and then calculates a trip rate based on a variety of different parameters such as GFA, number of employees etc.

While this method provides accurate trip rates for site types with large number of surveys that present similar travel habits irrespective of location (such as residential/commercial), there are limitations for site types where TRICS contains a low number of survey sites, which are often highly site specific. As a result, these often offer inaccurate trip rates.

An alternative method is to survey trips generated by a nearby site of similar nature, which offers representative travel habits, but again – in this case – there are no similar sites nearby to use as a basis.

2 PROPOSED SITE

Fort Dunree is a 25 Ha site located within the Inishowen peninsula. It offers a rich and detailed history and this project aims to expand upon its existing elements to attract more visitors across the entire site by repurposing existing buildings and implementing new interpretive installations to present an extended tourism offering than what is there at present. As well as structured tours, free exploration of the site offers an equally spectacular experience.

The site is accessed via an existing local road of varying width, which includes passing bays that are in keeping with the local landscape character. As a stop off along the Wild Atlantic Way, the local routes are well travelled across a large part of the year with nearby Buncrana serving as the main base for many visitors.

The main key objectives for the site are as follows:

- Drive economic impact in the Northwest;
- Grow Visitor Numbers from 14,250 (current) to 114,191 (Year 10) annually. The analysis of recent visitor numbers to tourism jobs ratio's shows that approximately 40 visitors can create 1 tourism job. 100,000 additional visitors could have a significant impact on employment rates in the Northwest;
- Increase employment rates;
- Minimum capacity of 295 Visitors Per Hour;
- Increasing the dwell time in Donegal / Northern Headlands;
- Lengthen the tourism season;
- Deliver an innovative tourism product;
- Deliver a sustainable project;
- Optimise investment.

3 TRIP CALCULATIONS

Having exhausted the options above, the Design Team and the Client agreed to calculate the number of vehicles generated by the proposed development by first principles based on projected number of visitors across future years. An annual visitor number target of 114,000 visitors has been set by the client for 10 years after opening, which has been distributed across each month as per Table 1.1 below in line with recognised Failte Ireland

Table 1.1: Generated Trips by proposed development

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEPT	OCT	NOV	DEC
Spread of visitors across the year	5%	5%	5%	7%	10%	11%	11%	13%	10%	9%	9%	5%
Monthly visitors	5700	5700	5700	7980	11400	12540	12540	14820	11400	10260	10260	5700
Weekday visitors (40% of visitors)	2280	2280	2280	3192	4560	5016	5016	5928	4560	4104	4104	2280
Weekend visitors (60% of visitors)	3420	3420	3420	4788	6840	7524	7524	8892	6840	6156	6156	3420
Daily Weekday Visitors	114	114	114	160	228	251	251	297	228	206	206	114
Daily Weekend Visitors	428	428	428	599	855	941	941	1112	855	770	770	428

The optimum figure of 1,283 daily weekend visitors in the month of August is further distributed using the following assumptions of the key parameters relating to travel and tourism habits.

Modal Share & Dwell Time

10% of visitors will be via coach tours with an average passenger occupancy of 50. The trips generated by these pre-booked tours are easy to manage as the travel companies operate to a strict timetable and notify each visitor attraction in advance of their arrival. For a comprehensive visitor attraction such as that proposed, tours normally begin in the morning and the afternoon to allow participants to experience as much of the attraction as possible. Normal dwell time for tours such as these are 2 hours as advised by Failte Ireland.

Mini-bus tours account for the same 10% modal share; however, offer a lower average passenger occupancy of 15. Failte Ireland have advised that organised tours associated with these vehicles will notify each attraction in advance of arrival whilst realising a longer dwell time of 4hrs.

The largest proportion of trips generated by the proposed development will be via passenger vehicles/cars with an estimated 75%. An average occupancy rate would be expected to be 3.5 persons with a 5hr dwell time.

Whilst not proposed as part of the development, there is an opportunity to implement improved sustainable routes to access the site. Preliminary discussions with local bus companies have shown that there is an appetite to extend the current service if the visitor numbers are as forecasted. We have also made formal representation to the recently completed public information/consultation day for the Buncrana – Carndonagh Greenway. Indeed, follow-up discussions with Donegal County Council representatives have indicated that Fort Dunree has been identified as a key node in any future Active Travel projects. We have proposed a modal share of 5% for sustainable travel; however, this is fully expected to be higher once all active travel measures are implemented.

Visitor Blocks

Similar to the organised coach tours, Failte Ireland's survey feedback from other sites indicates that individual families using their cars actively plan their day with typical visiting habits showing two distinct blocks – AM & PM.

All of these assumptions have been presented overleaf in Table 1.2 and confirms the total number of spaces required for each mode of transportation. On the basis of these calculations, the Design Team has carried out a geometric design of the car park that will accommodate the traffic generated with some extra spaces included.

Table 1.2: Car Parking Capacity Design

AUGUST	1283	Daily Weekend Visitors			
Modal Share of Vehicles Generated	10%	of this will be through coach tours	(50 passenger occupancy on average & allow for 2hr dwell time)	3	coach tours across the day
	10%	of this will be through minibus tours	(15 passenger occupancy on average & allow for 4hr dwell time)	9	minibus tours across the day
	5%	of this will be via sustainable routes	(Public bus, walking, cycling)		
	25%	of this will be pre-booked vehicles	(3.5 passenger occupancy on average & allow for 5 hr dwell time)	92	pre-booked vehicles across the day
	50%	of this will be turn-up vehicles	(3.5 passenger occupancy on average & allow for 5 hr dwell time)	184	casual vehicles across the day

100% Total

Arrival Times of Passenger Vehicles	30%	of passenger vehicles will arrive during first two hours of AM peak and spend 5hrs before they leave
	20%	of passenger vehicles will arrive during next three hours of AM peak and spend 5hrs before they leave
	30%	of passenger vehicles will arrive during first two hours of PM peak and spend 5hrs before they leave
	20%	of passenger vehicles will arrive during next three hours of PM peak and spend 5hrs before they leave
	0%	of passenger vehicles will arrive during the last two hours of day

100% Total

Time	Buses						Passenger Vehicles/Car						Total Car Spaces
	Tour Coach Arrivals	Tour Coach Departures	Tour Coach Spaces	Mini-bus Arrivals	Mini-bus Departures	Mini-bus Spaces	Pre-booked Arrivals	Pre-booked Departures	Pre-booked Spaces	Casual Arrivals	Casual Departures	Casual Spaces	
0800 - 0900	0	0	0	0	0	0	12	0	12	24	0	24	36
0900 - 1000	0	0	0	2	0	2	12	0	24	24	0	48	71
1000 - 1100	1	0	1	1	0	3	5	0	29	11	0	58	87
1100 - 1200	1	0	2	1	0	4	5	0	34	11	0	69	103
1200 - 1300	0	1	1	1	0	5	5	12	28	11	0	79	107
1300 - 1400	0	1	0	1	2	4	0	12	16	0	24	56	71
1400 - 1500	0	0	0	1	1	4	12	5	23	0	24	32	54
1500 - 1600	1	0	1	1	1	4	12	5	29	24	11	45	74
1600 - 1700	1	0	2	1	1	4	5	5	29	24	11	58	87
1700 - 1800	0	1	1	0	1	3	5	0	34	11	11	58	93
1800 - 1900	0	1	0	0	1	2	5	12	28	11	0	69	97
1900 - 2000	0	0	0	0	1	1	0	12	16	11	0	79	95
2000 - 2100	0	0	0	0	1	0	0	16	0	0	79	0	0

4 CONCLUSION

The calculations contained within are based on best-practice assumptions taken from similar travel habits across Failte Ireland promoted sites. We have calculated for an optimum scenario – i.e. annual tourism numbers of 114,000 distributed across the year. Our robust assessment uses August as the basis of our calculations – a month considered to be the height of the summer season. Dwell times adopted as part of the calculations are in line with the more experiential tourism offering proposed as well as the 2no distinct AM & PM visiting blocks.

The peak requirement for car parking occurs between 1200hrs and 1300hrs, which would follow visiting habits at other sites (i.e. those at the end of the AM visiting block having lunch while others begin their PM visits).

Once the proposed development has been built, it would be prudent to monitor visitor numbers in the initial few year – firstly to gauge the viability of third-party sustainable transport options and secondly to allow a phased implementation of any additional capital works/programmes.