

Holyhead Land Train feasibility: Report of land train pilot



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Ymddiriedolaeth
Elusennol Ynys Môn
*Isle of Anglesey
Charitable Trust*



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1 Introduction

- 1.1 Following a feasibility study to examine the potential for initiating a permanent land train service in Holyhead, a pilot service was trialled at the end of July and beginning of August 2019.
- 1.2 The objectives of pilot were to:
- Test the proposed routes in terms of operational issues and attractiveness to users;
 - Gain local experience in the operational aspects of the land train service;
 - Test user response, in terms of interest in and satisfaction with the service;
 - Assess who the user markets are, what they like about the service and anything they'd change about it;
 - Gather more robust evidence on operational costs and user revenue to confirm that a financially viable service can be operated in the future.
 - Undertake a detailed route assessment, including confirming the best routes to use and the appropriate timings for those routes.
- 1.3 A procurement exercise was conducted in June 2019. LandTrainHire NationWide was commissioned to run the service.
- 1.4 This document reports on the pilot and is structured as follows:
- Section 2 describes the pilot operation;
 - Section 3 analyses passenger boardings and information about the types of people who used the land train;
 - Section 4 provides an updated assessment of costs and revenues of running a full service;
 - Section 5 provides our conclusions and recommendations.

2 Route operation

Preparations

- 2.1 The preparatory work for undertaking the pilot included:
- A meeting of the land train operator with Highways Department and Traffic Police to confirm route;
 - Application for VSO;
 - Completion of risk assessment for the route and setting out plans for dealing with any safety issues;
 - Liaising with Breakwater Park to provide traffic cones to prevent parking obstructing the land train turning circle;
 - Provision of overnight storage courtesy of Stenaline.

Route served

- 2.2 The service travelled from Newry Beach (outside Maritime Museum) to Breakwater Country Park and back and then on to the town centre, before returning to Newry Beach.
- 2.3 The route taken was from in front of the Maritime Museum on the lower road. It passed the Marina and climbed the short hill to the junction of Beach Road before crossing straight on to the Breakwater Country Park access road and continuing along here to the Country Park, where it stopped next to the parking bays on the left of the car park.
- 2.4 The land train then turned in the car park and proceeded via the same route back to the Maritime Museum.
- 2.5 At the Maritime Museum, it then turned onto the main Beach Road / Prince of Wales Road via the small access road to Holyhead Boatyard. It then proceeded along Prince of Wales Road before turning right into Market Street. It stopped at the top of Market Street by St Cybi's and then continued along William Street before turning right onto Boston Street and left onto Prince of Wales Street to continue back to the Maritime Museum. It turned right via the Holyhead Boatyard car park access road to rejoin the lower road back to the Maritime Museum.
- 2.6 Although the trail began operation using the lower road in front of the Maritime Museum for most of the subsequent trial period the train was actually operated via Beach Road rather than the lower road. This was to avoid the gradient near the Holyhead Sailing Club as the land train that operated the trial had a smaller capacity engine than was originally planned for (see below).
- 2.7 The route distance from Maritime Museum to Breakwater Park and back was 3 miles and took an average 20-25 minutes to complete.
- 2.8 The route distance from Maritime Museum to town centre and back was 1.5 miles and took an average 20 minutes to complete.
- 2.9 The total route distance, incorporating both loops, was 4.5 miles, and could be operated in 40-45 minutes.

- 2.10 During the trial, no timetable was provided, to provide flexibility in operations according to demand. On occasion, the service made consecutive runs from Newry Beach to Breakwater Park to accommodate demand. It was also decided to provide a short rest at Breakwater Park to allow customers to briefly explore the park before returning to Newry Beach. Consequently, the complete service was typically run at hourly intervals.



Services operated during the trial

- 2.11 Originally the service was to be operated from Thursday 25th – Sunday 28th July and Thursday 1st – Sunday 4th August by a LandRover Train. However, a mechanical fault on the first day of operation led to its replacement by a land train, with the service operating 7 days instead of 8.

Marketing during the trial

- 2.12 A project website and facebook page was set up for the trial with most communication done through this. This helped to generate awareness and interest in the service.
- 2.13 Posters and flyers were created, using the same branding, and distributed to visitor attractions, Stenaline, holiday parks and the ferry terminal and rail station. A boards were also provided on the street advertising stopping locations.

Operational issues

- 2.14 No operational issues were reported with the running of the train. In particular, there were no problems with traffic congestion in the town centre (due to parked cars blocking the carriageway), turning the vehicle in Breakwater Park (with the cones successfully stopping people from parking in the turning circle), and no concerns with the use of the viaduct on the approach to Breakwater Park. There were also no issues with other road users becoming frustrated with the land train or trying to overtake inappropriately.
- 2.15 One consequence of the change of engine for the land train was that for most of the trial the service was operated exclusively along Beach Road, rather than the lower access

road in the Newry Beach area. In order to avoid the risk of passengers looking to cross Beach Road to catch the train when it was travelling in the direction of the Country Park on its return from the town centre the decision was taken not to stop the train at this point of the service loop. This had the effect of reducing the service frequency from Newry Beach to the Country Park to hourly rather than half hourly and probably contributed to the fact that passengers tended to stay on the train for the entire round trip rather than making shorter one way or hop-on, hop-off trips (see section 3 for more details).

2.16 In conclusion, the trial showed the route to be suitable for a land train and to be reliable for operation.

2.17 The only changes that would be recommended for the full service would be to consider a three carriage operation and to operate via the lower access road at Newry Beach in both directions as this would provide a better waiting environment for passengers, allow a half hourly service to be operated to/from Newry Beach and facilitate more shorter hop-on, hop-off trips. This would require a more powerful land train to negotiate the climb from the lower road to Beach Road.

3 Ridership of the land train

Introduction

- 3.1 A log of passenger boardings and alightings was maintained throughout the trial.

Passenger numbers

- 3.2 Table 3.1 shows the number of passenger boardings, operational hours and average boarders per hour for the 7 days of the trial. On Saturday 27th July, the land train took part in the Holyhead Festival parade, so had reduced operating hours.

Table 3.1: Passenger numbers by day

Day	Operating hours	Total boarders	Average boarders per hour
Friday 26th July	6.3	120	19.2
Saturday 27 th July	3.6	95	26.5
Sunday 28th July	6.2	149	24.2
Thursday 1 st August	5.8	137	23.8
Friday 2nd August	6.8	152	22.5
Saturday 3 rd August	6.1	189	31.1
Sunday 4th August	6.0	180	30.0
Total	40.6	1022	25.2

- 3.3 A total of 1022 individuals used the train, averaging 25.2 passenger boarders per hour and varying between 19.2 and 31.1 passengers.
- 3.4 Whilst the service was very popular with cruise ship visitors, (days of cruise ships highlighted in bold), it should be noted that passenger loadings were slightly higher on non-cruise ship days (average 27.3 boardings per hour compared to 23.9 boardings per hour on cruise ship days). Similarly, it should be noted that boardings were slightly higher during the second week (26.9 boardings per hour compared to 23.3 boardings per hour). The Holyhead Festival was running during the first weekend. It therefore seems that passenger numbers were robust throughout and not dependent on cruise ships or the Holyhead Festival.
- 3.5 It was reported that the service was full or nearly full most of the time (with a carrying capacity of around 34 passengers) and on occasion, some people were unable to board. It was also reported that most passengers enjoyed completing the whole journey from Newry Beach to Breakwater Park to the town centre and back to Newry Beach.
- 3.6 Table 3.2 shows the passenger boardings aggregated by day of week. With the trial only lasting 7 days and running on one Thursday and two Fridays/Saturdays/Sundays, it would be wrong to draw too much inference from this, but it shows that Saturdays followed by Sundays were the most popular days.

Table 3.2: Number of boarders by day of week

Day	No. of departures	Op hours	No. of boarders	Boarders / departure	Boarders / op hour
Thursday	19	5.8	137	7.2	23.8
Friday	43	13.0	272	6.3	20.9
Saturday	32	9.7	284	8.9	29.4
Sunday	39	12.2	329	8.4	27.0
	133	40.6	1022	7.7	25.2

- 3.7 Table 3.3 shows boarders by time of day. It shows that demand was strongest during the middle of the day (1pm-2pm), with 3pm-4pm and 11am-12pm being the next strongest times in terms of total number of boarders.

Table 3.3: Number of boarders by time of day

Timeslot	No. of departures	No. of boarders	Average boarders
09:45-10:59	21	161	7.7
11:00-11:59	18	170	9.4
12:00-12:59	18	150	8.3
13:00-13:59	21	227	10.8
14:00-14:59	19	127	6.7
15:00-15:59	26	187	7.2
16:00-16:30	10	0	0.0
	133	1022	

- 3.8 In terms of where passengers boarded and alighted the train, Table 3.4 shows that Newry Beach was the most popular boarding and alighting location. The fact that the Breakwater Café was closed for most of the trial was reported as discouraging many people from alighting at Breakwater Park and spending time there.

Table 3.4: Boarding and alighting locations

Stop	No. of departures	No. of boarders	Av boarders	No. alighters	Av. Alighters
Town centre	41	202	4.9	232	5.7
Newry Beach	49	637	13.0	641	13.1
Breakwater Park	43	183	4.3	149	3.5
	133	1022		1022	

- 3.9 A log of weather conditions was maintained during the trial. Weather was logged simply as “raining”, “cloudy” or “sunny”. Boardings were actually strongest whilst it was raining, and virtually identical for cloudy or sunny conditions. Whilst again the length of the trial was limited, it does suggest that the land train service is not too dependent upon weather conditions.

Tickets sold and revenue raised

3.10 Table 3.5 shows the number of tickets sold.

Table 3.5: Number of tickets sold

Number of tickets sold	Number of individuals	Type	Price	Income	% share
357	357	adult	£3	£1,071	63%
123	123	children	£2	£246	22%
83	332	family	£8	£664	15%
563	812			£1,981	

3.11 563 tickets were sold for a total of 812 individuals, generating a revenue of £1,981. The majority of tickets sold were adult tickets. If it is assumed that family tickets (which could be used for 2 adults and 2 children or 1 adult and 3 children) had an average of 1.75 adults and 2.25 children, this would imply 62% of passengers were adults and 38% were children. It was possible for tickets to be bought by credit or debit card, though this was only used in a handful of cases (representing 4% of revenue).

3.12 The discrepancy between number of individuals buying tickets and numbers boarding the train is accounted for by under 3's who travelled for free, and passengers who got off the service and then reboarded later on.

3.13 Revenue per ticket was £2.44 and revenue per boarder was £1.96. Revenue per operating hour was £48.81.

Passenger profile

3.14 A simple paper-based survey was distributed to all groups joining the land train, to be completed and returned on leaving the land train. 237 responses were received representing 767 passengers, representing 75% of those carried.

3.15 Table 3.6 below shows the type of visitor group, categorised into resident of Holyhead / Anglesey, day visitor, staying visitor, cruise ship visitor and other. Usage was dominated by residents, followed by cruise ship visitors. Other included people coming on the ferry from Dublin for a day trip and people coming to Holyhead to catch a ferry and spending some time locally beforehand.

Table 3.6: Type of visitor group

Type	Number of groups	%
Resident	140	59%
Cruise ship visitor	44	18%
Staying visitor	30	13%
Day visitor	20	8%
Other	3	1%
Total	237	

3.16 The age category of the group leader was asked, together with the number of adults and children in the party. The biggest categories of users were 25-34, followed by over 65, followed by 35-44. There was relatively little take up amongst groups led by someone in the 45-54 or 55-64 age groups. Group sizes were highest for 25-34 and 35-44. This translates to 60% of passengers being within groups led by someone in the 25-34 and 35-44 age categories. 74% of groups contained children, with 26% adult only.

Table 3.7: Age category of group leader and average group size

Age category	Number of groups	%	Average no. adults	Average no. children	Average group size	Total passengers
17-24	6	4%	1.6	1.0	2.6	13
25-34	45	28%	2.0	1.8	3.8	164
35-44	37	23%	2.1	1.5	3.7	136
45-54	18	11%	2.3	1.2	3.4	62
55-64	14	9%	1.8	0.5	2.2	29
65+	40	25%	1.9	0.9	2.8	96
Age not given	71		2.1	1.6	3.8	267
All	231		2.1	1.4	3.5	767

3.17 In terms of type of visitor, group sizes were as shown below in Table 3.8.

Table 3.8: Average group size by type of visitor

Type	Adults	Children	Total
Resident	1.9	2.0	3.8
Cruise ship visitor	2.5	0.6	3.1
Staying visitor	2.5	1.7	4.2
Day visitor	2.1	1.5	3.6
Other	1.7	4.0	5.7

3.18 Table 3.9 shows the age category of the different type of visitors. The most common age category of residents was 25-34, for day and stay visitors it was 35-44, and for cruise ship visitors it was 65+.

Table 3.9: Age category of group leader by type of visitor

Age category	Day	Stay	Cruise	Resident
17-24	7%	5%		4%
25-34	27%	10%	9%	38%
35-44	47%	35%	12%	21%
45-54	7%	15%	9%	12%
55-64		20%	15%	6%
65+	13%	15%	55%	19%

3.19 Respondents were asked how they had become aware of the land train (Table 3.10). Either seeing the train or reading about it on-line were the most common. The 25-34 and 35-44 age groups were most likely to find out about it online, whereas older age categories were more likely to see the train.

Table 3.10: Age category and how became aware of land train

Age category	No.	On-line	Printed information	Word of mouth	Saw train
17-24	6	2	1	0	3
25-34	45	24	1	10	15
35-44	37	17	2	10	9
45-54	18	8	3	3	7
55-64	14	5	1	3	8
65+	40	6	7	9	21
Age not given	77	32	10	8	32
All	237	94	25	43	95

3.20 Respondents were asked to rate the service in terms of how enjoyable it was and value for money. Responses were universally high and there were no statistical differences between age groups or type of visitor.

Table 3.11: Satisfaction with land train service

Rating	Enjoyment	Value for money
*****	197	186
****	22	27
***	1	6
**	0	0
*	1	2
Average	4.87	4.79

3.21 Respondents were asked about other ways of improving their land train experience and the responses are given below in Table 3.12.

Table 3.12: Other ways of improving the experience

Set timetable	8
cafe not open	3
more carriages	3
more photo opps	3
better signage (especially in town)	2
explain more about the area / speaker in carriage	2
great idea	2
loyalty card	2
more information	2
avoid speed bumps	1
Easter onwards	1
faster + glass windows	1
great for older people to see area	1
market it to ships	1
more attractions	1
more stops	1

serve South Stack	1
stay at Park longer	1
variety of routes	1
weekly tickets	1

3.22 Finally, passengers were asked about other places they were planning to visit that day.

Table 3.13: Other places land train users intend to visit

Attraction	No.	No.
Breakwater Country Park	104	44%
Maritime Museum	65	27%
St Cybi's	42	18%
South Stack Lighthouse	31	13%
South Stack RSPB	21	9%
Ucheldre Centre	18	8%
Other	19	8%
All	300	

Visitors to attractions

3.23 Surveys were distributed to visitor attractions to ask whether their visitors had used the land train, or intended to, or whether on another visit to Holyhead they would be interested.

3.24 The distribution and completion of these surveys was much more limited, with 37 responses collected.

3.25 Table 3.14 below shows the type of visitor group, categorised into resident of Holyhead / Anglesey, day visitor, staying visitor and cruise ship visitor. Day visitors and stay visitors were much more represented compared to land train users, showing that they are present in the area but possibly lack of prior awareness of the land train.

Table 3.14: Type of visitor group

Type	Number of groups	%
Staying visitor	8	32%
Resident	10	27%
Day visitor	12	22%
Cruise ship visitor	7	19%
Total	37	

3.26 The age category of the group leader was slightly older than the land train users, with 30% over 65 and the median age being 45-54. Residents tended to be younger and cruise ship visitors older, with day and stay visitors across the range of age categories.

3.27 Group sizes were slightly smaller compared to land train users, averaging 2.0 adults and 0.7 children, as shown in Table 3.15.

Table 3.15: Average group size by type of visitor

Type	Adults	Children	Total
Resident	1.7	0.9	2.6
Cruise ship visitor	2.1	0.1	2.3
Staying visitor	1.9	0.9	2.8
Day visitor	1.7	0.9	2.6
Average	2.0	0.7	2.7

- 3.28 Visitors were asked whether they had used the land train. 2 had and 35 hadn't.
- 3.29 12 of 33 respondents (36%) said they planned to use the land train later in the day.
- 3.30 When asked whether they would consider using the land train in the future, 38% said yes, 49% said possibly and 14% said no. It is encouraging that only a small proportion thought they wouldn't use it.

Table 3.16: Would you use the land train in the future?

	Yes	Possibly	No
Day visitor	1	6	1
Staying visitor	6	4	2
Cruise ship	1	5	1
Resident	6	3	1
	14	18	5

- 3.31 Finally, visitors to attractions were asked about other places they were planning to visit that day (Table 3.17). The majority were visiting the Maritime Museum, with a third planning to go to Breakwater Country Park and a quarter to South Stack Lighthouse.

Table 3.17: Other places visitors intend to visit

Attraction	No.	No.
Maritime Museum	27	73%
Breakwater Country Park	12	32%
South Stack Lighthouse	9	24%
St Cybi's	7	19%
South Stack RSPB	3	8%
Ucheldre Centre	2	5%
Other	5	14%
All	300	

Assessment

- 3.32 In our assessment of demand, we forecast an average of 170 boarders for an average 6.6 hour operation, equating to 25.6 boarders per operating hour.
- 3.33 The trial showed 25.2 boarders per operating hour on an operating day of average 6.2 hours. However, only 80% of boarders were buying tickets meaning that the average paying boarders per hour was 20.

- 3.34 We also predicted a revenue of £2.61 per boarder in July/August (£2.56 across the full season), whereas the figures in the trial were £2.44.
- 3.35 Our estimated revenue per operational hour (based on 25.6 passengers boarding per hour and paying £2.61) was £66.96 whereas in the trial a total of £48.81 was received.
- 3.36 Our estimated operational costs were £60.52 per hour. So the service would need to generate 24% more revenue in order to break even.
- 3.37 Our prediction of the source of the passengers and the equivalent data from the survey is shown in Table 3.18.

Table 3.18: Comparison of passenger market sources

Visitor market	Phase 2 report	From visitor survey
Staying visitors	44%	13%
Day visitors	7%	8%
Cruise ship market	18%	18%
Ferry visitors	10%	1%
Residents	15%	59%
Generated demand	5%	

- 3.38 While the day visitor and cruise ship visitor proportions are in line with the forecasts the staying visitors proved to be a much smaller proportion than expected whilst residents were much higher. To an extent this might be expected. The combination of the Holyhead festival, which is very much a local event taking place during the first weekend of the trial and the limited amount of advance marketing (borne out by the findings of how people found out about the train -Table 3.10) meant that local people were more likely to know about the train than visitors, particularly those staying elsewhere in Anglesey.
- 3.39 Nevertheless this does add a note of caution to the forecasts and illustrates the vital importance of marketing to the staying visitors in particular as it is unlikely that the local resident market would provide sufficient repeat visits to fill the gap if the staying visitors are not attracted to the service.
- 3.40 In the next section we consider the implications for the potential viability of a permanent land train service and revisit the passenger revenues and operating costs to refine the business case.

4 Implications for Potential Viability

Demand and Revenue Forecasts

- 4.1 The main findings from the trial with regards to demand and revenue are:
- The number of passengers per hour proved to be very similar to forecast;
 - There is potential to charge higher fares for round trips (in the form of a hop-on, hop-off fare), and to introduce single trip fares at a similar price to the fares charged in the trial;
 - However, whilst the lack of advanced marketing may be a major factor in this, the number of passengers from the staying visitor market was a lot lower than forecast and there was a far greater reliance on local residents.
- 4.2 With this in mind and with the possibility that there will also have been an initial surge in interest because of the time-limited opportunity offered by the two-weekend trial we have revisited the demand and revenue forecasts from the Phase 2 report, taking a slightly more cautious view on the potential demand but a more optimistic view on the potential revenue that could be generated.
- 4.3 In terms of *demand* we have reduced our forecast capture rate from the Overnight holiday trips market segment from 5% to 4% of the market and also removed the 'Generated demand' segment. This has the impact of **reducing our forecast of demand for the land train from 15,257 trips (May-September) to 13,003** - Table 4.1 below. In terms of the forecast average daily number of trips during the July and August peak season this is a reduction from 170 trips per day to 148 trips per day. For a six hour operational day this would be the equivalent of 24.7 boarders per hour, compared to the average of 25.2 boarders per hour in the trial (Table 3.2).
- 4.4 Offsetting this we have increased our forecast of *revenue* per passenger, applying Day Rover ticket prices of £5 (adult), £3 (child) and £13 (family) and Single ticket prices of £3/£2/£8 respectively. We have also allowed for a proportion of the passengers to be travelling for free (primarily the under 3's). The impact of these changes is to increase average revenue across the whole operating season from £2.56 per passenger to £3.22 and **to increase the revenue forecast for the full season from £38,986 to £41,893** (and £497 per average July/August day, up from £445 per day). Thus 14.8% fewer passengers over the whole season are forecast to generate 7.5% more revenue.
- 4.5 Table 4.1 summarises the revised demand and revenue forecasts.

Table 4.1: Revised Demand and Revenue Forecasts

Demand					Revenue		
Potential Market Segments	Estimated Holy Island Market Size	May-Sept Land train trips	July-Aug Av Day	%	Av Rev/Pax	May-Sept Revenue £	July-Aug Av Daily Rev £
Overnight holiday trips							
GB	152,787	6,111	58	40%	£ 3.10	£ 18,973	£ 181
International	3,785	189	2	1%	£ 3.10	£ 587	£ 6
Day visitors							
	51,633	1,291	12	8%	£ 3.10	£ 4,007	£ 38
Cruise ship market							
	25,000	1,250	31	21%	£ 4.33	£ 5,406	£ 135
Ferry visitors							
transit	10,469	262	2	2%	£ 3.10	£ 813	£ 8
day trips	24,449	1222	16	11%	£ 3.10	£ 3,795	£ 49
Local residents							
	13,386	2677	26	17%	£ 3.10	£ 8,311	£ 80
Sub total		13,003	148			£ 41,893	£ 497
Generated Demand	0%	0	0	0%	£ -	£ -	£ -
Total		13,003	148	100%		£ 41,893	£ 497

Operational costs

- 4.6 The trial demonstrated that the proposed route worked well, with no adverse impacts on other traffic, and with journey times as predicted. As such the basic operating parameters proposed in our Phase 2 report (and shown again here in Table 4.2) have been left unchanged.

Table 4.2: Service Parameters

	Cruise Days	Peak exc Cruise	Mid Exc Cruise	Season
Operating season (days)	40	29	24	93
Operating hours	7.5	6	6	
frequency /hr	1.5	1.5	1.5	
mileage round trip	4.4	4.4	4.4	
daily mileage	49.5	39.6	39.6	
Seasonal mileage total	1980	1148	950	4079
Seasonal operating hour total	300	174	144	618

Operations and maintenance costs

- 4.7 Although the trial did not provide any information on expected operating costs, other than confirming run times and mileages (which help confirm much of the fuel and staff costs), we now consider there is potential to reduce costs slightly by providing some of the train guard crew from volunteer staff. For the purposes of the analysis we have

assumed that guard duties during the mid-season (May-June and September) could be performed by volunteers.

4.8 This has the impact of reducing the staff costs from £15,127 for the full season to £13,484 (Table 4.3 below).

4.9 Maintenance cost estimates are unchanged.

Administration costs

4.10 The administration costs will include both marketing and administration costs and expenses. We have made two changes to these since the Phase 2 report.

4.11 Having highlighted the importance of marketing in order to attract the staying visitor market (and other visitor markets) to the train we have increased the estimated spend on marketing materials from £1,000 to £3,000 and increased the hours and length of season for the General Manager/Marketing manager so that he/she would be employed for 800 hours in the season, rather than 300.

4.12 The consequence of these changes is to increase the Staff and Materials costs for Administration from £4,450 to £12,200 for the season.

4.13 Combined with the reduction in expenditure on guards the net impact is to increase our estimate of the annual costs of operating the service from £37,400 to £43,509 (+16.3%).

4.14 Table 4.3 provides a summary of the revised estimates.

Table 4.3: Revised Operations, Maintenance and Administration costs

		Cruise Days		Peak exc Cruise		Mid Exc Cruise		Year
Operations								
	staff	£ 7,234		£ 4,319		£ 1,932		£ 13,484
	fuel	£ 1,000		£ 725		£ 600		£ 2,325
Maintenance								
	Service	£ 1,720		£ 1,247		£ 1,032		£4,000
	Repairs	£ 430		£ 312		£ 258		£1,000
Admin								
	staff	£ 3,957		£ 2,869		£ 2,374		£ 9,200
	materials	£ 1,290		£ 935		£ 774		£ 3,000
	other	£ 4,516		£ 3,274		£ 2,710		£ 10,500
Total		£ 20,147		£ 13,681		£ 9,680		£ 43,509
Cost	per day	£ 503.69		£ 471.77		£ 403.35		£ 467.84
	per service mile	£ 15.26		£ 17.87		£ 15.28		£ 16.00
	per operational hour	£ 67.16		£ 78.63		£ 67.22		£ 70.40

Land train vehicle and carriages

4.15 The trial also reported a number of instances when potential passengers were unable to board the train as it was already full. If an effective hop-on, hop-off service is to be provided and not risk leaving passengers behind there is a case for operating the land train with three carriages rather than the two carriage train used in the trial (and assumed in the Phase 2 report). With considerable potential also identified for special charter services, particularly for the cruise ship market where there would be the opportunity for premium pricing), it is recommended that a three-car train is purchased.

4.16 Based on quotes received we have therefore assumed a price of £81,000 (inclusive of VAT) for a three-car refurbished second-hand land train.

Updated 10-year business case forecasts

4.17 The updated financial analysis for the business plan has again taken a 10-year horizon. It assumes that a second-hand vehicle will be purchased for the start of the 2020 season and that this will need replacing sometime in the early 2030's.

4.18 The (revised) key inputs to the financial modelling are as follows:

- Capital cost of £81,000 for the land train and carriages;
- A central operating cost estimate of £43,509 pa (Table 4.3);
- A central revenue forecast of £41,893 pa (Table 4.1);
- An (increased) assumption of a further £5,000 pa of net revenue (after costs) that could be generated from ancillary activities such as charter hire for the cruise ship markets;
- Future year growth assumptions of:
 - 1.5% pa in staff costs;
 - 1% pa in other costs;
 - 1% pa passenger revenue growth;
 - 5% pa growth in net revenue from ancillary activities.

4.19 The service is assumed to start in 2020 but that some expenditure will begin during 2019.

4.20 A further £5,000 of capital expenditure has been allocated for 2019 and 2020 (split 50/50 across the two years) for start-up costs associated with establishing a Holyhead Land Train Company to run the service – this could include expenditure on the storage/depot facilities for example.

4.21 In addition, a further allowance of £2,500 (split 50:50 between 2019 and 2020) expenditure on additional staff costs to help with the pre-service set up of the business has been allowed for in this updated business case.

4.22 As in the Phase 2 report two versions of the central scenario have been developed – the first where the land train is purchased with the use of finance and the second where the train is purchased following receipt of a capital grant.

Financial forecast – vehicle purchased with finance

4.23 Finance for the purchase of land trains is available. This can be for up to 80% of the purchase price.

4.24 Table 4.4 shows the cash flow across the 10-year period – figures in red are negative (outgoings), those in black are positive (incoming).

4.25 Under this funding scenario the operation would move into the black on an annual basis from year 2026, after six years of operation, once the interest payments on the land train

are complete. However, by the end of the 10-year period over £57,000 of the capital cost would still remain unpaid.

- 4.26 The land train operation would make a small surplus from its second year of operation, sufficient to cover the operating costs of the service and fully cover the interest charges that begin to accrue in 2021. However, once the capital debt is added in the service only begins to reduce the overall debt from 2026 onwards.

Financial forecast – vehicle purchased with grant funding

- 4.27 As the benefits from the land train are likely to be felt and distributed more broadly throughout the Holy Island economy rather than being captured through the farebox revenue of the land train operator, there is a case for seeking grant funding to purchase the vehicle to ensure that the scheme goes ahead and the wider benefits are realised.
- 4.28 Table 4.5 illustrates how the central financial forecast is significantly improved if a grant covering 100% of the vehicle capital cost is secured.
- 4.29 The service, with the aid of charter revenues, would cover its operating costs and would cover most of the other £7,500 of initial set-up costs in the first season of operation, resulting in a modest annual deficit of £366. It is then forecast to begin generating annual surpluses from 2021 onwards. This would potentially leave the operating company with over £33,000 as a fund towards investment in a new train sometime after 2030 (in addition to the allowance for depreciation in the annual costs).

Sensitivity Tests

- 4.30 Table 4.6 shows the impact of 10% reduction in revenue (on the grant funded option). In this scenario the service would only move into surplus on an annual basis in 2028, although annual losses in preceding years are modest from 2021 onwards. While these level of losses are unlikely to be fatal to the business, and would not require much management intervention to potentially reverse them, they do indicate that the land train operation is likely to be a business with at best modest margins that will need to be well managed if it is to deliver the benefits to Holyhead that is being planned for.
- 4.31 Conversely an upside test of revenues being 10% higher (Table 4.7) illustrates how only a modest improvement in the annual operating margin could generate a healthy surplus towards the funding of a new train sometime after 2030.

Table 4.4: 10 Year financial forecast – vehicle purchased with finance

	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Capital Cost -Train		-£ 16,200	-£ 12,960	-£ 12,960	-£ 12,960	-£ 12,960	-£ 12,960				
Other Set Up Costs	-£ 2,500	-£ 2,500									
Interest			-£ 3,240	-£ 2,592	-£ 1,944	-£ 1,296	-£ 648	£ -	£ -	£ -	£ -
Staff Costs	-£ 1,250	-£ 23,934	-£ 23,025	-£ 23,370	-£ 23,721	-£ 24,076	-£ 24,437	-£ 24,804	-£ 25,176	-£ 25,554	-£ 25,937
Other Op Costs		-£ 20,825	-£ 21,033	-£ 21,244	-£ 21,456	-£ 21,671	-£ 21,887	-£ 22,106	-£ 22,327	-£ 22,550	-£ 22,776
Pax Revenue		£ 41,893	£ 42,312	£ 42,735	£ 43,162	£ 43,594	£ 44,030	£ 44,470	£ 44,915	£ 45,364	£ 45,818
Other Revenue		£ 5,000	£ 5,250	£ 5,513	£ 5,788	£ 6,078	£ 6,381	£ 6,700	£ 7,036	£ 7,387	£ 7,757
Net Annual	-£ 3,750	-£ 16,566	-£ 12,696	-£ 11,918	-£ 11,130	-£ 10,331	-£ 9,521	£ 4,261	£ 4,447	£ 4,647	£ 4,861
Cumulative	-£ 3,750	-£ 20,316	-£ 33,012	-£ 44,930	-£ 56,060	-£ 66,391	-£ 75,912	-£ 71,652	-£ 67,204	-£ 62,557	-£ 57,696

Table 4.5: 10 Year financial forecast – vehicle purchased with 100% grant funding

	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Capital Cost -Train		£ -									
Other Set Up Costs	-£ 2,500	-£ 2,500									
Interest	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -
Staff Costs	-£ 1,250	-£ 23,934	-£ 23,025	-£ 23,370	-£ 23,721	-£ 24,076	-£ 24,437	-£ 24,804	-£ 25,176	-£ 25,554	-£ 25,937
Other Op Costs		-£ 20,825	-£ 21,033	-£ 21,244	-£ 21,456	-£ 21,671	-£ 21,887	-£ 22,106	-£ 22,327	-£ 22,550	-£ 22,776
Pax Revenue		£ 41,893	£ 42,312	£ 42,735	£ 43,162	£ 43,594	£ 44,030	£ 44,470	£ 44,915	£ 45,364	£ 45,818
Other Revenue		£ 5,000	£ 5,250	£ 5,513	£ 5,788	£ 6,078	£ 6,381	£ 6,700	£ 7,036	£ 7,387	£ 7,757
Net Annual	-£ 3,750	-£ 366	£ 3,504	£ 3,634	£ 3,774	£ 3,925	£ 4,087	£ 4,261	£ 4,447	£ 4,647	£ 4,861
Cumulative	-£ 3,750	-£ 4,116	-£ 612	£ 3,022	£ 6,796	£ 10,721	£ 14,808	£ 19,068	£ 23,516	£ 28,163	£ 33,024

Table 4.6: Sensitivity test, revenues minus 10% (vehicle 100% grant funded)

	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Capital Cost -Train		£ -									
Other Set Up Costs	-£ 2,500	-£ 2,500									
Interest	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -
Staff Costs	-£ 1,250	-£ 23,934	-£ 23,025	-£ 23,370	-£ 23,721	-£ 24,076	-£ 24,437	-£ 24,804	-£ 25,176	-£ 25,554	-£ 25,937
Other Op Costs		-£ 20,825	-£ 21,033	-£ 21,244	-£ 21,456	-£ 21,671	-£ 21,887	-£ 22,106	-£ 22,327	-£ 22,550	-£ 22,776
Pax Revenue		£ 37,704	£ 38,081	£ 38,462	£ 38,846	£ 39,235	£ 39,627	£ 40,023	£ 40,424	£ 40,828	£ 41,236
Other Revenue		£ 5,000	£ 5,250	£ 5,513	£ 5,788	£ 6,078	£ 6,381	£ 6,700	£ 7,036	£ 7,387	£ 7,757
Net Annual	-£ 3,750	-£ 4,556	-£ 727	-£ 639	-£ 542	-£ 435	-£ 316	-£ 186	-£ 44	£ 111	£ 280
Cumulative	-£ 3,750	-£ 8,306	-£ 9,033	-£ 9,672	-£ 10,214	-£ 10,649	-£ 10,965	-£ 11,151	-£ 11,196	-£ 11,085	-£ 10,805

Table 4.7: Sensitivity test, revenues plus 10% (vehicle 100% grant funded)

	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Capital Cost -Train		£ -									
Other Set Up Costs	-£ 2,500	-£ 2,500									
Interest	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -	£ -
Staff Costs	-£ 1,250	-£ 23,934	-£ 23,025	-£ 23,370	-£ 23,721	-£ 24,076	-£ 24,437	-£ 24,804	-£ 25,176	-£ 25,554	-£ 25,937
Other Op Costs		-£ 20,825	-£ 21,033	-£ 21,244	-£ 21,456	-£ 21,671	-£ 21,887	-£ 22,106	-£ 22,327	-£ 22,550	-£ 22,776
Pax Revenue		£ 46,082	£ 46,543	£ 47,009	£ 47,479	£ 47,954	£ 48,433	£ 48,917	£ 49,407	£ 49,901	£ 50,400
Other Revenue		£ 5,000	£ 5,250	£ 5,513	£ 5,788	£ 6,078	£ 6,381	£ 6,700	£ 7,036	£ 7,387	£ 7,757
Net Annual	-£ 3,750	£ 3,823	£ 7,735	£ 7,908	£ 8,090	£ 8,284	£ 8,490	£ 8,708	£ 8,939	£ 9,184	£ 9,443
Cumulative	-£ 3,750	£ 73	£ 7,808	£ 15,716	£ 23,806	£ 32,091	£ 40,580	£ 49,288	£ 58,227	£ 67,410	£ 76,854

5 Conclusions and Recommendations

Findings of Pilot

- 5.1 The land train popular and full most of the time. Whilst busy weekends in the summer holidays were chosen (with Holyhead Festival and large cruise ship arrivals), ridership was consistently strong on all days.
- 5.2 The train was used by a variety of user markets including residents, cruise ship visitors, day and stay visitors and universally popular amongst all of these groups. However, ridership was dominated by residents and fewer staying visitors used the service than anticipated. This is possibly due to the limited reach of marketing to those client groups. Flyers were distributed to holiday parks in the south of Holy Island, but there seemed to be limited commitment from some of the holiday parks to display and actively promote it. Many of the visitor attractions, reliant on volunteers for staffing, were not able to strongly promote the land train or to undertake many visitor surveys. This demonstrates the need to ensure that budget and time is given over to significant marketing by a future land train operation as it will be difficult to rely on third parties to promote it. Similarly, the land train operation will most likely have to take the lead on developing any cross-promotional initiatives, such as developing visitor bundles, due to capacity limitations with partners.
- 5.3 All legs of the journey were popular and many people tended to stay on to complete a full loop, rather than short rides or hop-on / hop-off. As such, they thought the fares were low.
- 5.4 There is some anecdotal evidence that the land train helped to boost number of visitors to attractions – Breakwater Park, Maritime Museum, St Cybi's, and passenger surveys suggested large numbers of land train users intended to visit local attractions. Surveys at the visitor attractions showed good levels of interest in using a land train in the future.

Recommendations

- 5.5 The pilot has demonstrated that a land train service would be justified in Holyhead.
- 5.6 Costs and revenues have been able to be refined based on the outcomes of the pilot and suggest that the service could be financially sustainable, if the initial vehicle purchase were secured via a grant.
- 5.7 Tariffs will need to be higher, but there is strong evidence of willingness to pay. We would recommend a day ticket / hop on hop off ticket at £5 per adult, £3 per child and £13 for a family (2 adults and 2 children) as well as a single ticket at £3 per adult, £2 per child and £8 per family.
- 5.8 We would suggest core operational hours of 10.30-16:30, with an earlier start on cruise ship days (e.g. 10:00).
- 5.9 The service could be operated on a 45 minute timetable which would be achievable though with minimal recovery time. Alternatively, it could operate an hourly service. This would enable rest time for driver to be incorporated into the shift. For an hourly operation, It may be appropriate to hold the train at Breakwater Park where there is more space for the land train.

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- 5.10 We recommend using the lower road along Newry Beach as this creates less issues with stopping the train to pick up passengers and passengers crossing Beach Road to access it. A bigger engine (such as a Dotto F87, P90 or Muson River Locomotive) will be appropriate for negotiating the inclines at Market Street and from the marina to Beach Road. We also recommend three carriages are purchased, providing a carrying capacity of circa 70 passengers (which will enhance revenue potential on busy days). The carriages should have wet weather protection and be accessible for disabled users with space for storing prams / pushchairs. Ideally, the carriages should have a mechanism for a PA system in the event of providing a guided tour.
- 5.11 The service needs to be strongly marketed to reach the day and stay visitor and cruise ship markets. The marketing should link to the Landscape Heritage project and should be promoting Holyhead as a place to visit for the day, featuring all the local attractions.
- 5.12 Marketing materials need to be disseminated to the holiday villages in the south of Holy Island and ways of communicating with the cruise ship market more effectively need to be found, working in collaboration with Stenaline.
- 5.13 There should be cross-promotion with the visitor attractions. In particular, if a minibus shuttle is provided to access South Stack lighthouse, this should be promoted in association with the land train. It is also essential to ensure that the café at Breakwater Park is open on a regular basis during the holiday season as its closure detracted from the service.
- 5.14 There is an opportunity to offer chartered services specifically for cruise ship visitors. It may also be appropriate to offer a Holyhead bundle to cruise ship visitors which provides the land train, St Cybi's, Maritime Museum, South Stack Lighthouse and RSPB, with an opportunity to visit the Ucheldre Centre on the return from South Stack. This could be formal excursion that the cruise ships market to their clientele.
- 5.15 Special services should be offered at other times of year such as Easter, Halloween, and Christmas.

Moving forwards

- 5.16 In order to move forwards, there is a need to decide on the governance and management of the land train, with a local company set up to oversee it and either running the operation or contracting an operator to run it.
- 5.17 An application for funding needs to be made.
- 5.18 A storage solution for the land train needs to be agreed.
- 5.19 For the full operation, parking arrangements in Market Street and at the Maritime Museum need to be agreed.
- 5.20 A web and facebook page have already been created, which were the primary method of promoting the service during the pilot. These will need to be developed for the full service operation.
- 5.21 Table 5.1 overleaf provides a summary of key actions to be taken.

Table 5.1 Action Plan and Timeline

Action	By When
Review results and take decision on committing to a full scheme	September 2019
Identify preferred legal structure, proposed governance structure and establish company	September 2019
Identify vehicle storage facility	October 2019
Contact potential rolling stock suppliers & prepare and submit funding bid for rolling stock and for set up of land train enterprise	October / November 2019
Decision on rolling stock grant	Jan 2020
Appoint marketing and administration manager	Jan 2020
Identify and secure vehicle storage facility	Jan 2020
Develop marketing strategy	Feb 2020
Purchase rolling stock	Feb 2020
Prepare VSO application for operation	Feb 2020
Implement marketing activities	March 2020
Identify and contract with vehicle maintenance and service facility	March 2020
Recruitment of drivers and guards	March 2020
Staff training and service testing	April 2020
Launch service	Easter 2020

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